<div align="center">

Vitae
José M. F. Moura

</div>

Date: February 2012
Address: Department of Electrical and Computer Engineering
Carnegie Mellon University
5000 Forbes Avenue, Pittsburgh, PA 15213-3890
Phone: 412-268-6341, Fax: 412-268-3890, e-mail: moura@ece.cmu.edu
http://www.ece.cmu.edu/~moura

Appointments

2010- University Professor, Department of Electrical and Computer Engineering, Carnegie Mellon University (CMU).

2006-2007 Visiting Professor of Electrical Engineering, Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology (MIT).

2006- Founding Director, Information and Communications technologies Institute (ICTI)

2005- CoDirector of CenSCIR, CMU Center for Sensed Critical Infrastructure Research.

1986- Professor of Electrical and Computer Engineering, Department of Electrical and Computer Engineering, Carnegie Mellon University (CMU).

2000- Courtesy Appointment as Professor of BioMedical Engineering, Department of BioMedical Engineering, Carnegie Mellon University (CMU).

1999-2000 Visiting Professor of Electrical Engineering, Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology (MIT), also associated with LIDS.

1984-1986 Genrad Associate Professor of Electrical Engineering and Computer Science (visiting), MIT, also associated with LIDS.

1979-86 Professor Catedrático, Department of Electrical and Computer Engineering, Instituto Superior Técnico (IST), Lisbon, Portugal.

Summers Visiting Scholar, Control Group, Department of Aerospace Engineering, University of
1978-81 Southern California (USC).

1978-79 Professor Agregado, IST.

1975-78 Professor Auxiliar, IST.

Education

1978 Agregação em Ciências da Engenharia, IST, Universidade Técnica de Lisboa.

1975 D.Sc. in Electrical Engineering and Computer Science, MIT.

1973 Electrical Engineering, MIT.

1973 M.Sc. in Electrical Engineering, MIT.

1969 Engenheiro Electrotécnico, IST.

Honors

2012-13 IEEE Division IX Director and Member of Board of Directors

2011 IEEE Division IX Director Elect

2010 IEEE Signal Processing Society Technical Achievement Award for fundamental contributions to statistical signal processing

2010 University Professor

2008 Philip L. Dowd Fellowship Award for Contributions to Engineering Education

2008-09 President, IEEE Signal Processing Society

2007 CIT Outstanding Research Award

2006 IBM Faculty Fellow

2005	Elected AAAS Fellow
2004	IEEE Signal Processing Society 2003 Meritorious Service Award
2000	IEEE Third Millennium Medal
Nov-1993	Elected Fellow of the IEEE
Jul-1992	Elected Corresponding Member, Portuguese Academy of Sciences

Citation in Numerous *Who is Who* Editions including *Who's Who in Science and Engineering* (1st and subsequent editions), *Who's Who in American Education* (since 1992-93 edition), *Personalities of America* (since 5th edition), *Five Thousand Personalities of the World* (since 2nd edition), *Who's Who of Emerging Leaders in America* (4th and subsequent editions), *Who's Who in the East* (several editions).

1984-86	Genrad Chair (MIT, Visiting Associate Professor)
1970-75	Instituto de Alta Cultura (IAC) Fellow (1st IAC doctoral fellow in US Universities)
1969	Marconi Prize (Best Graduating Student)
1968	Efacec Prize (Best 5th Year student)

Professional Activities (Selected List)

- **IEEE Board of Directors** (2012-2013)
- **IEEE Director**, Division IX (2012-2013).
- **IEEE Technical Activities Board** (TAB) (2012-2013)
- **IEEE Awards Board** (2012)
- **Plenary Speaker, 4th CAMSAP, The Fourth International Workshop on Computational Advances in Multi-Sensor Adaptive Processing**, San Juan, Puerto Rico, Dec 15-16, 2011
- **Plenary Speaker, International Symposium on Image and Signal Processing and Analysis**, Dubrovnik, Croatia, Sep 4, 2011
- **IEEE Director Elect**, Division IX (2011).
- **IEEE Hamming Awards Committee** (2011-2012)
- **IEEE Publications Services and Products Board** (PSPB), member and **PSPB Strategic Planning Committee** (SPC) member (2011-2012).
- **IEEE Education Activities Board (EAB)**, member and **Chair of EAB Society Outreach Committee** (SOOC) (2010).
- **Past President, IEEE Signal Processing Society** (2010-2011).
- **President, IEEE Signal Processing Society** (2008-2009).
- **Editor in Chief**, *IEEE Transactions on Signal Processing* (1995-1999).
- **Chair, Nominations and Appointments Committee, IEEE Signal Processing Society** (2010-2011).
- **Invited Speaker, 3rd CAMSAP, The Third International Workshop on Computational Advances in Multi-Sensor Adaptive Processing**, Aruba, Dutch Antilles, Dec 13-16, 2009.
- **Panel Member**, 7th Program European Commission Review Panel, Brussels, Nov 23-25, 2009
- **Plenary Speaker, 1st IFAC Workshop on Estimation and Control of Networked Systems**, Centro Culturale, Don Orione Artigianelli, Venice, Italy, Sep 24-27, 2009.
- **Invited Speaker, Multimedia, Mathematics, and Machine Learning II,** BIRS, Banf, Alberta, Canada, Jul 6, 2009.
- **Plenary Speaker, International Symposium on Signals, Circuits, and Systems**, Technical University Iasi, Iasi, Romania, July 9-10, 2009.
- **Plenary Speaker, IEEE 13th Digital Signal Processing Workshop and 5th Sign. Pr. Ed.**, Marco Island, FL, Jan 4-7, 2009
- **Panel Member, Sp. Session Sensor Net., PIMRC**, Cannes, France, Sep 18, 2008
- **Speaker, CNRS Lab. Signaux, Systémes (L3S),** Sophia-Antipolis, France, Sep 17, 2008

- **Keynote Speaker, 5th Int. Conf. on Networked Sensing Syst., Kanazawa, Japan,** Jun 17, 2008
- **Seminar Speaker, Electrical and Systems Eng. Dep., Washington Un. at St. Louis**, Apr 11, 2008
- **ECE Colloquium, Department Electrical and Computer Engineering, Tufts Univ.**, Apr 16, 2008
- **Vice Chair, IEEE Publications Services and Products Board**, PSPB, 2008
- **Invited presentation**, Workshop on Data Fusion, IEEE Globecom, Washington DC, Nov 26, 2007.
- **Invited Seminar**, Woods Hole Oceanographic Institute, Woods Hole, Jul 26, 2007
- **NSF Science and Technology Research Center** Panel Review Chair, UCLA, May 13-16, 2007.
- **Panel Member**, PAPS, Columbia University, New York City, NY, March 24, 2007
- **ECE Graduate Seminar**, NC State, Raleigh, NC, March 2, 2007.
- **ECE Colloquium**, Boston University, Boston, February 21, 2007.
- **Distinguished lecture**, ECE , Iowa State University, Des Moines, IA, January 22, 2007
- **Invited Seminar**, Computing Research Institute, Computer Science Department, Purdue University, Lafayette, IN, January 19, 2007
- **Invited Seminar**, Communication, Networking, Signal & Image Processing Seminar Series, Electrical and Computer Engineering Department, Purdue University, Lafayette, IN, January 18, 2007
- **Invited lecture**, Mathematical Challenges and Opportunities in Sensor Networks Workshop, Institute for Pure and Applied Mathematics (IPAM), UCLA, January 10, 2007.
- **Invited Seminar**, Stochastic Systems Group, LIDS, MIT, November 29, 2006
- **Invited Speaker**, University of California Los Angeles, CA, November 21, 2006.
- Member, **NSF Committee of Visitors (COV)**, Computing and Communication Foundations Division, Directorate for Computer and Information Science and Engineering (CISE), June 15-16, 2006.
- **President Elect of IEEE Signal Processing Society** for period 2006-2007 to succeed as President for period of 2008-2009.
- **Invited Speaker**, University of Massachusetts, Amherst, MA, Mar 3, 2006.
- **Invited Speaker**, IBM T. J. Watson Research Center, Hawthorne, NY, February 23, 2006.
- **Invited Speaker** and **Panel Member**, *Robust Signal Processing and Stochastic Eigen-Analysis Workshop (SEA05)*, Hosted by Department of Mathematics and Center for Ocean Engineering, MIT, October 14-15, 2005.
- **Invited Speaker**, *2nd IEEE/CreateNet Workshop on BroadBand Advanced Sensor Networks* (BaseNetS 2005), Radisson Hotel, Boston, MA, October 3, 2005.
- **Member of External Advisory Board**, *Network of Excellence on the Application and Communication Aspects of Wireless Sensor Networking (CRUISE)*, European Consortium of Universities, National Labs, and Industrial Research Labs on Sensor Networks, since September 2005.
- **Member of Panel** on *Wireless Sensor Networks –From Sensor Networks to Smart Dust*, at the *16TH IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications*, Berlin, Germany, September 12-14, 2005.
- **Invited Speaker**, *"Banff International Research Station Multimedia and Mathematics Workshop,"* Banff, Alberta, Canada, July 24-27, 2005.
- **NSF Science and Technology Research Center** Panel Review Member, UCLA, June 15-17, 2005.
- **Invited speaker**, *"ARO/AMRDEC Workshop on Information Theoretic Image Processing,"* **ARO/AMRDEC Workshop**, Redstone Arsenal, Huntsville, AL, June 14-15, 2005.

- **Invited speaker**, "*Sensor Networks: Detection and Estimation under Constraints*," **SENSIP Workshop**, Tempe, Arizona, April 28-29, 2005.
- **Steering committee member**, **ACM/IEEE International Symposium in Information Processing in Sensor Networks**, 2005-.
- **Keynote speaker**, "*Sensor Networks: Challenges and Applications*," *Next Wave Digital Home, Community Products, Services, and Opportunities Symposium*, Institute for Information Industry, Taipei, Taiwan, November 2004.
- **Invited talk** *Frontiers in Optics FiO'04*, October 2004.
- **Member of Panel** on *Sensor Networks - Interacting with the Real World*, at the *15TH IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications*, Barcelona, Spain, September 2004.
- **Distinguished Lecturer** *IEEE Sensor and Multichannel Array Processing* (*SAM'04*), July 2004.
- **Plenary Speaker** *IEEE 5th International Workshop on Signal Processing Advances in Wireless Communications* (*SPAWC'04*), July 2004.
- **Founding Member of Technical Committee**, *Bio Signal and Image Processing*, IEEE Signal Processing Society (2004-)
- **Member of founding Editorial Board**, *ACM Journal on Sensors Networks*, January 2004.
- **Guest co-Editor, IEEE Proceedings** *Special Issue on High Performance Tuning*, **February 2005.**
- **Book Series Editor,** *Lectures in Signal Processing*, Morgan & Claypool Publisher (January 2004–)
- **Guest co-Editor, IEEE Signal Processing Magazine** *Special Issue on Iterative, Soft Signal Processing for Communications*, January 2004.
- **Science Foundation Ireland**, *Baseline Assessment Public Research System in Ireland, Information and Communications Technologies* (June 2002)
- **Member, Editorial Board, IEEE Signal Processing Magazine** (2003–).
- **Chair, IEEE Technical Activities Board (TAB) Transactions Committee** (joining all 70+ IEEE Transactions and Journals) (2002-2003).
- **Member, IEEE TAB Periodicals Committee** (2003-2004).
- **Member, IEEE TAB Periodicals Review Committee** (2003–2006).
- **Member of Steering Committee, IEEE International Symposium on BioImaging** (2002-2005).
- **Acting Editor in Chief, IEEE Signal Processing Letters**, December 2001 – March 2002.
- **Plenary Speaker** IEEE 11th Workshop on Statistical Signal Processing, Singapore, August 2001.
- **ARESII**, Member of Panel on *"Advanced Research and Experiments in Sensing II,* Office of the Deputy UnderSecretary of Defense for Science and Technology, December 2000, and January 2001.
- **Member,** Editorial Board, *Applied Signal Processing Journal*, European Signal Processing Society Journal, (2000 – 2003).
- **Member Steering Committee, IEEE Transactions on Multimedia** (2002).
- **Vice President for Publications**, *IEEE Sensors Council* (2000-2002).
- **Vice President for Publications**, *IEEE Signal Processing Society* (2000-2002).
- **Chair Publications Board**, *IEEE Signal Processing Society* (2000-2002).
- **Member of Administrative Committee,** *IEEE Sensors Council* (representation of IEEE Signal Processing Society) (1999-2002).
- **IEEE Proceedings Editorial Board** (1999 – 2002 and 2003-2005).
- Member at large, **Board of Governors**, *IEEE Signal Processing Society* (1999 – 2001).
- **Guest Co-Editor**, *IEEE Transactions on Information Theory Special Issue on Information Theoretic Imaging*, August 2000.
- Member of **Technical Committee**, *IEEE on Sensors Array and Multichannel Processing*, March 2000.

- Member of **Publications Board**, *IEEE Signal Processing Society,* (1995-2002).
- Member of **Technical Program Committee** for *2nd and 3rd Workshops on Multimedia Signal Processing* (1998 and 1999).
- **Organizer and chair** of session on *Random Processes*, *IEEE 1999 Information Theory Workshop on Detection, Estimation, Classification, and Imagin*g, Santa Fe, February 1999.
- Founding Member of IEEE **Technical Committee** on *Sensor Array and Multichannel Processing*, *IEEE Signal Processing Society* (1998 on).
- Member of IEEE **Technical Committee** on *Multimedia Signal Processing*, *IEEE Signal Processing Society* (since 1997).
- Member of IEEE **Technical Committee** on *Underwater Acoustics and Radar Processing*, *IEEE Signal Processing Society* (1988-1997).
- Member of **Advisory Board** of the Digital Signal Processing Handbook, CRC Press, Boca Raton, FL (1997).
- Member of **Technical Program Committee**, *IEEE International Conference on Image Processing, ICIP'99.*
- Member of **Technical Program Committee,** *IEEE International Conference on Image Processing, ICIP'98.*
- Member of **Technical Program Committee**, *IEEE International Conference on Image Processing, ICIP'97.*
- **Associate Editor**, *IEEE Signal Processing Letters* (1993-95).
- **Organizer and Chair**, Special Session for Channels, Models, and Signal Processing, *SPIE Conference on Coding and Signal Processing for Information Storage*, Philadelphia, PA, September 1995.
- **Coorganizer and Chair**, Invited Session on *"Statistics and the Ocean Sciences,"* American Statistical Society Annual Meeting ASA'95, Orlando, FL, 1995.
- Member of **Technical Program Committee**, *IEEE International Conference on Image Processing, ICIP'95*, Washington DC, October 1995.
- **Organizer and Chair**, Special Session on "Undersea and Applications of Acoustic Signal Processing," *IEEE International Conference on Signal Processing, ICASSP'95,* Detroit, MI, March 1995.
- Member of **Technical Program Committee**, *IEEE International Symposium on Information Theory*, San Antonio, Texas, 1993.
- **Co-Director** (with I. Lourtie) of Advanced Study Institute on *"Acoustic Signal Processing for Ocean Exploration,"* Madeira, Portugal, July/August 1992.
- **Editorial Board Member** of *IEEE Press Board* (1991-95).
- **Associate Editor**, *IEEE Transactions on ASSP* (1988-92).
- **Director** of Laboratory of Automated Systems and Information Processing (LASIP), CMU, 1988-1992.
- Member **International Committee**, *IEEE International Symposium on Information Theory*, 1985-1987.
- Member of **Editorial Board**, "Signal Processing Journal,"
- **Co-Director** (with R. S. Bucy) of Advanced Study Institute on *"Nonlinear Stochastic Problems,"* Algarve, Portugal, May/ June 1982.
- One of three **cofounders**, IEEE Portugal Section, 1980.
- **Cofounder** of Instituto de Engenharia de Sistemas e Computadores, INESC, Lisboa, Portugal, 1979.
- **Director,** Centro de Análise e Processamento de Sinais, CAPS, Instituto Superior Técnico, 1978-1980.

- **Chair** of several sessions at International Conferences.
- **Member of Program Committees** for numerous International Scientific and Technology Conferences.
- Declined numerous other invitations to give talks, organize or chair sessions, or be part of Technical Program Committees of International Conferences.
- **Co-founder**, Centro de Análise e Processamento de Sinais, CAPS, Instituto Superior Técnico, 1975.

Invited Lectures, Seminars, and Panels
2012

[1]   Feb 1-2   York University, Panel to Review new School of Engineering and new Program in Electrical Engineering.

[2]   Feb 10   *The Information Theory and Applications Workshop, Invited talk*, University of California at San Diego, La Jolla, CA.

[3]   May 28-30   *CIP 2012, Third International Workshop on Cognitive Information Processing*, Parador de Bayona, Spain, *IAPR Keynote.*

[4]   Jul 22-24   *SPCOM 2012, International Conference on Signal Processing and Communications*, IIS Bangalore, India, Invited Speaker.

[5]   Jul 26   *2012 Third International Conference on Computing, Communication and Networking Technologies (ICCCNT'12)*, Chettinad, India, *Plenary Speaker*.

2011

[6]   Dec 13-16   *The Fourth International Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP), Plenary Speaker*, San Juan, Puerto Rico.

[7]   Dec 12-16   *Invited paper, IEEE Conference on Decision and Control and European Control Conference*, Special Session, Orlando, FL

[8]   Nov 04   *Advanced Networks Colloquia Series, Institute for Systems research (ISR), University of Maryland*, College Park, MD

[9]   Oct 19-23   *International Conference on Image Analysis and Signal Processing, Plenary Speaker*, Huazhong Normal University; also Tsinghua University. Peoples Republic of China.

[10]   Sep 30-Oct 02   *Invited paper, 49th Annual Allerton Conference on Communication, Control, and Computing,* Special Session, Monticello IL

[11]   Sep 08-12   *ACCESS Distinguished Lecture Series, KTH Royal Institute of Technology*, Stockholm, Sweden

[12]   Sep 04-06   *International Symposium on Signals, Circuits, and Systems, Plenary Speaker*, Dubrovnik, Croatia.

[13]   Jul 10-14   *DASP'11, Defense Applications of Signal Processing*, The Hyatt Coolum Resort, Cooling, Queensland, Australia, Invited Speaker.

[14]   Jul 8-10   *Foundations of Computational Mathematics Conference, Workshop on Flocking, Swarming, and Control of Distributed Systems*, Invited speaker, Budapest, Hungary.

[15]   May 23-28   *Invited Paper, Meeting of the Acoustical Society of America*, Seattle WA

[16]   May 22-27   *IEEE International Symposium on Signal Processing (ICASSP)*, Prague, Check Republic, 5 papers, one invited

[17]   Apr 26   *University of Pennsylvania, Seminar on Communications and Networking*, invited seminar, Philadelphia, PA.

[18]   Feb 10   *The Information Theory and Applications Workshop, Invited talk*, University of California at San Diego, La Jolla, CA.

[19]   Jan 28   *Harvard University, Electrical Engineering Seminar Series,* Cambridge, MA.

2010

[20]   Oct 07-09   *École Polytechnique Federale de Lausanne* (EPFL), *Invited Seminar*, Lausanne, Switzerland.
[21]   Sep 28   *The Chinese University of Hong Kong, Invited Seminar*, Hong Kong.
[22]   Jul 18-31   *The Australian National University (ANU),* working visit, Prof. Brian D. O. Anderson's research group, *Invited Seminar July 30*, Canberra, Australia.
[23]   Jun 25   *Universidad Carlos III de Madrid, Invited Seminar*, Madrid, Spain.
[24]   Jun 30-Jul 2   **American Control Conference (ACC)**, **invited paper**, Baltimore, MD**.**
[25]   Apr 16   *Tsinghua University, Invited seminar*, Beijing, Peoples Republic of China.
[26]   Apr 15   *Huaqiao University, Invited seminar*, Xiamen, Peoples Republic of China.
[27]   Apr 13   *International Conference on Image Analysis and Signal Processing, Plenary Speaker*, Xiamen, Peoples Republic of China.
[28]   Mar 14-19   **35th IEEE International Conference on Acoustics, Speech, and Signal Processing**, papers presented including two invited Special Sessions, Dallas, TX.

2009

[29]   Dec 13-16   *The Third International Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP), Invited Session*, Aruba, Dutch Antilles.
[30]   Oct 26   *IEEE Signal Processing Society Dinner, Speaker*, Washington DC.
[31]   Oct 21-22   *Challenges in Information Evaluation and Extrication in Distributed Sensing Systems, Panel Member*, Army Research Office Workshop, MIT, Cambridge, MA.
[32]   Oct 16   *Philipp Dowd Fellowship Award, ICES, Invited Talk*, Carnegie Mellon University, Pittsburgh, PA.
[33]   Sep 24-27   *1st IFAC Workshop on Estimation and Control of Networked Systems, Invited Plenary Speaker*, Centro Culturale, Don Orione Artigianelli, Venice, Italy.
[34]   Jul 6   *Multimedia, Mathematics, and Machine Learning II, Invited Speaker*, BIRS, Banf, Alberta, Canada.
[35]   July 9-10   *International Symposium on Signals, Circuits, and Systems, Invited Plenary Speaker*, Technical University Iasi, Iasi, Romania.
[36]   Apr   *34th IEEE International Conference on Acoustics, Speech, and Signal Processing*, Paper in Special Session, Taipei, Taiwan.
[37]   Apr 15-16   *NSF Review Panel*, Arlington VA.
[38]   Apr 3   *BBN, Invited Talk*, Cambridge, MA
[39]   Feb 25   *Association of International Education Administrators (AIEA), Invited Talk*, Atlanta, GA
[40]   Feb 18 **DARPA VORTEX Workshop**, invited talk, Arlington, VA.
[41]   Jan 4-7 **IEEE 13th Digital Signal Processing Workshop and 5th Signal Processing for Education Workshop**, K**eynote speaker**, Marco Island, Florida on January 4-7, 2009.

2008

[42]   Oct 25 *ABB Workshop*, invited talk, MIT, Cambridge MA.
[43]   Oct   27-29 *42nd Asilomar Conference on Signals, Systems and Computers*, two papers invited to be part in two Special Sessions Pacific Grove, CA.
[44]   Sep 23-25   *46th Allerton Conference on Communications, Control, and Computing*, paper in invited session, Allerton House, IL.
[45]   Sep 18 I**EEE PIMRC**, **Personal Indoor and Mobile radio Communications, Panel Member, Sp. Session Sensor Networks,** Cannes, France, Sep 18
[46]   Sep 17 **CNRS Lab. Signaux, Systémes (L3S), Speaker,** Sophia-Antipolis, France, Sep 17
[47]   Aug 11**Air Force Research Lab**, Invited Presentation, ATR Center, Dayton OH.

[48] Jun 17 **5th Int. Conf. on Networked Sensing Syst., Keynote Speaker,** Kanazawa, Japan

[49] Apr 21 **IPSN Workshop on Sensor Networks**, Invited talk, St. Louis, MI

[50] Apr 11 **Electrical and Systems Eng. Dep., Washington Un. at St. Louis**, **Seminar Speaker**, St. Louis, MI.

[51] Apr 16 **ECE Colloquium, Department Electrical and Computer Engineering, Tufts Univ.**

2007

[52] Nov 26 *Workshop on Multisensor Data Fusion*, invited presentation, IEEE Globecom, Washington DC.

[53] Oct 14-16 *Orthogonal Polynomials Workshop*, invited lecture, Casa de Carmona, Carmona, Universidad de Seville, Spain.

[54] Jul 26 *Woods Hole Oceanographic Institute*, invited seminar, Woods Hole, MA

[55] Mar 24 *PAPS Congress*, member of panel, Columbia University, New York City, NY.

[56] Mar 2 *North Carolina State University*, *Distinguished Lecture Series on Sensor Networks*, Raleigh, NC.

[57] Jan 22 *Iowa State University*, *Distinguished Lecture on Sensor Networks*, IA.

[58] Jan 19 *Purdue University, Computer Science Department*, *Invited Seminar on Automatic Performance Tuning*, LaFayette, IN.

[59] Jan 18 *Purdue University, Electrical Engineering Department*, *Invited Seminar on Sensor Networks*, LaFayette, IN.

2006

[60] Nov 29 *MIT, Stochastic Systems Group*, *Seminar on Sensor Networks*, Cambridge, MA.

[61] Nov 20 *University of California Los Angeles*, *Invited Seminar on Sensor Networks*, Seminar Series in Electrical Engineering, Los Angeles, CA.

[62] Nov 2 *MIT Signal Transformation and Information Representation Group*, *Invited Talk on Sensor Networks*, Cambridge, MA.

[63] Sep 27-29 *44th Allerton Conference on Communications, Control, and Computing*, Paper presented by coauthor in *invited session on sensor networks*, Allerton House, IL.

[64] Jun 6-7 *Adaptive Sensor Array Processing Workshop*, *Chaired Session*, Lincoln Lab, Lexington, MA.

[65] May 14-21 *IEEE ICASSP'06*, *IEEE International Conference on Signal Processing*, *two invited papers*, Toulouse, France.

[66] Apr 24-25 *INTEL, Adaptive library Generation Workshop*, Presentation on SPIRAL and Panel Member, Beaverton, OR.

[67] Mar 10 *New Horizons Workshop*, **plenary talk,** "*Sensor Networks: Decision Making and the Role of Connectivity*," Aveiro, Portugal.

[68] Mar 3, *University of Massachusetts, Amherst*, i**nvited seminar** "*Where algebra meets signal processing: generating SW/HW implementations of linear transforms*," Amherst, MA.

[69] Feb 24 *IBM T. J. Watson Research Laboratory*, Hawthorne, **invited seminar** on "*Distributed Decision in Sensor Networks*," Hawthorne, NY.

2005

[70] Oct245-25 *INTEL Adaptive Libraries Workshop*, SIPRAL Presentation and Discussion, Schaumburg, IL.

[71] Oct14-15 *Robust Signal Processing and Stochastic Eigen-Analysis Workshop (SEA05)*, Hosted by Department of Mathematics and Center for Ocean Engineering, MIT, ***Invited Speaker*** and ***Panel Member***.

[72] Oct 3 *2nd IEEE/CreateNet Workshop on BroadBand Advanced Sensor Networks* (*BaseNetS 2005*), Radisson Hotel, Boston, MA, ***Invited Speaker***.

[73] Sep 12-14 *Wireless Sensor Networks –From Sensor Networks to Smart Dust*, at the *16TH IEEE Int. Symp. on Personal, Indoor, and Mobile Radio Comm.*, Berlin, Germany, *Invited Panel Member*.

[74] Jul 24-27 *Banff Int. Research Station Multimedia and Mathematics Workshop*, Banff, Alberta, Canada, *Invited Speaker*.

[75] Jun 14-15 *ARO/AMRDEC Information Theoretic Image Processing*, *Invited Speaker*, Atlanta GA.

[76] Apr28-29 *SENSIP Workshop*, "*Sensor Networks: Detection and Estimation Under Constraints,"* *Invited Speaker*, Tempe, Arizona**.**

[77] Mar6-10 *National University of Singapore*, "*Energy Minimization: Segmentation and Registration in MRI Sequences,"* *Invited Speaker,* Computer Science Department, Singapore.

2004

[78] Nov 23 *Next Wave Digital Home/Community Products, Services, and Opportunities Symposium*, "*Sensor Networks: Challenges and Applications,"* *Keynote Speaker*, Institute for Information Industry, Taipei, Taiwan.

[79] Nov 4 *INTEL*, Discussion on SPIRAL, Schaumburgh, IL.

[80] Oct 10-14 *FiO'04, Frontiers in Optics, Optical Society of America 88th Annual Meeting*, *Invited Paper*, "*Fusion in Sensor Networks,"* Chicago, IL.

[81] Jul 19-21 *SAM'04, IEEE Sensor and Multichannel Array Processing Workshop*, **Distinguished Lecturer**, "Matched Field Time Reversal," Stieges, Barcelona, Spain.

[82] Jul 12-14 **Forum Internacional de Investigadores Portugueses no Estrangeiro, 5th Encontro, Chaired** session on Robótica e Engenharia Electrotécnica, Coimbra, Portugal.

[83] Jul 12-14 *SPAWC'04, IEEE 5th International Workshop on Signal Processing Advances in Wireless Communications*, **Plenary Speaker**, Lisbon, Portugal.

[84] Mar 30 *IBM T. J. Watson Research Laboratory*, Hawthorne, *Invited Speaker,* "*The Network as the Sensor,"* Hawthorne, NY.

2003

[85] Nov19-20 *Lockheed Martin*, talk on "*Distributed Sensing and Processing: A Graph Approach,"* Orlando, FL.

[86] Oct 30 *INTEL FFT Workshop*, "SPIRAL," *Invited Talk* and *Discussion*, Intel Champaign, IL.

[87] Oct 14-15 *Statistical and Applied Mathematical Sciences Institute*, *SAMSI Sensors Network Workshop*, *Invited Speaker*, "*Distributed Sensing and Processing: A Graph Approach,"* Research Triangle Park, NC.

[88] Sep28–Oct 1 *SSP'03, IEEE Statistical Signal Processing Workshop*, papers presented by coauthors, including paper in *Invited Session on Statistical Inferences on Manifolds with Applications in Image Analysis*, St. Louis, MO.

[89] Jul 31 *Siemens Corporate Research*, "*MRI Techniques for Noninvasive Monitoring of Transplanted Organs,"* *Invited Speaker,* Princeton, NJ.

[90] May 1-3 "*SMART: Finding Structure in DSP Transforms,"* *Invited Speaker,* University of Illinois, Urbana-Champaign, Urbana, IL.

2002

[91] Dec 5 *IBM T. J. Watson Research Lab*, "*SPIRAL: Tuning DSP Transforms to Computing Platforms,"* *Invited Speaker,* Yorktown Heights, NY.

[92] Nov 21 *DARPA Discovering and Exploiting Structure in Algorithms (DESA) Workshop*, "*SPIRAL: A Library Generator for DSP Algorithms* *Invited Speaker*; also rapporteur for Working Group 1, Arlington, VA.

[93] Nov 7 *Laboratoire Signaux et Systèmes (L2S)*, "*Blind Recovery of Intrinsic Shape,"* *Invited Speaker,* Sophie-Antipolis, Fr.

[94] Nov 4-6 *36th Asilomar Conference on Signals, Systems, and Communications*, *Invited paper in Special Session*, Asilomar, Monterey, CA.

[95] Jun 17 *University of Florida,* "*SPIRAL: Tuning DSP Transforms to Computing Platforms,*" *Invited Speaker, Gainesville, FL.*

[96] Apr 18 *University of Maryland*, "*3D Models from Monocular Video,*" *Invited Speaker*, College Park, MD.

[97] Feb 18 *IEEE ASW Signal Processing for Communications and Multimedia Workshop*, "*3D Video Representations, Structure from Motion,*" *Invited Speaker,* Tempe Mission Palms, Tempe, Arizona.

<p align="center">2001</p>

[98] Aug 6-8 *IEEE 11th Workshop on Statistical Signal Processing*, "*A Geometric and Multiresolution Analysis Approach to Robust Detection,*" *Invited Plenary*, Orchid Country Club Singapore.

[99] Jan 22-24 *ARESII, Advanced Research and Experiments in Sensing II*, Panel of the National Academy of Sciences and Office of the Undersecretary of Defense for Acquisition (OUSDA). Panel Member on *Impact of Advanced Research and Engineering on the Development of Sensors* for use in the Defense and National Security Interests of the United States. Arnold and Mabel Beckman Center of the National Academy of Sciences and Engineering. Irvine, CA.

<p align="center">2000</p>

[100] Dec 12-16 *ARESII, Advanced Research and Experiments in Sensing II*. *Panel Member*. Arnold and Mabel Beckman Center of the National Academy of Sciences and Engineering. Irvine, CA.

[101] Jul 27 *ISR, IST*, "*Soft Decision and Detection,*" *Invited Speaker,* Instituto de Sistemas e Robótica, Instituto Superior Técnico, Lisbon, Portugal.

[102] Jul 19 *CRL, COMPAQ Cambridge Research Laboratory*, "*Recovery of 3D Structure by Surface Based Factorization.*" *Invited Speaker,* Cambridge, MA.

[103] Jun 26 *Alphatech,* "*Hyperspectral Adaptive Anomaly Detection.*" *Invited Speaker,* Burlington, MA.

[104] Jun 21-22 *McMaster University*, "*The Viterbi Algorithm and Markov Noise Memory,*" and "*Geometric Approach to Robust Detection,*" *Invited Speaker,* (two invited lecturers) Hamilton, Ontario, Canada.

[105] Jun *Signal Processing and Stochastic Control Group Seminar, LIDS, MIT*, *Invited Seminar,* "*Qualitative Design of Nonlinear Filters,*" Cambridge, MA.

[106] May 5 *Graduate Seminar, Drexel University*, "3D Shape from Monocular Video: Surface Based Factorization." *Invited Speaker,* Department of Computer Science, Drexel University. Philadelphia, PA.

[107] Mar 16 *Stochastic Systems Group, LIDS, MIT*, "Video Meta Representations: From Pixels and Frames to Content." *Invited Seminar,* Cambridge, MA.

[108] Mar 1-2 *Phillips Research Laboratory*, "*What is in a Video: Automatic Extraction of 2D and 3D Content.*" *Invited Speaker,* NY.

[109] Jan 14-15 *Symposium in Honor of D. Snyder*, *Invited Speaker*. St. Louis, MI.

[110] Jan 3-4 *MCT Symposium*, participation by invitation, Lisbon, Portugal.

<p align="center">1999</p>

[111] Nov 16 *LIDS Colloquium, MIT,* "*Detection in Hyperspectral Imagery,*" *Invited Speaker,* Cambridge, MA.

[112] Oct 15 *Symposium on System Theory,* "*SPIRAL: A Library of Optimized Portable Signal Processing Algorithms,*" *Invited Speaker*, Symposium in honor of Sanjoy Mitter on occasion of his 65th Anniversary, Royal Sonesta Hotel, Cambridge, MA.

[113] May 21 *NIST*, "*Meta Video: Representations and Applications,*" *Invited Speaker* and working visit, Gaithersburg, MD.

[114] Apr 8 *OCADE*, "*Meta Video: Representation and Applications,*" *Invited Speaker,* Oregon-Washington States, OCADE, Portland, OR.

[115] Apr 7 *Graduate Seminar, Oregon State University, Department of Electrical Engineering*, *Invited Speaker*, "*Hard and Soft Detection in Signal-Dependent Correlated Noise,*" Corvalis, OR.

[116] Feb 24-26 *1999 IEEE Information Theory Workshop on Detection, Estimation, Classification, and Imaging,* organizer and chair of invited session on *Random Processes*, two invited papers presented by co-authors, Santa Fe, NM.

[117] Jan 25 *Graduate Seminar*, "*SPIRAL: A Library of Optimized Portable Signal Processing Algorithms,*" *Invited Speaker*, Department of Electrical Engineering, University of Pittsburgh, Pittsburgh, PA.

1998

[118] Nov 2-4 *33th Asilomar International Conference on Signals, Systems, and Communications,* "*Translation Invariance and Robust Detection,*" *Invited Paper,* Monterey, CA.

1997

[119] Nov 20 *Northrop-Grumman*, "*Focusing SAR Images,*" *Invited Speaker*, Baltimore, MD.

[120] Oct 30 *Rome Laboratories, Hanscom Air Force Base,* "*Focusing SAR Images,*" *Invited Speaker*, Lexington, MA.

[121] Oct 16-17 *Symposium of Electronics Engineers*, "*Digital Video,*" *Invited Speaker*, Instituto Superior Tecnológico de Monterey (ISTM), Monterey, Mexico.

[122] Jul 8-11 *11th IFAC Symposium on System Identification*, "*Statistical Signal and Sensor Array Processing,*" *Invited Paper*, Kitakyushu, Fukuoka, Japan.

[123] Jul 7 *NEC*, "*Video Representations,*" *Invited Speaker,* NEC Laboratories, Tokyo, Japan.

[124] Jul 2-4 *1st International Conference on Technology Policy and Innovation*, Chair of Session "*Multimedia Technologies,*" *Invited Speaker*, member of advisory committee, Macau.

1996

[125] Nov *GlobeCom'96, IEEE International Conference for Global Communications,* *invited paper* presented by co-author, *Session for Signal Processing for Magnetic Recording*, London, UK, (not present).

[126] Jul 10 *International Study Institute on Advanced Broadband Communications*, (*ABC '96*), "*Video Over Wireless,*" *Invited Speaker,* University of Aveiro, Aveiro, Portugal (and live ATM-broadcast to 17 world cities ranging from Toronto to Berlin).

[127] Jun 1 *Atlantic Aerospace Electronics Corporation (AAEC)*, "*Robust Detection,*" *Invited Speaker*, Greenbelt, MD.

[128] Apr 1-4 *Forum Acusticum, 1ˢᵗ Convention of the European Acoustic Association, EAA*, *Invited Paper*, Antwerp, Belgium.

[129] Mar18-20 *ONR Time-Frequency Analysis Workshop,* "*Geometric Approach to Robust Detection,*" *Invited Speaker*, Princeton, NJ.

1995

[130] Oct 26 *SPIE Conference on Wireless Personal Communications Technologies and Services,* invited paper in Session "*PCS Data and Multimedia Applications,*" Philadelphia, PA.

[131] Oct 23 *SPIE Conference on Coding and Signal Processing for Information Storage, invited paper in Special Session on Channels, Models, and Identification.* Philadelphia, PA.

[132] Oct 19 *Graduate Seminar*, "*Digital Video,*" Department of Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA.

[133] Aug 15 *American Statistical Society Annual Meeting*, *Organizer and Chair of Special Session on "Statistics and the Ocean Sciences,"* Orlando, FL.

[134] Aug 14 *NRL Stennis Space Center*, "*Efficient Algorithms for Data Assimilation,*" *Invited Speaker*, Stennis, MS.

[135] Jul 11 *Bellcore*, "*Generative Video,*" *Invited Speaker*. Redbanks, NJ.

[136] Jul 10 *Atlantic Aerospace Electronics Corporation (AAEC)*, "*Detection and Classification using Gabor/ Wavelet, and Zak Transforms,*" *Invited Speaker*. Greenbelt, MD.

[137] Mar 15-17 *IEEE Adaptive Sensor Array Processing Workshop*, "*Ray Path Identification in Ocean Acoustic Tomography,*" ***Invited Speaker***, Lincoln Laboratory, MIT, Lexington, MA.

1994

[138] Jun 27-30 *Matched Field Workshop*, invited paper presented by co-author. La Spezia, Italy (not present).

1993

[139] Oct. *University of Pittsburgh, Department of Electrical Engineering,* Graduate Seminar, "*A Statistical Approach to Image Compression,*" ***Invited Speaker,*** Pittsburgh, PA.

[140] Oct 7 *Academia das Ciências de Lisboa*, Seminar on "*2D Statistical Signal Processing,*" Lisbon, Portugal.

1992

[141] Oct 26-28 *26th Asilomar Conference on Signals, Systems, and Computers*, ***Invited Paper***, "*Ambiguity for Sonar,*" Monterey, CA.

[142] Jul 26-Aug 7 *NATO Advanced Study Institute on "Acoustic Signal Processing for Ocean Exploration,"* Co-Director, and ***Invited Speaker***, Funchal, Madeira, Portugal.

[143] Mar 25 *INI Alumni Conf.*, "*Coding for Multimedia,*" ***Invited Speaker,*** Pleasanton, CA.

[144] Feb 20-21 *Palo Alto Phillips Research Lab*, "*High Definition Video Coding for Multimedia Networks,*" ***Invited Speaker,*** Palo Alto, CA.

[145] Jan 8 *Bellcore Research Laboratory*, "*Video Coding for Broadband Networks,*" in "Information Networking at CMU: A Symposium at Bellcore." ***Invited Speaker,*** Morristown, NJ.

1991

[146] Nov 4-6 *25th Asilomar Conference, Invited Paper* in session on "*Signal Processing and Coding for Data Storage.*" Monterey, CA.

[147] Sep 5-6 *ONR Workshop on Matched Field Processing*, participation by invitation, Fairfax, VA.

[148] May 20-27 *Ruhr Univ. of Bochum*, "*Markov Random Fields.*" ***Invited Speaker,*** Bochum, Germany.

[149] Jan 8 *Bellcore Navsink Research Center*, "*Image Processing and Video Coding,*" ***Invited Speaker,*** "Information Networking at CMU: A Symposium at Bellcore." Navsink, NJ.

1990

[150] Oct 10-12 *IEEE Signal Processing 5th Workshop on Spectral Estimation and Modeling*, ***Invited Paper*** on "*Cramér-Rao Bounds for Location of Unknown Multiple Sources in a Multipath Environment,*" Rochester, NY.

[151] Jun 18-29 *Radar and Sonar Institute for Mathematics and Its Applications (IMA) Summer Program*, "*Ambiguity in Sonar,*" ***Invited Speaker,*** University of Minnesota, Minneapolis, MN.

1989

[152] Sep 19-23 *OCEANS'89, IEEE International Symposium on Oceanic Engineering,* paper presented by co-author on "Range Sensitivity in a Multipath Environment," Seattle, WA (not present).

1988

[153] Nov 15 *Mathematics Systems Center, University of Florida*, "*Error Distributions for Nonlinear Filters,*" ***Invited Speaker,*** Gainesville, FL.

[154] Aug 3-5 *IEEE Acoustics, Speech, and Signal Processing Fourth Workshop on Spectral Estimation and Modeling*, "Linear Estimation of ARMA Processes," ***Invited Speaker,*** Minneapolis, MN.

[155] Jul 18-29 *Nato Advanced Study Institute on Underwater Acoustic Data Processing, Invited Speaker,* Kingston, Ontario, Canada.

1986

[156] Jul 9-17 *Nato Advanced Study Institute on Mathematical Limits for Communications Systems,* "*Nonlinear Filtering: Limits on Performance and Implementation,*" ***Invited Speaker,*** Il Ciocco, Castelvecchio, Italy.

[157] May26-30*New Horizons in System Theory*, participation by invitation by the Director (R. Kalman), "*Recursive Maximunm Likelihood,*" ***Invited Speaker,*** Villa Olmo, Cuomo, Italy.

[158] May 14 ***Stochastics Systems Seminar, Laboratory for Information and Decision Systems (LIDS), MIT,*** "*Recursive Identification of Dynamical Systems,*" ***Invited Speaker,*** Cambridge, MA.

[159] May 12 ***Acoustics Seminar, Department of Ocean Engineering, MIT***, "*Statistical Phase Unwrapping of Arctic Signals,*" ***Invited Speaker,*** Cambridge, MA.

1985

[160] Oct 7 ***LIDS Seminar, MIT***, "*Pole-Zero Identification for ARMA Models,*" ***Invited Speaker,*** Cambridge, MA.

[161] Aug12-Sep6 ***XLV Les Houches Summer School on Signal Processing,*** *invited set of five lectures*, "*Stochastic Filtering: Linear and Nonlinear,*" ***Invited Speaker,*** Les Houches, France.

[162] Jun24-28*ISIT '85, **IEEE International Symposium on Information Theory***, ***Invited Paper,*** "*Optimal Filtering in the Presence of Multipath,*" in *Invited Session on Stochastic Processes for Underwater Signal Processing*, Brighton, England.

[163] May 6 ***Acoustics Seminar, Department of Ocean Engineering, MIT***, "*A New Method for Spectral Analysis of ARMA Models,*" ***Invited Speaker,*** Cambridge, MA.

1984

[164] Oct. 15 ***Acoustics Seminar, Department of Ocean Engineering, MIT***, "*Optimal Phase Demodulation,*" ***Invited Speaker,*** Cambridge, MA.

[165] Jul30-Aug10 ***Nato Advanced Study Institute on Adaptive Methods in Underwater Acoustics,*** "*Range and Bearing Determination: Maximum Likelihood and Kalman-Bucy Techniques*," ***Invited Speaker,*** Lüneburg, Germany.

1983

[166] Oct12-15*Workshop on Architectures for Signal Processing*, "*Array Architectures for Signal Processing,*" ***Invited Speaker,*** Universidade de Aveiro, Aveiro, Portugal.

[167] Oct3-8 ***LIDS Seminar, MIT***, "*Optimal Filtering and Phase Demodulation,*" ***Invited Speaker,*** Cambridge, MA.

1982

[168] May16-28 ***Nato Advanced Study Institute on Nonlinear Stochastic Problems,*** co-director, ***Invited Speaker***, "*Phase Demodulation and Nonlinear Filtering,*" Armação de Pêra, Algarve, Portugal.

[169] Aug5-7 ***Workshop on Issues in Acoustic Signal Processing and Recognition***, ***Invited Speaker***, "*Geometric Aspects in Array Processing,*" San Miniato, Italy.

1981

[170] Jul10-12 ***2nd Joint Ibero Workshop on Signal Processing,*** *organizer and chair of special session on Signal Processing Applications*, Vigo, Spain.

[171] Jun30-Jul14 ***Workshop on Realization and Synthesis of Nonlinear Systems,*** *invited presentation,* "*Optimal Nonlinear Filtering: Structures and Performance,*" Université de Rome, Rome, Italy.

[172] Mar11-12 ***Journées sur le Filtrage Nonlinéaire,*** *invited lecture*, "*Démodulation Absolue de la Phase,*" Laboratoire d'Automatique et d'Analyse de Systèmes (LAAS), Toulouse, France.

1980

[173] Aug26-28 ***Nato Advanced Study Institute on Underwater Acoustics and Signal Processing,*** "*Modeling, Algorithmic and Performance Issues in Deepwater Ranging Sound Systems,*" ***Invited Speaker,*** Kollekole, Denmark.

1978

[174] Mar. ***INRIA*** (Rocquencourt), ***Laboratoire de Signals et Systèmes*** (LSS) (Université de Paris et École Supérieur de Électricité, Gif-Sur-Yvette), and ***Laboratoire d'Automatique et d'Analyse de Systèmes*** (LAAS, Toulouse), visit at invitation of Services Culturels, Ambassade de France, France.

1977

[175] Nov. *Tema 8, Congresso dos Engenheiros*, chaired session, *Invited Speaker*, "*Teoria dos Sistemas*," Lisboa, Portugal.

Patents

[1] *"Efficient and Robust Method for Affine Invariant Feature Detection,"* Bernardo Pires and José M. F. Moura, Provisional Patent filed with the US Patent and Trademark Office, October 2011.

[2] *"Scale cross-correlation technique for ultrasonic velocity robustness,"* Joel B. Harley and José M. F. Moura, Provisional Patent filed with the US Patent and Trademark Office, June 2011.

[3] "*Time Reversal Synthetic Aperture Radar Imaging*," Yuanwei Jin and José M. F. Moura, Patent and Trademark Office, **S.N. 7,928,896**, issued April 19, 2011; initially filed, July 9, 2008, S.N. 12/217,839.

[4] "*Contrast-Invariant Registration of Cardiac and Renal Magnetic Resonance Perfusion Images*," Ying Sun, Marie-Pierre Joly, and José M. F. Moura, Patent and Trademark Office, **S.N.** 7,734,075 June 8, 2010.

[5] "*Integrated Registration of Dynamic Renal Perfusion MR Images*," Ying Sun, Marie-Pierre Joly, and José M. F. Moura, Patent and Trademark Office, **S.N. 7,394,921**, issued July 1, 2008; foreign patent filed in The Netherlands, March 2004.

[6] "*System and Method for Generating a Three-dimensional Model from a Two-dimensional Image Sequence*," Pedro M. Q. Aguiar and José M. F. Moura, Patent and Trademark Office, **S.N. 6,760,488**, issued July 6, 2004.

[7] "*Soft and Hard Sequence Detection in ISI Memory Channels*," José M. F. Moura and Alek Kavcic, US Patent and Trademark Office, **S.N. 6,438,180**, issued August 20, 2002.

[8] "*Method and Apparatus for Correlation-Sensitive Adaptive Sequence Detection*," Aleksandar Kavcic and José M. F. Moura, US Patent and Trademark Office, **S.N. 6,201,839**, issued March 13, 2001.

[9] "*Adaptive Parametric Signal Predistorter for Compensation of Time Varying Linear and Nonlinear Amplifier Distortion*," José M. F. Moura, John Stonick, and Virginia Stonick, U.S. Patent and Trademark Office, **S.N. 5,900,778**, issued May 4, 1999.

[10] "*Generative Video: Very Low Bit Rate Video Compression*," José M. F. Moura and Radu S. Jasinschi, US Patent and Trademark Office, **S.N. 5,854,856**, issued December 29, 1998.

[11] "*Noncausal Predictive Image Codec*," Nikhil Balram and José M. F. Moura, US Patent and Trademark Office, **S.N. 5,689,591**, issued November 18, 1997.

[12] "*System and Method for Collaborative Resource Tracking,"* Usman Khan, Soummya Kar, José M. F. Moura, patent filed with USPTO on November 9, 2010; previously, *"Collaborative Tracking in Cluttered Indoor Environments,"* Usman Khan, Soummya Kar, José M. F. Moura, provisional patent submitted to USPTO, November 09, 2009.

[13] "*Time Reversal Beamforming For Cancer Detection Using Electromagnetic Radiation*," Yuanwei Jin and José M. F. Moura, filed with the US Patent Office, July 9, 2008, S.N. 12/217,838.

Disclosures

[14] "*Time Reversal Beamforming for Cancer Detection using ElectroMagnetic Radiation*," Yuanwei Jin and José M. F. Moura, disclosure filed with the CMU Technology Transfer Office, June 8, 2007.

[15] "*Partition-and-shift LDPC Codes – a Class of Highly Structured LDPC Codes with Arbitrary Large Girth*," Jin Lu and José M. F. Moura, disclosure filed with the CMU Technology Transfer Office, January 16, 2005.

[16] "*Integrated Registration of Dynamic Renal Perfusion MR Images*," Ying Sun, Marie-Pierre Joly, and José M. F. Moura, disclosure filed with Siemens Corporation Intellectual Property Department (IPD), 186 Wood Avenue South, Iselin, NJ 08830, March 11, 2004.

[17]   "*Contrast-Invariant Registration of Cardiac and Renal MR Perfusion Images,*" Ying Sun, Marie-Pierre Joly, and José M. F. Moura, disclosure filed with Siemens Corporation Intellectual Property Department (IPD), 186 Wood Avenue South, Iselin, NJ 08830, March 11, 2004.

[18]   "*An Efficient Implementation of a Video Codec Compliant to H.263 and H.263 Version 2,*" Deepak Turaga, Tsuhan Chen, and José M. F. Moura, disclosure filed with the CMU Technology Transfer Office, January 16, 2001.

[19]   "*Robust Receivers,*" Chuang (Mike) He and José M. F. Moura, Invention disclosure filed with the CMU Technology Transfer Office, December 1997.

Current Ph.D. Students

Dusan Jakovetic (co-advisor, João Xavier) (Started September 2008)
Augusto Almeida Santos (co-advisor, João Xavier) (Started September 2008)
Joel Harley (Started Septenmber 2008)
Aurora Schmidt (Started September 2007)
Kyle Anderson (Started September 2007)
Marek Telgarski (co-advisor, James Hoe)
Joya Deri (Started September 2010)
June Zhang (Started September 2010)
Subhro Das (Started September 2011)
Stephen Kruzick (Started September 2011)

Current MSc. Students

Current Undergraduate Students

Current Post-docs

Aliaksei Sandryhaila

Current Staff

Vladimir Arbatov

Ph.D. Graduates (36) (With 1st and/or Current Job)

Nickolas O'Donoughue (December 2, 2011, ECE CMU Post-doc, Lincoln Lab)
Bernardo Pires (October 5, 2011, Robotics Institute, CMU)
Divyanshu Vats (May 6, 2011, Institute for Mathematics and Its Applications (IMA))
Soummya Kar (May 5, 2010, Princeton University)
Basil AsSadhan (October 2, 2009, KSU, King Saud University, Riyadh, Saudi Arabia)
Usman Kahn (August 25, 2009, University of Pennsylvania, currently Tufts University)
Hsun-Hsien Chen (September 26, 2007, Harvard Children's Hospital)
David Sepiashivili (May 12, 2006, currently at Pipeline Trading, NYC,NY)
Saeed Aldosari (December 7, 2005, King Saud University, Riyadh, Saudi Arabia)
Haotian Zhang (December 1, 2005, 1st job Maxtor, Shrewsbury, MA; currently with Marvell, Denver CO; co-advisor Bruce Krogh)

Aca Gacic (December 8, 2005; Bosch Research Center, Pittsburgh PA; co-advisor Markus Pueschel)
Jin Lu (December 14, 2005; Storage Tek (now Sun Microsystems), Oklahoma, TN)
Ying Sun (September 3, 2004; Siemens Research Corporation, Princeton, NJ)
Charnchai Pluempitiwiriyawej (September 2003; Chulalongkorn University, Thailand)
Hyeong-Seok Viktor Ha (July 2002, Samsung)
Pedro M. Q. Aguiar (July 2000; IST)
Susan Schweizer (September 1999; MediaSite)
Jia-Ching Cheng (December 1998; University in Taiwan)
Alek Kavcic (98; Harvard University)
Marcelo G. S. Bruno (98; Instituto Tecnológico Aeronaútica, Brazil)
Irina Gladkova (98; CS Dep., CUNY City College, co-advisor with Louis Auslander)
Nirmal Keshava (97; Lincoln Lab, MIT)
Chuang (Mike) He (97; Los Alamos National Lab)
Fernando Martins (97; Intel, currently, Feb 2011, President and General Manager, Intel Brazil)
Amir Asif (96; CMU, currently Technical University British Columbia)
Steve Benno (95; Bell Labs)
Radu S. Jasinschi (95; Tektronix, Phillips Research Lab)
Sauraj Goswami (95; Tudor Investments, Wall Str.)
Matthew Vea (93; Digital Comp. Corp., currently Quantum, now Maxtor)
Nikhil Balram (92; IBM, then several positions including Marvell, currently, Feb 2011, President of Ricoh Innovations, Inc (RII))
M. João D. Rendas (91; CNRS, France)
Carlos A. C. Belo (90; IST)
Victor A. N. Barroso (89; IST)
M. Isabel L. F. Ribeiro (88; IST)
Isabel M. G. Lourtie (88; IST)
José M. N. Leitão (83; IST)

MSc. (36 students supervised)

Joel Harley (May 2011)
Kyle Andersen (May 2010)
Divyanshu Vats (December 2009)
Rohan Chabukswar (Project, May 2009)
Nicholas O'Donoughue (May 2008)
Malolan Santhanakrishnan (Project, May 2006)
Pryianka Luhadia (Project, May 2006)
Neeti Gore (September 2005)
Elijah Liu (December 2003)
Nehemiah Liu (December 2003)
Gavin Haentjes (May 2000)
Roger Kumar (May 2000, Apple Computer)
Scott Schremmer (May 2000, Lincoln Lab)
David Sepiashvili (May 2000, continuing PhD)

Urs W Batzel (May 1999, Northrup-Grumman)
Kelly McClure (December 1997, Pacemaker)
Hirohisa Shiojiri (December 1995, NEC)
Jyh-Cherng Lin (December 1995, start-up)
Neil Aggarwal (October 1994, Bellcore)
Amir Asif (March 1993; continued for PhD)
Prakash Mishra (October 1992, Bellcore)
Yoshito Tobe (February 1992, Toshiba)
Michael Souryal (October 1991, Bellcore)
Satya Patel (May 1990, Bell Labs)
Paul McKee (December 1988, Symantec)
Michael McPheters (December 1988, Bell Labs)
Edgar Ataíde (June 1986)
M. João D. Rendas (March 1985; continued PhD)
Jorge Salvador Marques (July 1984)
João M. Lemos (July 1984)
Rogério Carapuça (June 1984)
M. Manuela Veloso (June 1984)
Agostinho Claúdio Rosa (March 1984)
Carlos A. C. Belo (January 1984; continued PhD)
M. Isabel Ribeiro (December 1983; continued PhD)
Isabel Lourtie (December 1983; continued PhD)

Undergraduate Students (Recent Incomplete List)

Natamon Thavornpitak   (2011)
Karnahaar Singh   (2011)
Faraz Chowdhury
Chen (Eva) Song
Fengyuan Gong
W. Garrett Jenkinson
Kyle Andersen

Long Term Visitors, Post-Docs, and Staff

Christian R. Berger (post-doc, 2009-2011, Qualcomm)
Jovan Ilic (staff 2004-2009, Booz, Allen, Hamilton)
Yuanwei Jin (University Maryland Eastern Shore, Jun 2003-Aug 2008))
Paolo D'Alberto (Yahoo, June 2005 through August 2007)
Marcelo G. S. Bruno (Inst. Tecnológico de Aeronaútica, Rio de Janeiro, Brasil, February 2005)
Pei Chung (PostDoc, May 2002-January 2004; then Univ. Michigan, Ann Arbor)
HuiMin Chen (Post-Doc, June 2002-December 2002, currently at Univ. New Orleans)
Franz Franchetti (Ph.D. grad. Student, C. S. Dep., Un. of Vienna, Austria, May-Aug. 2001)
Sebastieen Bausson (Ph.D. student, INPG, CEPHAG, Grenoble, Fr., Sum.99; Fall 00; Sum. 01)
Marcelo G. S. Bruno (Universidade São Paulo, Brasil, Summer 99, Spring 2001, Winter 2003)
Jeremy Johnson (Visiting Associate Professor, Drexel University, sabbatical leave, 1998-99)
Markus Püschel (PostDoc Research Associate, Karlsruhe Univ., Germany, Nov.1998-Nov. 99)
Amir Asif (PostDoc Research Associate, Nov. 97-June 98, York University, Toronto, Canada)
Carlos A. C. Belo (Visiting Associate Prof., IST, sabbatical leave, 1998-99)
João Maciel (Ph.D. graduate student, IST, Summer 1999)

Kehua Jiang (faculty at University of TV Broadcasting, Peking, China, res. associate, 98-99)
João Xavier (Ph.D. graduate student, IST, Fall 1997, Spring 1998, Fall 2009)
John Stonick (PostDoc Research Associate, 1993-1996, now at Oregon State Univ.)
José M. N. Leitão (Visiting Associate Prof., IST, sabbatical leave, 1993-94)
Didier Mauuary (Ph.D. student, INPG, CEPHAG, Grenoble, France, Summer 1993)
Isabel Lourtie (Visiting Assistant Prof., IST, sabbatical leave, 1991-92)
João J. S. Sentieiro (Visiting Associate Prof., IST, sabbatical leave, 1991-92)

Publications

Books

[1]   Richard S. Bucy and José M. F. Moura, "*Nonlinear Stochastic Problems*," edited volume, D. Reidel, Amsterdam, The Netherlands, 1983.

[2]   Isabel M. G. Lourtie and José M. F. Moura, "*Acoustic Signal Processing for Ocean Exploration*," edited volume, D. Reidel, Amsterdam, The Netherlands, 1993.

Chapters in Books

[3]   Usman Khan, Soummya Kar, José M. F. Moura, "*Distributed Algorithms in Sensor Networks*," invited chapter, eds. Simon Haykin and K. J. Ray Liu, April 2009.

[4]   Hsun-Hsien Chen and José M. F. Moura, "*Biomedical Signal Processing*," in **Biomedical Engineering And Design Handbook, Fundamentals**, 2nd edition, vol.1, edt. Myer Kutz, McGraw-Hill, NY, Chapter 22, pp. 559-579, November, 2009. *Invited Chapter.*

[5]   Pedro M. Q. Aguiar, Radu S. Jasinschi, José M. F. Moura, and Charnchai Pluempitiwiriyawej, "*Content-Based Image Sequence Representation*," in **Handbook Digital Image Sequence Processing: Compression and Analysis**, edt. Todd Reed, CRC Press, Boca Raton, FL, 2004, Chapter 2, pp. 5-72,. *Invited Chapter.*

[6]   Victor A. N. Barroso, João Xavier, and José M. F. Moura, "*Blind Channel Identification and Source Separation in SDMA Systems*," in **Handbook on Antennas in Wireless Communications**, edt. Lal Godara, Chapter 21, pp. 21-1–21-55, CRC Press, Boca Raton, FL, 2002. *Invited Chapter.*

[7]   Victor A. N. Barroso and José M. F. Moura, "*Beamforming with Correlated Arrivals in Mobile Communications*" in **CRC Handbook on Digital Signal Processing**, edts. V. Madisetti and Williams, Chapter 69, pp. 69-1 69-19, CRC, Boca Raton, FL, 1998. *Invited Chapter.*

[8]   José M. F. Moura and Nikhil Balram, "*Statistical Algorithms for Noncausal Markov Random Fields*," in **Handbook of Statistics**, edts. N. K. Bose and C. R. Rao, Chapter 15, North Holland, Amsterdam, The Netherlands, July 1993. *Invited Chapter.*

[9]   José M. F. Moura and Carlos A. C. Belo, "*Threshold Extension for Nonlinear Techniques*," in **Underwater Acoutic Data Processing**, edt. Y. T. Chan, pp. 433-452, D. Reidel, Amsterdam, The Netherlands, 1989. *Invited.*

[10]   José M. F. Moura, "*Stochastic Filtering: Linear and Nonlinear,*" in ***Signal Processing Les Houches XLV,*** edts. J. L. Lacoume and R. Stora, pp. 205-276, North Holland, Amsterdam, The Netherlands, 1987. *Invited chapter*.

[11]   José M. F. Moura and M. João D. Rendas, "*Optimal Filtering in the Presence of Multipath,*" in ***Stochastic Processes in Underwater Acoustics***, edt. C. R. Baker, Chapter 3:64-94, Springer Verlag, Berlin, 1986. *Invited Chapter*.

[12] José M. F. Moura, "*Geometric Aspects in Array Processing,*" in ***Issues in Acoustic Signal/ Image Processing and Recognition***, edt. C. H. Chen, pp. 139-154, Springer Verlag, Berlin, 1983.

[13] José M. F. Moura, "*Phase Demodulation: A Nonlinear Filtering Approach,*" in ***Nonlinear Stochastic Problems***, edts. Richard S. Bucy and José M. F. Moura, D. Reidel, Dordrecht, The Netherlands, 1983.

Journal Articles

[14] Nicholas O'Donoughue and José M. F. Moura, "*Gaussian Target Detection with Single-Antenna Time Reversal,*" submitted for publication in **IEEE Transactions on Signal Processing**, 2012.

[15]   Joel B. Harley and José M. F. Moura, "*Scale Transform Signal Processing for Optimal Ultrasonic Temperature Compensation,*" **IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control**, Submitted, February 2012.

[16]   Soummya Kar and José M. F. Moura, "*Kalman Filtering with Intermittent Observations: Weak Convergence and Moderate Deviations,*" accepted for publication, **IEEE Transactions on Automatic Control**; also, posted http://arxiv.org/abs/0910.4686, 37 pages, October 24, 2009.

[17]   Soummya Kar, José M. F. Moura, Kavita Ramanan "*Distributed Parameter Estimation in Sensor Networks: Nonlinear Observation Models and Imperfect Communication,*" accepted for publication **IEEE Transactions on Information Theory**, vol. 58:( ), pp., 2012. Initial submission: August 2008; available: http://arxiv.org/abs/0809.0009.

[18] Nicholas O'Donoughue and José M. F. Moura, "*On the Product of Independent Complex Gaussians,*" **IEEE Transactions on Signal Processing**, vol. 60(3), pp. 1050-1063, March, 2012. DOI: 10.1109/TSP.2011.2177264.

[19]   S. Kar, Bruno Sinopoli and J.M.F. Moura, "*Kalman Filtering with Intermittent Observations: Weak Convergence to a Stationary Distribution,*" **IEEE Transactions on Automatic Control**, vol: 57(2), pp.: 405-420, February 2012. Digital Object Identifier: 10.1109/TAC.2011.2161834. Also posted: http://arxiv.org/abs/0903.2890, March 2009.

[20] Dusan Jakovetic**,** João Xavier, and José M. F. Moura "*Fast Distributed Gradient Methods,*" **submitted to IEEE Transactions on Automatic Control**, Nov. 2011, available at: http://arxiv.org/abs/1112.2972.

[21] Dragana Bajovic, Dusan Jakovetic**,** José M. F. Moura, João Xavier, and Bruno Sinopoli "*Large Deviations Performance of Consensus+Innovations Distributed Detection with non-Gaussian Observations,*" **submitted to IEEE Transactions on Signal Processing**, Nov. 2011, available at: http://arxiv.org/abs/1111.4555.

[22] Dragana Bajovic, Dusan Jakovetic*,* João Xavier, Bruno Sinopoli, and José M. F. Moura "*Distributed Detection via Gaussian Running Consensus: Large Deviations Asymptotic Analysis,*" **IEEE Transactions on Signal Processing**, vol. 59(9), pp. 4381-4396, Sept. 2011. DOI: 0.1109/TSP.2011.2157147. Initial submission: December 21, 2010. arXiv: http://arxiv.org/PS_cache/arxiv/pdf/1012/1012.4668v1.pdf.

[23] Dusan Jakovetic*,* João Xavier, and José M. F. Moura "*Cooperative Convex Optimization in Networked Systems: Augmented Lagrangian Algorithms with Directed Gossip Communication,*" **IEEE Transactions on Signal Processing**, vol. 59(8), pp. 3889-3902, Aug. 2011. DOI: 10.1109/TSP.2011.2146776 . Initial submission: July 21, 2010. arXiv post: http://arxiv.org/PS_cache/arxiv/pdf/1007/1007.3706v2.pdf.

[24] Dusan Jakovetic*,* José M. F. Moura, and João Xavier, "*Distributed Detection over Noisy Networks: Large Deviations Analysis,*" **submitted to IEEE Transactions on Signal Processing**, July 2011, available at: http://arxiv.org/abs/1108.1410.

[25] S. Kar, José M.F. Moura, and H.V. Poor, *"Distributed linear parameter estimation: asymptotically efficient adaptive strategies",* submitted to the **SIAM J. Control Optim.**, Initial Submission: Sept. 22, 2011. Posted: http://arxiv.org/abs/1109.4960.

[26] Soummya Kar and José M. F. Moura, "*Convergence Rate Analysis of Distributed Gossip (Linear Parameter) Estimation: Fundamental Limits and Tradeoffs,*" **IEEE Journal on Selected Topics on Signal Processing**, vol. 5:(4), pp. 674-690, August 2011. Digital Object Identifier: 10.1109/JSTSP.2011.2127446.

[27] Divyanshu Vats and José M. F. Moura, "Finding Non-overlapping Clusters for Generalized Inference Over Graphical Models*,*" submitted to **IEEE Transactions on Signal Processing**. Initial Post, July 20, 2011: http://arxiv.org/abs/1107.4067.

[28] Soummya Kar and José M. F. Moura, "*Gossip and Distributed Kalman Filtering: Weak Consensus under Weak Detectability,*" **IEEE Transactions on Signal Processing**, vol. 59:(4), pp. 1766-1784, April 2011. Digital Object Identifier: 10.1109/TSP.2010.2100385.

[29] Divyanshu Vats and José M. F. Moura, "*Telescoping Recursive Representations and Estimation of Gauss–Markov Random Fields,*" **IEEE Transactions on Information Theory**, vol. 57:3, pp. 1645-1664, March 2011. Digital Object Identifier: 10.1109/TIT.2011.2104612. Initial Post, July 30, 2009: http://arxiv.org/abs/0907.5397.

[30] Anthony Rowe, Mario E. Berges, Gaurav Bhatia, Ethan Goldman, Raj Rajkumar, James H. Garrett, José M. F. Moura, and Lucio Soibelman. "*Sensor Andrew: Large-scale Campus-wide Sensing and Actuation.*" **IBM Journal of Research and Development**, vol. 55: 1.2, pp. 6:1 - 6:14, January 2011. Digital Object Identifier: 10.1147/JRD.2010.2089662.

[31] Yuanwei Jin, José M. F. Moura, Yi Jiang, Daniel Stancil, and Ahmet Cepni, "*Time Reversal Detection in Clutter: Additional Experimental Results*," **IEEE Transactions on Aerospace and Electronics Systems**, 47:(1), pp. 140-154, January 2011. Digital Object Identifier: 10.1109/TAES.2011.5705665

[32]   A. Dimakis, Soummya Kar, José M.F. Moura, Michael Rabbat and Anna Scaglione, "*In-Network Signal Processing with Gossip Algorithms*", **IEEE Proceedings**, vol. 98:11, pp. 1847-1864, November 2010. Digital object identifier: 10.1109/JPROC.2010.2052531. **Invited**; initial submission: November 2009.

[33]   Dusan Jakovetic, João Xavier, and José M. F Moura, "*Weight Optimization for Consensus Algorithms with Correlated Switching Topology*," **IEEE Transactions on Signal Processing**, Vol. 58:(7), pp. 3788-3801, July 2010. Digital Object Identifier: 10.1109/TSP.2010.2046635. Initial post: http://arxiv.org/abs/0906.3736, June 2009.

[34]   Marija D. Ilić, Le Xie, Usman A. Khan, and José M. F. Moura, "*Modeling of Future Cyber–Physical Energy Systems for Distributed Sensing and Control*," **IEEE Trans. On Systems, Man and Cybernetics, Part A: Systems and Humans**, Vol.:40:4, pp.:825-838, July 2010. Digital Object Identifier: 10.1109/TSMCA.2010.2048026.

[35]   U. A. Khan, S. Kar, and J. M. F. Moura, "*Higher Dimensional Consensus: Learning in Large-scale Networks*," **IEEE Transactions on Signal Processing**, Vol. 58:5, pp. 2836-2849, May 2010; initial post: http://arxiv.org/abs/0904.1840, April 2009.

[36]   U. A. Khan, S. Kar, and J. M. F. Moura, "*DILAND: An Algorithm for Distributed Sensor Localization with Noisy Distance Measurements*," **IEEE Transactions on Signal Processing**, Vol. 58:3, pp. 1940-1947, March 2010. Digital Object Identifier: 10.1109/TSP.2009.2038423. Initial post: http://arxiv.org/abs/0910.2743, May 2009.

[37]   Soummya Kar and José M. F. Moura, "*Distributed Consensus Algorithms in Sensor Networks: Quantized Data and Random Link Failures*," **IEEE Transactions on Signal Processing**, 58:3, pp., March 2010; initial post: http://arxiv.org/abs/0712.1609, December 2007.

[38]   Yuanwei Jin, José M. F. Moura, and Nicholas O'Donoughue**,** "*Time Reversal in Multiple-Input Multiple-Output Radar*," **IEEE Transactions on Selected Topics in Signal Processing**, 4:1, pp. 210-225, February 2010. DOI: 10.1109/JSTSP.2009.2038983.

[39]   Jin Lu and José M. F. Moura, "*Linear Time Encoding of LDPC Coding*," **IEEE Transactions on Information Theory**, 56(1), pp. 233-249, January, 2010. DOI: 10.1109/TIT.2009.2034823.

[40]   Franz Franchetti, Markus Puschel, Yevgen Voronenko, Srinivas Chellappa, and José M. F. Moura, "*Discrete Fourier Transform on Multicores*," **IEEE Signal Processing Magazine**, Vol. 26:6, pp. 90-102, November 2009; DOI: 10.1109/MSP.2009.934155.

[41]   Haotian Zhang, José M. F. Moura, and Bruce Krogh, "*Dynamic Field Estimation Using Wireless Networks: Tradeoffs Between Estimation Error and Communication Cost*," **IEEE Transactions on Signal Processing**, 57:6, pp. 2383-2395, June 2009. DOI: 10.1109/TSP.2009.2015110.

[42]   U. A. Khan, S. Kar, and J. M. F. Moura, "*Distributed Sensor Localization in Random Environments using Minimal Number of Anchor Nodes*," **IEEE Transactions on Signal Processing**, 57: 5, pp. 2000-2016, May 2009; DOI: 10.1109/TSP.2009.2014812.

[43]   Yuanwei Jin and José M. F. Moura, "*Time Reversal Detection Using Antenna Arrays,*" **IEEE Transactions on Signal Processing**, 57:4, pp. 1396-1414, April 2009. DOI: 10.1109/TSP.2008.2010425.

[44]   Soummya Kar and José M. F. Moura, "*Distributed Consensus Algorithms in Sensor Networks: Link Failures and Channel Noise,*" **IEEE Transactions on Signal Processing**, 57: 1, pp. 355-369, January, 2009. DOI: 10.1109/TSP.2008.2007111.

[45] Usman Khan and José M. F. Moura "*Distributing the Kalman Filter for Large-Scale Systems,*" **IEEE Transactions on Signal Processing**, vol. 56:10, pp. 4919-4935, Oct. 2008.

[46] Markus Pueschel and José M. F. Moura, "*Algebraic Theory of Signal Processing: Foundation and 1D Time,*" **IEEE Transactions on Signal Processing** ,vol. 56(8), pp. 3572-3585, August 2008.

[47] Markus Pueschel and José M. F. Moura, "*Algebraic Theory of Signal Processing: 1D Space,*" **IEEE Transactions on Signal Processing**, vol. 56:8, pp. 3586-3599, August 2008.

[48] Hsun-Hsien Chang; Moura, J.M.F.; Wu, Y.L.; Chien Ho, "*Automatic Detection of Regional Heart Rejection in USPIO-Enhanced MRI,*" **IEEE Transactions on Medical Imaging**, vol. 27:8, pp. 1095-1106, July 2008.

[49]   Soummya Kar and José M. F. Moura, "*Sensor Networks with Random Links: Topology Design for Distributed Consensus,*" **IEEE Transactions on Signal Processing**, vol. 56: 7, pp. 3315-3326, July 2008.

[50]   Soummya Kar, Saeed Aldosari, and José M. F. Moura, "*Topology for Distributed Inference on Graphs,*" **IEEE Transactions on Signal Processing**, vol. 56:6, pp. 2609-2613, June 2008. DOI: 10.1109/TSP.2008.923536.

[51]   Markus Pueschel and José M. F. Moura, "*Algebraic Theory of Signal Processing: 1D-Cooley-Tukey Type Algorithms for DCTs and DSTs,*" **IEEE Transactions on Signal Processing**, 56: 4, pp. 1502-1521, April 2008.

[52]   Yuanwei Jin and José M. F. Moura, "*Time Reversal Imaging by Adaptive Interference Canceling,*" **IEEE Transactions on Signal Processing**, vol 56:1, pp. 233-247, January 2008.

[53]   Jin Lu and José M. F. Moura, "*TS-LDPC Codes: Turbo-structured Codes with large Girth,*" **Transactions on Information Theory**, 53(3), pp 1080-1094,March 2007.

[54]   José M. F. Moura and Yuanwei Jin, "*Detection by Time Reversal: Single Antenna,*" **IEEE Transactions on Signal Processing**, 55:1, pp.187-201, January 2007.

[55]   Saeed Aldosari and José M. F. Moura, "*Detection in Sensor Networks: The Saddlepoint Approximation,*" **IEEE Transactions on Signal Processing**, 55:1, pp. 327-340, January 2007.

[56]   Jin Lu and José M. F. Moura, "*Structured LDPC codes for high-density recording : large girth and low error floor,*" **IEEE Transactions on Magnetics**, 42(2), Part 1, pp. 208-213, February 2006.

[57] Victor Ha and José M. F. Moura, "*Affine-permutation Invariance of 2D Shapes,*" **IEEE Transactions on Image Processing**, 14:(11), pp.1687-1700, November 2005.

[58] Jin Lu and José M. F. Moura, "*Partition-and-shift LDPC Codes for High Density Magnetic Recording,*" *IEEE Transactions on Magnetics*, 41:(10), pp.2977-2979, October 2005.

[59] Pedro M. Q. Aguiar and José M. F. Moura, "*Figure Ground Segmentation from Occlusion,*" in press, **IEEE Transactions on Image Processing**, 14:(8), pp.1109-1124, August 2005.

[60] Charnchai Pluempitiwiriyawej, José M. F. Moura, Yi-Jen L. Wu, and Chien Ho, "*STACS: New Active Contour Scheme for Cardiac MR Image Segmentation,*" **IEEE Transactions on Medical Imaging**, vol 24:5, pp.593-603, May 2005.

[61] Markus Püschel, José M. F. Moura, Jeremy Johnson, David Padua, Manuela Veloso, Bryan W. Singer, Jianxin Xiong, Franz Franchetti, Aca Gacic, Yevgen Voronenko, Kang Chen, Robert W. Johnson, and Nick Rizzolo "*SPIRAL: Code Generation for DSP Transforms,*" **IEEE Proceedings**, Volume: 93, number 2, pp. 232-275, February 2005. *Invited paper*, *Special Issue on Program generation, Optimization, and Platform Adaptation*.

[62] Amir Asif and José M. F. Moura, "Inversion of Block matrices with L-Block Banded Inverse," in press, **IEEE Transactions on Signal Processing**, 53:2, pp. 630-642, February, 2005.

[63] Markus Püschel, Bryan Singer, Jianxin Xiong, José M. F. Moura, Jeremy Johnson, David Padua, Manuela Veloso, and Robert Johnson, "*SPIRAL: A Generator for Platform-Adapted Libraries of Signal Processing Algorithms.*" **The International Journal of High Performance Computing and Applications**, vol. 18:(1), pp. 21-45, February 2004.

[64] José M. F. Moura, Jin Lu, and Haotian Zhang, "*Structured LDPC Codes with Large Girth,*" *IEEE Signal Processing Magazine*, vol. 21:1, pp.42-55, January 2004. Included in *Special Issue on Iterative Signal Processing for Communications*.

[65] Pedro M. Q. Aguiar and José M. F. Moura, "*Rank 1 Weighted Factorization for 3D Structure Recovery: Algorithms and Performance Analysis.*" **IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)**, vol. 25 (9), pp. 1134-1149, September 2003.

[66] Ying Sun, Dewen Yang, Qing Ye, Mangay Williams, José M. F. Moura, Fernando Boada, Zhi-Pei Liang, and Chien Ho, "*Improving Spatiotemporal Resolution of USPI-Enhanced Dynamic Imaging of Rat Kidneys.*" **Magnetic Resonance Imaging**, 21:6, pp. 593-598, July 2003.

[67] Markus Pueschel and José M. F. Moura, "*The Algebraic Approach to the Discrete Cosine and Sine Transforms and their Fast Algorithms.*" **SIAM Journal of Computing**, vol. 32 (5), pp. 1280-1316, March 2003.

[68] Qing Ye, Dewen Yang, Mangay Williams, Donald S. Williams, Charnchai Pluempitiwiriyawej, José M. F. Moura, and Chien Ho, "*In-vivo Detection of Acute Rat Renal Allograft Rejection by MRI with USPIO Particles.*" **Kidney International**, 61:3, pp. 1124-1135, March 2002.

[69] Dewen Yang, Qing Ye, Mangay Williams, Ying Sun, Tom C.-C. Hu, Donald S. Williams, José M. F. Moura, and Chien Ho, "*USPIO-Enhanced Dynamic MRI: Evaluation of Normal and*

Transplanted Rat Kidneys.” **Journal on Magnetic Resonance in Medicine**, 46:1152-1163, November 2001.

[70]   Pedro M. Q. Aguiar and José M. F. Moura, “*3D Modeling from 2D Video*.” **IEEE Transactions on Image Processing**, Volume: 10 (10), pp. 1541-1551, October 2001.

[71]   Marcelo G. Bruno and José M. F. Moura, “*Multiframe Detector/ Tracker*.”   **IEEE Transactions on Aerospace and Electronics Systems**, vol. 37 (3), pp. 825-845, July 2001.

[72]   João Xavier, Victor A. N. Barroso, and José M. F. Moura, “*Closed-Form Correlative Coding for Blind Channel Identification from Second Order Statistics*.” **IEEE Transactions on Signal Processing**, 49 (5), pp. 1073-1086, May 2001.

[73]   Susan M. Schweitzer and José M. F. Moura, “*Efficient Detection in Hyperspectral Imagery*.” **IEEE Transactions on Image Processing**, Volume: 10 (4), pp. 584-597, April 2001.

[74] Susan M. Schweitzer and José M. F. Moura, “*Hyperspectral Imagery: Clutter Adaptation in Anomaly Detection*.” **IEEE Transactions on Information Theory**, *Special Issue on Information Theoretic Imaging*, 46(5), pp.1855-1871, August, 2000.

[75] Alek Kavcic and J. M. F. Moura “*Gauss-Markov Approximations and Information Loss*.” **IEEE Transactions on Information Theory**, 46(4), pp.1495-1509 July 2000.

[76]   Alek Kavcic and J. M. F. Moura, “*The Viterbi Algorithm and Markovian Noise Memory*.” **IEEE Transactions on Information Theory**. Volume: 46 (1), pp. 291 –301, January 2000.

[77]   Marcelo G. S. Bruno and José M. F. Moura, “The Optimal 2D Multiframe Detector/ Tracker.” **International Journal of Electronics and Communications.** AEU-53 (6): pp. 1-17, December 1999.

[78]   Amir Asif and José M. F. Moura, “*Data Assimilation in Large Time Varying MultiDimensional Fields*,” **IEEE Transactions on Image Processing**, Volume: 8 (11), pp.1593 –1607, November 1999.

[79]   Jia-Ching Cheng and José M. F. Moura, “*Capture and Representation of Human Motion in Live Video Sequences*.” **IEEE Transactions on Multimedia**, Volume: 1 (2), pp. 144 –156, June 1999.

[80]   Nirmal Keshava and José M. F. Moura, “Matching *Wavelet Packets to Random Processes*.“ **IEEE Transactions on Signal Processing**, 47(6), pp. 1604-1614 , June 1999.

[81]   Steve A. Benno and José M. F. Moura, “*Scaling Functions Robust to Translations*.” **IEEE Transactions on Signal Processing**, 46(12), pp. 3269-3281, December 1998.

[82]   João Xavier, Victor A. N. Barroso, and José M. F. Moura, “*Closed-Form Blind Channel Identification and Source Separation in SDMA Systems through Correlative Coding*.” **IEEE Journal on Selected Areas in Communications**, 16(8), pp. 1506-1517, October 1998. Special Issue on Signal Processing for Wireless Communications.

[83]   Jia-Ching Cheng and José M. F. Moura, “Automatic Recognition of Human Walking in Real Video Sequences.” **Journal of VLSI Signal Processing Systems for Signal, Image, and Video**

Processing, 20⊗1/2), pp.107-120, October 1998. Special Issue on Multimedia Signal Processing. Invited paper.

[84]   José M. F. Moura and Marcelo G. S. Bruno, "*DCT/DST and Gauss Markov Fields: Conditions for Equivalence.*" **IEEE Transactions on Signal Processing**, 46(9), pp. 2571-2574, September 1998.

[85]   José M. F. Moura, "*The Future of Signal Processing in the Ocean: A Personal Perspective.*" **IEEE Signal Processing Magazine**, 21(2), pp. 43-51, July 1998.

[86]   Alek Kavcic and José M. F. Moura, "*Correlation-Sensitive Adaptive Sequence Detection.*" **IEEE Transactions on Magnetics**, 34(3), pp. 763-771, May 1998.

[87]   Chuang He and José M. F. Moura, "*Focused Detection via Multiresolution Analysis.*" **IEEE Transactions on Signal Processing**, 46(4), pp. 1094-1104, April 1998. Special Issue on Theory and Applications of Filter Banks and Wavelet Transforms.

[88]   Victor A. N. Barroso, José M. F. Moura, and João Xavier. "*Blind Array Channel Division Multiple Access AChDMA for Mobile Communications.*" **IEEE Transactions on Signal Processing**, 46(3), pp. 737-752, March 1998.

[89]   M. João D. Rendas and José M. F. Moura, "*Ambiguity Analysis in Source Localization.*" IEEE Transactions on Signal Processing, **IEEE Transactions on Signal Processing**, 46(2), pp. 294-305, February 1998.

[90]   Fernando C. M. Martins and José M. F. Moura, "*Video Representation With 3D Entities.*" **IEEE Journal on Selected Areas in Communications**, 16(1), pp. 71-85, January 1998. Special Issue on Very Low Bit Rate Video Coding.

[91]   Victor A. N. Barroso and José M. F. Moura, "Beamforming with Correlated Arrivals in Mobile Communications," in **Signal Processing Handbook**, Chapter 69, pp. 69-1 – 69-19, January 1998.

[92]   Alek Kavcic and José M. F. Moura, "*Statistical Study of Zig -Zag Transition Boundaries in Longitudinal Digital Magnetic Recording.*" **IEEE Transactions on Magnetics**, 33(6), pp. 4482-4492, November 1997.

[93]   José M. F. Moura and Sauraj Goswami. "*Gauss-Markov Random Fields With Continuous Indices.*" **IEEE Transactions on Information Theory**, 43(5), pp. 1560-1573, September 1997.

[94]   Alek Kavcic and José M. F. Moura, "*Experimental Validation of the Triangle Zig-Zag Transition Model.*" **IEEE Transactions on Magnetics**, 33(5): 2704-2706, September 1997.

[95]   Chuang (Mike) He and José M. F. Moura, "*Robust Detection With The Gap Metric."* **IEEE Transactions on Signal Processing**, 45(6), pp. 1591-1604, June 1997.

[96]   Steve A. Benno and José M. F. Moura, "On Translation Invariant Subspaces and Critically Sampled Wavelet Transforms," **Multidimensional Systems and Signal Processing**, 8(1-2) pp. 89-110, January 1997. Special issue on wavelets and multiresolution analysis. Invited paper.

[97]   Alek Kavcic and José M. F. Moura, "*Expedient Media Noise Modeling: Isolated and Interacting Transitions.*" **IEEE Transactions on Magnetics**, 32(5), pp. 3875-3877, September 1996.

[98] Nikhil Balram and José M. F. Moura, "*Noncausal Predictive Image Codec.*" **IEEE Transactions on Image Processing**, 5(8): pp. 1229-1242, August 1996.

[99] Amir Asif and José M. F. Moura, "*Image Codec With Noncausal Prediction, Residual Mean Removal, and Cascaded VQ.*" **IEEE Transactions on Video Technology**, 6(1):1-14, February 1996.

[100] José M. F. Moura, R. S. Jasinschi, H. Shiojiri, and J-C. Lin. "*Video Over Wireless.*" **IEEE Personal Communications**, 6(1):44-54, February 1996. Invited paper.

[101] José M. N. Leitão and José M. F. Moura, "*Acquisition in Phase Demodulation: Application to Ranging in Radar/ Sonar Systems.*" **IEEE Transactions on Aerospace and Electronic Systems**, 31(2):581-599, April 1995.

[102] Victor A. N. Barroso and José M. F. Moura, "*l_2 and l_1 Beamformers: Recursive Implementation and Performance Analysis,*" **IEEE Transactions on Signal Processing**, 42(6):1323-1334, June 1994.

[103] Nikhil Balram and José M. F. Moura, "*Noncausal Gauss Markov Random Fields: Parameter Structure and Estimation.*" **IEEE Transactions on Information Theory**, IT-39(4):1333-1355.July 1993.

[104] H. Tokuda, Yoshito Tobe, Stephen T.-C. Chen, José M. F. Moura, "*Continuous Media Communications with Dynamic QOS Control using ARTS with an FDDI Network.*" **ACM Computer Communications Review**, 22(4):88-98, October 1992.

[105] José M. F. Moura and Nikhil Balram, "*Recursive Structure of Noncausal Gauss Markov Random Fields,*" **IEEE Transactions on Information Theory**, IT-38(2):334-354, March 1992.

[106] M. João D. Rendas and José M. F. Moura, "*Cramér-Rao Bounds for Location Systems in Multipath Environments.*" **IEEE Transactions on Signal Processing**, 39(12):2593-2610, December 1991.

[107] Mathew Vea and José M. F. Moura, "*Magnetic Recording Channel Model with Intertarck Interference.*" IEEE Transactions on Magnetics, 27(6):4834-4836, November 1991.

[108] M. Isabel L. F. Ribeiro and José M. F. Moura, "*LD^2 – ARMA Identification Algorithm.*" **IEEE Transactions on Signal Processing**, 39(8):1822-1835, August 1991.

[109] Isabel M. G. Lourtie and José M. F. Moura, "*Multisource Delay Estimation of Nonstationary Signals.*" **IEEE Transactions on Signal Processing**, 39(5):1033-1048, May 1991.

[110] M. João D. Rendas and José M. F. Moura, "*Alternative Bounds on the Resolvability Constraints of Spatial Smoothing.*" **IEEE Transactions on Signal Processing**, 37(6):949-952, June 1989.

[111] José M. F. Moura and Arthur B. Baggeroer, "*Phase Unwrapping of Signals Propagated Under the Arctic Ice Crust: A Statistical Approach.*" **IEEE Transactions on Signal Processing**, 35(5):617-630, May1988.

[112] Gérard Alengrin, Richard S. Bucy, José M. F. Moura, Jaume Pagés, and M. Isabel L. F. Ribeiro, "*ARMA Identification,*" **Journal of Optimization Theory and Applications**, 55(6):345-367, December 1987.

[113] José M. F. Moura and M. Manuela M. A. Veloso, "*Sistema de Informação em Linha de Produção Fabril: Estrutura Lógica de Dados,*" **Técnica**, December 1985. *Invited paper*.

[114] Richard S. Bucy, José M. F. Moura, and Jack Mallinckrodt, "*A Monte Carlo study of Absolute Phase Demodulation,*" **IEEE Transactions on Information Theory**, IT-29(4):139-154, July 1983.

[115] José M. F. Moura, "*A Spatial Smoothing Formulation for Location Systems,*" **IEEE Journal of Oceanic Engineering**, Special Issue on Location and Tracking Systems, OE-8(4):148-162, July 1983. *Invited paper*.

[116] Richard S. Bucy, Frank Ghovanlou, José M. F. Moura, and Ken D. Senne, "Nonlinear Filtering and Array Computation," **IEEE Computer Magazine**, *Special Issue on Array Computation*, 16(7):51-61, July 1983. *Invited paper*.

[117] José M. F. Moura, "The Hybrid Algorithm: A Solution to Acquisition and Tracking in Platform Location**," Journal of the Acoustical Society of America, JASA**, 69(6):1663-1672, June 1981.

[118] Richard S. Bucy, José M. F. Moura, and Jack Mallinckrodt, "Absolute Phase Demodulation," **Mini and Microcomputers**, 5(2), February 1980.

[119] José M. F. Moura, "Passive Systems Theory with Narrowband Constraints: Part III – Spatial/ Temporal Diversity," **IEEE Journal of Oceanic Engineering**, OE-4(3):113-119, July 1979.

[120] José M. F. Moura, "Passive Systems Theory with Narrowband Constraints: Part II – Temporal Diversity," **IEEE Journal of Oceanic Engineering**, OE-4(1):19-30, January 1979.

[121] José M. F. Moura and Arthur B. Baggeroer, "Passive Systems Theory with Narrowband Constraints: Part I – Spatial Diversity," **IEEE Journal of Oceanic Engineering**, OE-3(1):5-13, January 1978.

[122] Alexandre Gomes Cerveira, José M. F. Moura, and José M. P. Duarte, "Canal Binário Afectado por Ruído Intermitente," **Técnica**, 32(393):1-20, December 1969.

Papers Submitted to Journals for Publication

International Conference Papers

[123] Aliaksei Sandryhaila and José M. F. Moura, *"Nearest-Neighbor Image Model,"* **2012 IEEE International Conference on Image Processing**, *Orlando, FL, September 30-October 3, 2012, submitted.*

[124] Aliaksei Sandryhaila and José M. F. Moura, *"Image Compression with Nearest-Neighbor Transforms,"* **2012 SIAM Conference on Imaging Science**, *Philadelphia, PA, May 20-22, 2012, to appear.*

[125] Aurora Schmidt, Joel B. Harley, and José M. F. Moura, *"Compressed Sensing Radar Surveillance Networks," 7th IEEE Sensor Array and Multichannel Signal Processing Workshop (SAM), special session on Compressive Sensing for Radar, Hoboken, NJ, June 17-20, 2012.* **Invited paper**.

[126] June Zhang and José M. F. Moura, *"Accounting for Topology in Spreading Contagion in Non-Complete Networks,"* **37th IEEE International Conference on Acoustics, Speech, and Signal Processing**, *Kyoto, Japan, March 25-30, 2012*.

[127] Aurora Schmidt and José M. F. Moura, "*Distributed Field Reconstruction with Model-Robust Basis Pursuit,*" **37th IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)**, *Kyoto, Japan, March 25-30, 2012.*

[128] Nicholas O'Donoughue and José M. F. Moura, *"The Complex Double Gaussian Distribution,"* **37th International Conference on Acoustics, Speech, and Signal Processing (ICASSP '12),** *Pages: PP, Kyoto, JP, March 25-30, 2012.*

[129] Chang Liu; Harley, J.B.; O'Donoughue, N.; Ying, Y.; Altschul, M.H.; Garrett, J.H.; José M. F. Moura; Oppenheim, I.J.; Soibelman, L., *"Ultrasonic Monitoring of a Pipe under Operating Conditions,"* **SPIE Conference on Smart Structures and Nondestructive Evaluation**, *San Diego, CA, March 11-15, 2012.*

[130] Augusto Santos and José M. F. Moura, *"Emergent Behavior in Large Scale Networks,"* 50th IEEE Conference on Decision and Control and European Control Conference (CDC-ECC), Pages: 4485-4490, Orlando, FL, USA, December 12-15, 2011. **Invited paper** in Special Session.

[131] Christian R. Berger, João Gomes, and José M. F. Moura, ***"Sea-trial results for cyclic-prefix OFDM with long symbol duration,"*** **IEEE OCEANS**, DOI: 10.1109/Oceans-Spain.2011.6003629, Santander, Spain, September 19-22, 2011.

[132] Christian R. Berger, João Gomes, and José M. F. Moura, *"Study of pilot designs for cyclic-prefix OFDM on time-varying and sparse underwater acoustic channels,"* **IEEE 2011 OCEANS**, DOI: 10.1109/Oceans-Spain.2011.6003627, Santander, Spain, September 19-22, 2011.

[133] Dragana Bajovic, Dusan Jakovetic**,** José M. F. Moura*,* João Xavier, and Bruno Sinopoli "*Large Deviations Analysis of Consensus+Innovations Distributed Detection over Random Networks,*" **49th Annual Allerton Conference on Communication, Control and Computing**, *Pages: 151-155, Monticello, IL, September 30 - October 2, 2011. Invited paper.*

[134] Joel B. Harley; Ying Y.; José M. F. Moura; Oppenheim, I.J.; Soibelman, L.; Garrett, J.H, *"Application of Mellin Transform Features for Robust Ultrasonic Guided Wave Structural Health Monitoring,"* **Review of Progress in Quantitative Nondestructive Evaluation**, *Burlington, VT, July 17-21, 2011.*

[135] Yujie Ying; Garrett, J.H.; Harley, J.; José M. F. Moura; O'Donoughue, N.; Oppenheim, I.J.; Soibelman, L., *"Machine Learning for Pipeline Monitoring under Environmental and Operational Variations,"* **8th International Workshop on Structural Health Monitoring**, *Pages: 1214-1221, Stanford, CA, September 13-15, 2011.*

[136] Joel B. Harley and José M. F. Moura, "*An Efficient Temperature Compensation Technique For Guided Wave Ultrasonic Inspection*," *8ᵗʰ* ***International Workshop on Structural Health Monitoring, Stanford***, *Pages: 1206-1213, CA, September 13-15, 2011.*

[137] Joel B. Harley and José M. F. Moura, "*Guided Wave Temperature Compensation with the Scale-Invariant Correlation Coefficient*," ***IEEE Ultrasonics Symposium***, *Best Student Paper Award, Orlando, FL, October 18-21, 2011.*

[138] Mohammad Deghat, Iman Shames, Brian D. O. Anderson, José M. F. Moura, "*Distributed Localization Via Barycentric Coordinates: Finite-Time Convergence*," **18ᵗʰ World IFAC Congress**, Pages: 7824-7829, August 28-September 2ⁿᵈ, Milano, Italy, 2011.

[139] Divyanshu Vats and José M. F. Moura, "*Necessary Conditions for Consistent Set-Based Graphical Model Selection*," **IEEE ISIT'11 International Symposium on Information Theory**, Pages: 303-307, June, Saint Petersburg, Russia, July 31-August 5, 2011.

[140] Nicholas O'Donoughue; Berger, C, and José M. F. Moura, "*A Hybrid-MMSE Approach to Channel Shortening for Underwater Acoustic OFDM,*" **MTS/IEEE Oceans '11**, pp: 1-7, Kona, HI, June, 2011.

[141] Christian R. Berger, Huang Jie, and José M. F. Moura, "Study of pilot overhead for iterative OFDM receivers on time-varying and sparse underwater acoustic channels," **IEEE OCEANS 2011,** Kona, HI, June 2011.

[142] Nicholas O'Donoughue, Joel Harley and José M. F. Moura, "*Ultrasonic Defect Localization in Pipes using Time Reversal*," ***Meeting of the Acoustical Society of America***, *Invited Presentation, Seattle, WA, May 23-28, 2011.*

[143] Soummya Kar, Shuguang Cui, Vincent Poor, and José M. F. Moura, "*Convergence Results in Distributed Kalman Filtering*," ***36th ICASSP, IEEE International Conference on Acoustics, Speech, and Signal Processing***, Pages: 2500 – 2503, May 22-27, Prague, Check Republic, 2011.

[144] Soummya Kar and José M. F. Moura, "*Global Emergent Behaviors in Clouds of Agents*," ***36th ICASSP, IEEE International Conference on Acoustics, Speech, and Signal Processing***, Pages: 5796 – 5799, May 22-27, Prague, Check Republic, 2011. **Invited paper in Special Session on Bioinspired Signal Processing**.

[145] Divyanshu Vats, Vishal Monga, Umamahesh Srinivas, and José M. F. Moura, "*Scalable Robust Hypothesis Tests Using Graphical Models*," ***36th ICASSP, IEEE International Conference on Acoustics, Speech, and Signal Processing***, Pages: 3612 – 3615, May 22-27, Prague, Check Republic, 2011.

[146] Dragana Bajovic, Dusan Jakovetic, João Xavier, Bruno Sinopoli, and José M. F. Moura, "*Asymptotic Performance of Distributed Detection over Random Networks*," ***36th ICASSP, IEEE International Conference on Acoustics, Speech, and Signal Processing***, Pages: 3008-3011, May 22-27, Prague, Check Republic, 2011.

[147] Nicholas O'Donoughue, Joel Harley, and José M. F. Moura, "*Detection of Targets Embedded in Multipath Clutter with Time Reversal*," ***36th ICASSP, IEEE International Conference on Acoustics, Speech, and Signal Processing***, Pages: 3868-3871, May 22-27, Prague, Check Republic.

[148]   Christian R. Berger and José M. F. Moura, *"Noncoherent compressive sensing with application to distributed radar,"* 2011 45th Annual Conference on Information Sciences and Systems (CISS), DOI: 10.1109/CISS.2011.5766108, Baltimore MD, March 23-25, 2011.

[149]   U. A. Khan, S. Kar, A. Jadbabaie, and J. M.F. Moura, "*On connectivity, observability, and stability in distributed estimation,*" **49th IEEE Conference on Decision and Control**, Atlanta, GA, Dec. 2010.

[150]   Soummya Kar, José M. F. Moura, and Kavita Ramanan, "*Sample path large deviations for the randomly sampled continuous-discrete Kalman filter,*" **49th IEEE Conference on Decision and Control**, Atlanta, GA, Dec. 2010.

[151]   Divyanshu Vats and José M. F. Moura, "*Reciprocal Fields: A Model for Random Fields Pinned to Two Boundaries,*" **49th IEEE Conference on Decision and Control**, Atlanta, GA, Dec. 2010.

[152]   Nicholas O'Donoughue, Joel Harley, José M.F. Moura, "*Time Reversal Beamforming of Lamb Waves in Pipes with a Single Defect,*" ***44th IEEE Asilomar Conference on Signals, Systems, and Computers***, Pacific Grove, CA, November 7-10, 2010.

[153]   Soummya Kar, Bruno Sinopoli, José M. F. Moura, "*A Random Dynamical Systems Approach to Filtering in Large-Scale Networks**," American Control Conference (ACC),** pp.: 1027 – 1034, June 30-July 2, 2010. **Invited paper**.

[154]   Dragana Bajovic, Dusan Jakovetic, João Xavier, Bruno Sinopoli, José M. F. Moura, "*Distributed detection over time varying networks: Large deviations analysis*," 48th Annual Allerton Conference on Communication, Control, and Computing, Digital Object Identifier: 10.1109/ALLERTON.2010.5706921, pp. 302-309, Monticello, IL, September 2010.

[155]   Divyanshu Vats and José M. F. Moura, "*A Telescoping Approach to Recursive Enhancement of Noisy Images*," ***35th ICASSP, IEEE International Conference on Acoustics, Speech, and Signal Processing***, Digital Object Identifier: 10.1109/ICASSP.2010.5495457, Publication Year: 2010, pp.: 1386 – 1389, Dallas, TX, March, 2010.

[156]   Dusan Jakovetic, João Xavier, and José M. F. Moura, "*Consensus in Correlated Random Topologies: Weights for Finite Time Horizon,*" ***35th ICASSP, IEEE International Conference on Acoustics, Speech, and Signal Processing***, Digital Object Identifier: 10.1109/ICASSP.2010.5496139, pp. 2974-2977, Dallas, TX, March, 2010.

[157]   Yuanwei Jin, José M. F. Moura, Nicholas O'Donoughue, Joel Harley, "Single Antenna Time Reversal Detection of Moving Target," ***35th ICASSP, IEEE International Conference on Acoustics, Speech, and Signal Processing***, Digital Object Identifier: 10.1109/ICASSP.2010.5495928, pp.: 3558 – 3561, Dallas, TX, March, 2010.

[158]   U.A. Khan, S. Kar and J.M.F. Moura, "*Designing the Parameters of High Dimensional Consensus: Multi-Objective Optimization and Pareto-Optimality,*" ***35th ICASSP, IEEE Intern. Conference on Acoustics, Speech, and Signal Processing***, Digital Object Identifier: 10.1109/ICASSP.2010.5496142, pp.: 2986 – 2989, Dallas, TX, March, 2010.

[159] Divianshu Vats and José M. F. Moura, "*Recursive Filtering and Smoothing for Gaussian Reciprocal Processes*," **IEEE ISIT'09 International Symposium on Information Theory**, Seoul, Korea, June 28-July 3, 2009.

[160] U. A. Khan, S. Kar, and J. M.F. Moura, "*Distributed Sensor Localization Using Barycentric Coordinates*," **CAMSAP, 3rd IEEE International Workshop on Computational Advances in Multi-Sensor Adaptive Processing**, Aruba, Dutch Antilles, Dec. 2009; **invited paper**.

[161] Basil AsSadhan, José M. F. Moura, David Lapsely, "*Periodicities in Botnet Command and Control Channels Traffic*," **IEEE GlobeCom**, Hawai, November 30-December 4, 2009.

[162] U. A. Khan, S. Kar and J. M. F. Moura, "*Distributed Average Consensus: Beyond the Realm of Linearity*," **43rd IEEE Asilomar Conference on Signals, Systems, and Computers**, Pacific Grove, CA, Nov. 2009.

[163] Aurora Schmidt and José M. F. Moura, "*A Distributed Sensor Fusion Algorithm for the Inversion of Sparse Fields*," in **43rd IEEE Asilomar Conference on Signals, Systems, and Computers**, Pacific Grove, CA, Nov. 2009.

[164] U. A. Khan, S. Kar and J. M. F. Moura, "*Asymptotic noise analysis of high dimensional consensus*," in **43rd IEEE Asilomar Conference on Signals, Systems, and Computers**, Pacific Grove, CA, Nov. 2009, **invited paper**.

[165] Nicholas O'Donoughue, Joel Harley, José M. F. Moura, Yuanwei Jin, "*Detection of Structural Defects in Pipes using Time Reversal of Guided Waves*," in **43rd IEEE Asilomar Conference on Signals, Systems, and Computers**, Pacific Grove, CA, Nov. 2009.

[166] Joel Harley, Nicholas O'Donoughue, José M. F. Moura, Yuanwei Jin. "*Time reversal focusing for pipeline structural health monitoring*," **158th Meeting of the Acoustical Society of America**, San Antonio, TX, Oct. 2009.

[167] U. A. Khan, S. Kar, and J. M. F. Moura, "*Distributed localization in networks of mobile agents*," in **47th Annual Allerton Conference on Communication, Control and Computing**, Monticello, IL, Sep. 2009.

[168] Daniel S. McFarlin, Franz Franchetti, Markus Püschel, and José M.F. Moura, "High Performance Synthetic Aperture Radar Image Formation On Commodity Multicore Architectures," **SPIE Conference on Defense, Security, and Sensing**, Proceedings of SPIE Vol. 7337, pp. 7337-08, Orlando, FL, April 2009.

[169] Joel Harley, Nicholas O'Donoughue, Joseph States, Y. Ying, James Garrett, Yuanwei Jin, José M. F. Moura, Irving Oppenheim, Lúcio Soibelman, "*Focusing of Ultrasonic Waves in Cylindrical Shells using Time-Reversal*," in **7th International Workshop on Structural Health Monitoring**, Stanford Univ., CA, Sept. 2009.

[170] Divyanshu Vats and José M. F. Moura, "*Recursive Filtering and Smoothing for Discrete Index Gaussian Reciprocal Processes*," **CISS 2009, 43rd Annual Conference on Information Sciences and Systems**, pp., Baltimore, MD, March 18-20, 2009.

[171] Bernardo Rodrigues Pires, José M. F. Moura, "*Shapes as Empirical Distributions*," ***ICIP'09, IEEE International Conference on Image Processing***, Cairo, Egypt, November, 2009.

[172] Basil AsSadhan, José M. F. Moura, David Lapsely, "*Detecting Botnets using Command and Control Traffic*," ***NCA IEEE International Symposium on Network Computing and Applications***, Cambridge, MA, USA, July 9–11, 2009.

[173] S. Kar and J.M.F. Moura, "*A Mixed Time-Scale Algorithm for Distributed Parameter Estimation: NonLinear Observation Models and Imperfect Communication*," ***ICASSP'09, 34th IEEE International Conference on Acoustics, Speech, and Signal Processing***, Taipei, Taiwan, Apr. 2009**. Invited paper in Special Session"Distributed Signal Processing and Consensus Gossiping."**

[174] U. A. Khan, S. Kar and J. M. F. Moura, "Higher dimensional consensus algorithms in sensor networks," ***34th IEEE International Conference on Acoustics, Speech, and Signal Processing***, Taipei, Taiwan, Apr. 2009.

[175] Yuanwei Jin, José M. F. Moura, Nicholas O'Donoughue, "Experimental Study of Extended Target Imaging by Time Reversal SAR," ***ICASSP'09, 34th IEEE International Conference on Acoustics, Speech, and Signal Processing***, Taipei, Taiwan, Apr. 2009**.**

[176] Aurora Schmidt and J.M.F. Moura, "*Field Inversion by Consensus and Compressed Sensing*," ***34th IEEE International Conference on Acoustics, Speech, and Signal Processing***, Taipei, Taiwan, Apr. 2009**.**

[177] U. A. Khan, M. D. Ilić, and J. M. F. Moura, "Cooperation for aggregating complex electric power networks to ensure system observability," ***IEEE International Conference on Infrastructure Systems***, Rotterdam, Netherlands, Nov. 2008.

[178] Nicholas O'Donoughue, José M.F. Moura, and Yuanwei Jin, "*Signal-Domain Registration for Change Detection in Time-Reversal SAR*," ***42nd Asilomar Conference on Signals, Systems and Computers***, Pacific Grove, CA, Oct. 2008. **Best Student Paper**.

[179] Yuanwei Jin, José M.F. Moura, Nicholas O'Donoughue, "*Adaptive Time Reversal Beamforming in Dense Multipath Communication Networks*," ***42nd IEEE Asilomar Conference on Signals, Systems, and Computers***, Pacific Grove, CA, Oct. 2008.

[180] S. Kar and J. M. F. Moura, "*Distributed Parameter Estimation in Sensor Networks With Random Link Failures and Quantized Inter-Sensor Communication*," ***42nd IEEE Asilomar Conference on Signals, Systems, and Computers***, Pacific Grove, CA, Oct. 2008.

[181] U. A. Khan, S. Kar and J. M. F. Moura, "A linear iterative algorithm for distributed sensor localization," ***42nd IEEE Asilomar Conference on Signals, Systems, and Computers***, Pacific Grove, CA, Oct. 2008, **<u>Invited paper</u>**.

[182] Bernardo Rodrigues Pires, José M. F. Moura and João Xavier, "*LASIC: A Model Invariant Framework for Correspondence*," ***ICIP'08, IEEE International Conference on Image Processing***, San Diego, CA, October 12 – 15, 2008.

[183] Soummya Kar, J.M.F. Moura, and Kavita Ramanan, "*Large Deviations for Many Server Networks with Long Range Dependent and Batch Arrivals,*" *46th Annual Allerton Conference on Communication, Control and Computing*, Monticello, IL, Sep. 2008.

[184] U. A. Khan, S. Kar, B. Sinopoli and J. M. F. Moura, "Distributed sensor localization in Euclidean spaces: Dynamic environments," *46th Annual Allerton Conference on Communication, Control and Computing*, Monticello, IL, Sep. 2008, **Invited paper**.

[185] Marija D. Ilić, Le Xie, Usman A. Khan and José M. F. Moura, "*Modeling Future Cyber-Physical Energy Systems,*" *IEEE Power Engineering Society General Meeting*, Pittsburgh, PA, Jul. 20-24 2008.

[186] Basil AsSadhan, Hyong Kim, and José M. F. Moura, "*Long-Range Dependence Analysis of Control and Data Planes Network Traffic,*" *Proceedings of the Saudi International Innovation Conference (SIIC 2008),* Leeds, UK, June 9–10, 2008.

[187] Y. Jin, J. M. F. Moura, Y. Jiang, M. Wahl, and Q. He, "*Breast cancer detection by time reversal imaging* ", *IEEE ISBI'08 International Symposium on BioImaging: From Nano to Micro*, May 13 -16, Paris, France.

[188] Basil AsSadhan, Hyong Kim, José M. F. Moura, "*Control and Data Planes,*" *The 4th International Workshop on Security Systems and Networks*, Miami, FL, April 18, 2008.

[189] Usman A. Khan and José M. F. Moura, "*Distributed Iterate-Collapse (DICI) Inversion Algorithm for L-Banded Matrices,*" *ICASSP'08, IEEE 33rd International Conference on Acoustics, Speech, and Signal Processing*, Las Vegas, NV, Mar. 30 - Apr. 04 2008.

[190] Soummya Kar and José M. F. Moura, "*Distributed Average Consensus in Sensor networks with Quantized Intersensor Communication,*" *ICASSP'08, 33rd IEEE International Conference on Acoustics, Speech, and Signal Processing*, Las Vegas, NV, March 30 – April 4, 2008.

[191] Y. Jin, N. O'Donoughue, J. M. F. Moura "*Position location by time reversal in communication networks*", *ICASSP'08, 33rd IEEE International Conference on Acoustics, Speech, and Signal Processing*, Las Vegas, NV, March 30 – April 4, 2008.

[192] Y. Jin, Y. Jiang, and J.M.F. Moura, "*Multiple Antenna Time Reversal Transmissions in Ultra-wideband Communications,*" Pages: 3029-3033, *IEEE Globecom'07, 50th Globe Communications Conference*, Washington DC, Nov. 26-30, 2007.

[193] Usman A. Khan and José M. F. Moura, "*Model distribution for distributed Kalman filters: A graph theoretic approach,*" *IEEE 41st Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, Nov. 04-07 2007.

[194] S. Kar and J.M.F. Moura, "*Distributed Consensus Algorithms in Sensor Networks with Communication Channel Noise and Random Link Failures,*" *IEEE 41st Asilomar Conference on Signals, Systems and Computers,* pp. 276-280, November 4 – 7, 2007, Pacific Grove, CA. **(Invited Paper**).

[195] Y. Jin, J. M. F. Moura, N. O'Donoughue "*Time reversal transmission in MIMO radar,*" *IEEE 41st Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, Nov. 4-7, 2007.

[196] Y. Jin, J.M.F. Moura, M. Mulford, N. O'Donoughue, A. Samuel, "*Time reversal spotlight SAR in Multipath*," ***IEEE 41st Asilomar Conference on Signals, Systems, and Computers***, Pacific Grove, CA, Nov. 4-7, 2007 (invited).

[197] Hsun-Hsien Chang and José M. F. Moura, "*Classification by Cheeger Constant Regularization*," ***ICIP'07, IEEE International Conference on Image Processing***, Vol. II, pages: 209-212, San Antonio, TX, September 16-19, 2007.

[198] Pedro M. Q. Aguiar and José M. F. Moura, "*Joint Segmentation of Moving Object and Estimation of Background in Low-light Video using Relaxation*," ***ICIP'07, IEEE International Conference on Image Processing***, Vol. V, pages: 53-56, San Antonio, TX, September 16-19, 2007.

[199] Y. Jin, Y. Jiang, and J.M.F. Moura, "*Time reversal beamforming for microwave breast cancer detection*," ***ICIP'07, IEEE International Conference on Image Processing***, vol. V, pp. 13-16, September 16-19, San Antonio, Texas, 2007.

[200] Hsun-Hsien Chang; Moura, J.M.F.; Wu, Y.L.; Chien Ho, "*Diffusion Map Approach to Classifying Early Stage Cardiac Dysfunction*," ***2007 IEEE 15th Workshop on Statistical Signal Processing***, Pages: 615-619, Madison, WI, August 26-29, 2007.

[201] Y. Jin, J.M.F. Moura, Y. Jiang, D. Stancil, N. O'Donoughue, "*Time reversal classification from scattered radiation*," ***2007 IEEE 15th Workshop on Statistical Signal Processing Workshop***, pp. 317-321, Madison, WI, August 26-29, 2007 (invited).

[202] Usman A. Khan and José M. F. Moura, "*Distributed Kalman filters in sensor networks: Bipartite fusion graphs*," Pages: 700-704, ***2007 IEEE 15th Workshop on Statistical Signal Processing***, Madison, WI, August 26-29, 2007.

[203] S. Kar and J.M.F. Moura, "*Consensus Based Detection in Sensor Networks: Topology Optimization Under Practical Constraints*," ***1st International Workshop on Information Theory in Sensor Networks***, June 18 – 20, 2007, Santa Fe, NM (**Invited Paper**.)

[204] Y. Jin, J.M.F. Moura, Y. Jiang, J. Zhu, and D. Stancil, "*Time reversal target focusing in spotlight SAR*," ***15th Adaptive Sensor Array Processing Workshop***, MIT Lincoln Lab, Lexington, MA, June 5-6, 2007.

[205] Y. Jin and J.M.F. Moura, "*TR-SAR: time reversal target focusing in spotlight SAR*," ***ICASSP'07, IEEE International Conference on Acoustics, Speech, and Signal Processing***, Vol. II, pp. 957-960, Honolulu, HI, April 16-20, 2007.

[206] S. Kar and J. M. F. Moura, "*Distributed Average Consensus in Sensor Networks with Random Link Failures*," ***ICASSP'07, International Conference on Acoustics, Speech, and Signal Processing***, Vol. II, 1013-1016, Honolulu, Hawaii, April 15 – 20, 2007.

[207] Paolo D'Alberto, Peter A. Milder, Aliaksei Sandryhaila, Franz Franchetti, James Hoe, José M. F. Moura, Markus Pueschel, Jeremy R. Johnson, "*Generating FPGA-Accelerated DFT Libraries,*" ***FCCM 2007, 15th Annual IEEE Symposium on Field-Programmable Custom Computing Machines***, Pages: 173-184, 23-25 April, 2007, Napa, CA.

[208] S. Kar and J. M. F. Moura, "*Topology for global average consensus,*" ***40th Asilomar Conference on Signals, Systems, and Computers***, Pages: 276-280, October 29 – November 1, 2006, Pacific Grove, CA. **(Winner in the Best Student Paper Contest).**

[209] Yuanwei Jin and José M. F. Moura, "*Asymptotic Noise Analysis of Time Reversal Detection,*" ***40th Asilomar Conference on Signals, Systems, and Computers***, Pages: 772-776, Pacific Grove, CA, October 29 – November 1, 2006.

[210] Soummya Kar and José M. F. Moura, "*Ramanujan Topologies for Decision Making in Sensor Networks,*" ***44th Annual Allerton Conference on Communications, Control, and Computing***, Monticello, IL, September 27-29, 2006, **invited paper in Special Session on Sensor Networks**.

[211] Hsun-Hsien Chang; Moura, J.M.F.; Wu, Y.L.; Chien Ho, "*Immune Cells Detection of the In Vivo Rejecting Heart in USPIO-Enhanced Magnetic Resonance Imaging,*" ***IEEE EMBS '06. 28th Annual International Conference Engineering in Medicine and Biology Society***, Page(s):87-90, August 30 – September 3, 2006.

[212] Amir Asif, Bai Qian, José M. F. Moura, "*Time Reversal Matched Field Processing : An Analytical Justification,*" ***2006 IEEE International Symposium on Signal Processing and Information Technology***, Pages: 81-86, August 2006.

[213] Yi Jiang; Jian-Gang Zhu; Stancil, D.D.; Moura, J.; Cepni, A.G.; Henty, B.; Yuan-Wei Jin, "*Single antenna target detection using broadband frequency selection time reversal method,*" ***IEEE International Symposium on Antennas and Propagation***, Page(s):699 – 702, 9-14 July 2006.

[214] Cepni, A.G.; Stancil, D.D.; Henty, B.; Yi Jiang; Yuanwei Jin; Moura, J.M.F.; Jian-Gang Zhu, "*Experimental results on single antenna target detection using time-reversal techniques,*" ***IEEE International Symposium on Antennas and Propagation Society***, Page(s):703 – 706, 9-14 July 2006.

[215] Saeed Aldosari and José M. F. Moura, "*Topology of Sensor Networks in Distributed Detection,*" ***ICASSP'06, IEEE International Conference on Signal Processing,*** Volume 5, Page(s):V-1061 - V-1064, Toulouse, France, May 14-21, 2006, **invited paper in Special Session on Sensor Networks**.

[216] José M. F. Moura, Yuanwei Jin, Dan Stancil, Jian-Gang Zhu, Ahmet Cepni, Yi Jiang, and Ben Henty, "*Array Processing Using Time Reversal: Experiments and Performance,*" ***ICASSP'06***, ***IEEE International Conference on Signal Processing,*** Volume 4, Page(s):IV-1053 - IV-1056, Toulouse, France, May 14-21, 2006.

[217] Haotian Zhang, Bruce Krogh, and José M. F. Moura, "*Inner Source Identification for Field estimation in Wireless Sensor Networks,*" ***ICASSP'06***, ***IEEE International Conference on Signal Processing,*** Volume 4, Page(s):IV-853 - IV-856, Toulouse, France, May 14-21, 2006.

[218] Marek Telgarsky, James Hoe, and José M. F. Moura, "*SPIRAL: Joint Runtime and Energy Optimization of Linear Transforms,*" ***ICASSP'06***, ***IEEE International Conference on Signal Processing,*** Volume 3, Page(s):III-1048 - III-1051, Toulouse, France, May 14-21, 2006.

[219] Markus Pueschel and José M. F. Moura, "*The Algebraic Structure in Signal Processing: Time and Space,*" ***ICASSP'06***, ***IEEE International Conference on Signal Processing,*** Toulouse, France,

Volume 5, Page(s):V-997 - V-1000, May 14-21, 2006, **invited paper in Special Session on Algebra and Geometry in Signal Processing**.

[220] Hsun-Hsien Chang; Moura, J.M.F.; Wu, Y.L.; Chien Ho, "*A mutual information approach to automatic detection of heart rejection in MRI,*" **14th ISMRM, Fourteenth Scientific Meeting and Exhibition of the International Society for Magnetic Resonance in Medicine**, Seattle, WA, 6-12 May 2006.

[221] Lionel Coulot, Heather Kirschner, Mina Chebira, José M. F. Moura, Jelena Kovacevic, Elvira Garcia Osuna, and Robert F. Murphy, "*Topology Preserving STACS Sgementation of Protein SubCellular Location Images,*" **IEEE ISBI'06 IEEE International Symposium on Bioimaging**, Page(s):566 – 569, Arlington, VA, 6-9 April, 2006.

[222] Hsun-Hsien Chang, José M. F. Moura, Yijen L. Wu, and Chien Ho, "*Early Detection of Rejection in Cardiac MRI: A Spectral Graph Approach,*" **IEEE ISBI'06 IEEE International Symposium on Bioimaging**, Page(s):113 – 116, Arlington, VA, 6-9 April, 2006.

[223] Saeed Aldosari and José M. F. Moura, "*Distributed Detection in Sensor Networks: Connectivity Graph and Small World Networks,*" **IEEE 39th Asilomar Conference on Signals, Systems, and Computers**, P age(s):230 - 234, Pacific Grove, CA, October 30 – November 2 , 2005.

[224] Yuanwei Jin, José M. F. Moura, Jian-Gang Zhu, Dan Stancil, Ahmet Cepni, and Ben Henty, "*Waveform Shaping for Time Reversal Interference Cancellation: A Time Domain Approach,*" **IEEE 39th Asilomar Conference on Signals, Systems, and Computers**, Page(s):665 – 669, Pacific Grove, CA, October 30 – November 2 , 2005.

[225] Daniel D. Stancil, Ahmet G. Cepni, Ben E. Henty, Yi Jiang, Yuanwei Jin, Jian-Gang Zhu, and José M. F. Moura, "*Super-resolution Focusing and Nulling in Rich Multipath Environments using Time-Reversal Techniques,*" **International Conference on Electromagnetics in Advanced Applications (ICEAA'05)**, Sept. 2005, Torino, Italy. **Invited paper**.

[226] Jin Lu and José M. F. Moura, "*Structured LDPC Codes for High-Density Recording : Large Girth and Low Error Floor,*" **TMRC, IEEE 16th Annual The Magnetic Recording Conference**, Stanford University, Stanford, CA, August 15-17, 2005.

[227] Jian-Gang Zhu, Yi Jiang, Daniel D. Stancil, and José M. F. Moura, "*A Novel Time Reversal Method for Target Detection in Cluttered Media,*" **2005 IEEE AP-S IEEE International Symposium and USNC/URSI National Radio Science Meeting on Antennas and Propagation**, Vol. 4B, Pages: 135-138, Omni Shoreham Hotel, Connecticut Avenue and Calvert Street, NW, Washington Street, Washington DC, July 3-8, 2005.

[228] Hsun-Hsien Chang, José M. F. Moura, Yijen L. Wu, and Chien Ho, "*3-D Dense Cardiac Strain reconstruction from Tagged MR Data Set,*" **13th ISMRM, Thirteenth Scientific Meeting and Exhibition of the International Society for Magnetic Resonance in Medicine**, South Beach, Miami, FL, May 7-13, 2005.

[229] Y.L. Wu, K. Sato, Y. Sun, H.-H. Chang, K. Hitchens, J.M.F. Moura, and C. Ho, "*The acute cardiac allograft rejection is heterogeneous and can be non-invasively monitored in vivo with MRI by the two-pronged methods,*" **SCMR'05 The Eight Annual Society for Cardiovascular Magnetic**

Resonance Scientific Sessions, Hyatt Regency, Embarcadero, San Francisco, CA January 21-23, 2005.

[230]   Haotian Zhang, José M. F. Moura, and Bruce Krogh, "*Estimation in Sensor Networks: A Graph Approach,*" ***IPSN'05 The Fourth International Symposium on Information Processing in Sensor Networks***, Pages: 203-209, UCLA, Los Angeles CA, April 25-27, 2005.

[231]   Jin Lu and José M. F. Moura, "*Partition-and-shift LDPC Codes for High Density Magnetic Recording,*" ***IEEE International Magnetics Conference***, ***10th Joint MMM-Intermag 2005***, Pages: 991-992, Nagoya, Japan, April 4-8, 2005.

[232]   Saeed Aldosari and José M. F. Moura, "*Saddle Point Approximation for Sensor Network Optimization,*" ***ICASSP'05***, ***IEEE International Conference on Signal Processing***, Vol. IV, Pages: 741-744, Philadelphia, PA, March 18-23, 2005.

[233]   Victor Ha and José M. F. Moura, "Robust Reorientation of 2D Shapes Using the Orientation Indicator Index," ***ICASSP'05***, ***IEEE International Conference on Signal Processing***, Vol. II, Pages: 777-780, Philadelphia, PA, March 18-23, 2005.

[234]   José M. F. Moura, Yuanwei Jin, Dan Stancil, Jian-Gang Zhu, Ahmet Cepni, Yi Jiang, and Ben Henty, "*Single Antenna Time Reversal Adaptive Interference Cancellation,*" ***ICASSP'05***, ***IEEE International Conference on Signal Processing***, Philadelphia, Vol. IV, Pages: 1121-1124, PA, March 18-23, 2005.

[235]   Thammanit Pipatsrisawat, Aca Gacic, Franz Franchetti, Markus Pueschel, and José M. F. Moura, "*Performance Analysis of the Filtered Backprojection Image Reconstruction Algorithm,*" ***ICASSP'05***, ***IEEE International Conference on Signal Processing***, Vol. V, Pages: 153-156, Philadelphia, PA, March 18-23, 2005.

[236]   Saeed Aldosari and José M. F. Moura, "*Fusion in Sensor Networks,*" ***Frontiers in Optics, Optical Society of America 88th Annual Meeting***, Rochester, NY, October 10-14, 2004. *Invited Paper*.

[237]   Victor Ha and José M. F. Moura, "*Three-dimensional Intrinsic Shapes,*" ***ICIP'04, IEEE International Conference on Image Processing***, Singapore, October 24-27, 2004.

[238]   Ying Sun, Marie-Pierre Jolly, and José M. F. Moura, "*Integrated Registration of Dynamic Renal Perfusion MR Images,*" ***ICIP'04, IEEE International Conference on Image Processing***, Singapore, October 24-27, 2004.

[239]   Ying Sun, Marie-Pierre Jolly, and José M. F. Moura, "*Contrast-Invariant Registration of Cardiac and Renal MR Perfusion Images,*" ***MICCAI 2004***, ***7th International Conference on Medical Imaging Computing and Computer Assisted Intervention***, Rennes, Saint-Malo, France, September 26-30, 2004.

[240]   João M. Lemos and José M. F. Moura, "*Time Sampling of Diffusion Systems Using ition Methods,*" ***MTNS 2004, 16th International Symposium on Mathematical Theory of Networks and Systems***, Katholieke Universiteit Leuven, Leuven, Belgium

[241] Jin Lu, José M. F. Moura and Urs Niesen, "*Grouping and Shifting Based LDPC Codes,*" *IEEE ISIT'04 International Symposium on Information Theory*, Chicago Downtown Marriot, Chicago, IL, June 27 – July 2, 2004.

[242] Haotian Zhang and José M. F. Moura, "*Geometry Based Designs of LDPC Codes,*" *ICC 2004, IEEE International Conference on Communications*, *Communication Theory Symposium Coding III Session*, Paris, France, June 20-24, 2004.

[243] Jin Lu, José M. F. Moura, and Urs Niesen, "*A Class of Structured LDPC Codes with Large Girth,*" *ICC 2004, IEEE International Conference on Communications*, *Communication Theory Symposium LDPC Codes Session*, Paris, France, June 20-24, 2004.

[244] Saeed Aldosari and José M. F. Moura, "*Detection in Decentralized Sensor Networks,*" *ICASSP'04*, *IEEE International Conference on Signal Processing*, Montreal, Québec, Canada, May 17-21, 2004.

[245] Elijah Liu and José M. F. Moura "*Fusion in Sensor Networks: Convergence Study,*" *ICASSP'04*, *IEEE International Conference on Signal Processing*, Montreal, Québec, Canada, May 17-21, 2004, *Special Session on Sensor Networks*.

[246] Pei Jung Chung and José M. F. Moura, "*A GLRT and Bootstrap Approach to Detection in Magnetic resonance Force Microscopy,*" *ICASSP'04*, *IEEE International Conference on Signal Processing*, Montreal, Québec, Canada, May 17-21, 2004.

[247] Aca Gacic, Markus Pueschel, and José M. F. Moura, "*Automatically Generated High-Performance Code for Discrete Wavelet Transforms,*" *ICASSP'04*, *IEEE International Conference on Signal Processing*, Montreal, Québec, Canada, May 17-21, 2004.

[248] Saeed Aldosari and José M. F. Moura, "*Fusion in Sensor Networks with Communication Constraints,*" *IPSN'04 Information Processing in Sensor Networks*, Berkeley California, April 2004.

[249] Charnchai Pluempitiwiriyawej, José M. F. Moura, Yi-Jen L. Wu, and Chien Ho, "*Cardiac MR Image Segmentation: Quality Assessment of STACS,*" *ISBI'04 IEEE International Symposium on Bioimaging*, Arlington, VA, 15-18 April 2004.

[250] Hsun-Hsien Chang, José M. F. Moura, Yijen L. Wu, Kazuya Sato, and Chien Ho, "Reconstruction of 3D Dense Cardiac Motion from Tagged MR Sequences," *ISBI'04 IEEE 2004 International Symposium on Biomedical Imaging: Macro to Nano*, vol. 1:880-883, Arlington, VA, 15-18 April 2004.

[251] Ying Sun, José M. F. Moura, and Chien Ho, "*Subpixel Registration in Renal Perfusion MR Image Sequence,*" *ISBI'04 IEEE International Symposium on Bioimaging*, Arlington, VA, 15-18 April 2004.

[252] Yijen L. Wu, Kazuya Sato, Ying Sun, Hsun-Hsien Chang, Kevin Hitchens, José M. F. Moura, and Chien Ho, "*Non-Invasive Early Detection of Acute Cardiac Allograft Rejection by MRI in Rodent Model,*" *12th ISMRM, Twelfth Scientific Meeting and Exhibition of the International Society for Magnetic Resonance in Medicine*, Kyoto, Japan, May 15-21, 2004.

[253] Yijen L. Wu, Kazuya Sato, Ying Sun, Hsun-Hsien Chang, J. Williams, Kevin Hitchens, José M. F. Moura, and Chien Ho, "*The Two Pronged Approach for Non-Invasive Early Detection of Acute Cardiac Allograft Rejection by MRI in a Rodent Transplantation Model*," *12th ISMRM, Twelfth Scientific Meeting and Exhibition of the International Society for Magnetic Resonance in Medicine*, Kyoto, Japan, May 15-21, 2004.

[254] Charnchai Pluempitiwiriyawej, José M. F. Moura, Yi-Jen L. Wu, Shinichi Kanno, and Chien Ho, "*Automatic Segmentation for Cardiac MR Image Sequence*," *SCMR'04 The Seventh Annual Society for Cardiovascular Magnetic Resonance Scientific Sessions*, Barcelona, Spain, February 13-15, 2004.

[255] Yijen L. Wu, Kazuva Sato, Ying Sun, José M. F. Moura, and Chien Ho, "*Noninvasive Early Detection of Acute Cardiac Allograft Rejection by MRI*," *SCMR'04 The Seventh Annual Society for Cardiovascular Magnetic Resonance Scientific Sessions*, Barcelona, Spain, February 13-15, 2004.

[256] Haotian Zhang and José M. F. Moura, "*A Graph-Based Construction for Large-girth LDPC Codes*," *9th Joint MMM-Intermag 2004*, Anaheim, CA, January 5-9 2004.

[257] Haotian Zhang and José M. F. Moura, "*Structured regular {LDPC} codes with large girth*," *IEEE Globecom*, San Francisco, CA, December 1-5, 2003.

[258] Jin Lu, José M. F. Moura, and Haotian Zhang, "*Efficient Encoding of Cycle Codes : A Graphical Approach*," *The 37th Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, Nov 9-12, 2003.

[259] Charnchai Pluempitiwiriyawej, José M. F. Moura, Yi-Jen L. Wu, Shinichi Kanno, and Chien Ho, "*Stochastic Active Contour for Cardiac MR Image Segmentation*," *ICIP'03, IEEE International Conference on Image Processing*, vol. 2, pp. 1097-1100, Barcelona, Spain, 14-17 September 2003.

[260] Victor Ha and José M. F. Moura, "*Efficient 2D Shape Orientation*," *ICIP'03, IEEE International Conference on Image Processing*, vol. 1, pp. 225-228, Barcelona, Spain, 14-17 September 2003.

[261] David Sepiashvili, José M. F. Moura, and Victor Ha, "*Affine-Permutation Symmetry: Invariance and Shape Space*," *IEEE Workshop on Statistical Signal Processing*, St. Louis, MO, September 28 –October 1, 2003. Included in *Invited Session on Statistical Inferences on Manifolds with Applications in Image Analysis*.

[262] Huimin Chen and José M. F. Moura, "*Detection of harmonic signal with phase shift for single electron spin microsc*opy," *IEEE Sixth International Conference on Information Fusion*, vol. 2, pp. 1055-1062, Cairns, Queensland, Australia, July 8-11, 2003.

[263] Haotian Zhang and José M. F. Moura, "*Large-Girth LDPC Codes Based on Graphical Models*," *SPAWC'03, IEEE Signal Processing and Wireless Communications Workshop*, Rome, Italy, June 15-18, 2003.

[264] Jin Lu and José M. F. Moura, "*Turbo Design for LDPC Codes with Large Girth*," *SPAWC'03, IEEE Signal Processing and Wireless Communications Workshop*, Rome, Italy, June 15-18, 2003.

[265] Ying Sun, Y. L. Wu, K. Sato, Chien Ho, and José M. F. Moura, "*Dense Motion Estimation in Tagged MRI Sequence*," ***Eleventh Scientific Meeting and Exhibition of the International Society for Magnetic Resonance in Medicine***, *ISMRM,* Toronto, ON, Canada, July 10-17, 2003.

[266] José M. F. Moura and Markus Püschel, "*SPIRAL: An Overview*," ***ODES: 1st Workshop on Optimizations for DSP and Embedded Systems***, in conjunction with ***International Symposium on Code Generation and Optimization (CGO)***, Hyatt at Fisherman's Wharf, San Francisco, CA, March 23, 2003.

[267] Aca Gacic, Markus Pueschel, and José M. F. Moura, "*Fast Automatic Software Implementations of FIR Filters*," ***ICASSP'03***, ***IEEE International Conference on Signal Processing***, vol. 2, pp. 6-10, Hong Kong, April, 2003.

[268] José M. F. Moura, Jin Lu, and Marius Kleiner, "*Intelligent Sensor Fusion: A Graphical Model Approach*," ***ICASSP'03***, ***IEEE International Conference on Signal Processing***, vol. 6, pp. 733-736, Hong Kong, April, 2003.

[269] Jin Lu and José M. F. Moura, "*Turbo Like Decoding of LDPC Codes*," ***INTERMAG '03***, ***IEEE International Conference on Magnetics***, DT-11, Boston, MA, March 28-April 3, 2003.

[270] Victor Ha and José M. F. Moura, "*Intrinsic Shape*," ***36th Asilomar Conference on Signals, Systems, and Computers***, vol.1: 139-143, Monterey, CA, 3-6 November 2002. *Invited paper, Special Session on Statistical Image Processing*.

[271] Pedro M. Q. Aguiar and José M. F. Moura, "*3D Rigid Structure from Video: What Are "Easy" Shapes and "Good" Motions?*," ***5th IEEE Workshop on Multimedia Signal Processing***, pp. 97-100, December 2002.

[272] Marcelo G. S. Bruno and José M. F. Moura, "*Bayesian Smoothing and Filtering for Multiframe, Multiaspect Target Detection and Tracking*," ***ICIP'02, IEEE International Conference on Image Processing***, vol. 1, pp. 561-564, Rochester, NY, September 2002.

[273] Markus Pueschel and José M. F. Moura, "*Understanding the Fast Algorithms for the Discrete Trigonometric Transforms*," ***IEEE Digital Signal Processing Workshop***, Atlanta, Georgia. September 2002.

[274] Markus Pueschel and José M. F. Moura, "*Generation and Manipulation of DSP Transform Algorithms*," ***IEEE Digital Signal Processing Workshop***, Atlanta, Georgia. September 2002.

[275] Ying Sun, José M. F. Moura, Dewen Yang, and Chien Ho, "*Kidney segmentation in MRI Sequences Using Temporal Dynamics*," ***ISBI'02 IEEE International Symposium on Bioimaging***, pp. 98-101, Washington DC, July, 2002.

[276] Ying Sun, Dewen Yang, Qing Ye, Chien Ho, and José M. F. Moura, "*Pseudo-Color Visualization of Dynamic Renal Perfusion in MRI*," ***Tenth Scientific Meeting and Exhibition of the International Society for Magnetic Resonance in Medicine***, *ISMRM,* Honolulu, Hawaii, May 19-24, 2002.

[277] Amir Asif and José M. F. Moura, "*Fast Inversion of L-Block Banded Matrices and their Inverses,*" ***ICASSP'02***, ***IEEE International Conference on Signal Processing,*** vol. 2, pp. 1369-1372, Orlando, FL, 12-17 May 2002.

[278] Marcelo G. Bruno and José M. F. Moura, "*Clutter Adaptive Tracking of Multiaspect Targets in IRAR Imagery,*" ***ICASSP'02***, ***IEEE International Conference on Signal Processing,*** vol. 3, pp. 2873-2876, Orlando, FL, 12-17 May 2002.

[279] Qing Ye, Dewen Yang, Ying Sun, Mangay Williams, Ben Y. Tseng, José M. F. Moura, and Chien Ho, "*Reduction of Renal Ischemia/ Reperfusion Injury Using Anti-Apoptosis Treatment with Pan-Caspase Inhibitor, MX1122,*" **American Transplant Congress**, 2002.

[280] José M. F. Moura, J. Johnson, R. W. Johnson, D. Padua, Victor Prasanna, M. Püschel, Bryan Singer, Manuela Veloso, and Jianxin Xiong "*Generating Platform Adapted DSP Libraries Using SPIRAL,*" ***HPEC'01, VII High Performance Embedding Computing Workshop***, Lincoln Lab., Lexington, MA, November 27-29, 2001.

[281] Pedro M. Q. Aguiar and José M. F. Moura, "*Image Motion Estimation – Convergence and Error Analysis,*" ***ICIP '01, IEEE Proceedings of International Conference on Image Processing,*** vol. 2, pp. 937-940, Greece, 7-10 October, 2001.

[282] José M. F. Moura, "*A Geometric and Multiresolution Analysis Approach to Robust Detection,*" ***11th Workshop on Statistical Signal Processing***, Orchid Country Club Singapore, August 6-8, 2001. *Invited Plenary Talk.*

[283] Pedro M. Q. Aguiar and José M. F. Moura, "*Maximum Likelihood Estimation of the Template of a Rigid Moving Object,*" ***EMMCVPR'01, Energy Minimization Methods in Computer Vision and Pattern Recognition,*** July 2001.

[284] Markus Pueschel, Bryan Singer, M. Manuela Veloso, José M. F. Moura, "*Fast Automatic Generation of DSP Algorithms,*" in **Computational Science – ICCS 2001**, eds. V. N. Alexandrov, J. J. Dongarra, B. A. Juliano, R. S. Renner, C. J. K. Tan, ***ICCS'01, The 2001 International Conference on Computational Science,*** presented in *Special Session* on "*Architecture-Specific Automatic Performance Tuning,*" Hilton San Francisco and Towers, San Francisco, May 28 – 30, 2001.

[285] Marcelo G. Bruno and José M. F. Moura, "*Integration of Bayes Detection and Target Tracking in Real Clutter Image Sequences,*" ***IEEE National Radar Conference***, Atlanta, GA, May 2001.

[286] Marcelo G. Bruno and José M. F. Moura, "*Clutter Adaptive Multiframe Detection/Tracking of Random Signature Targets,*" ***ICASSP'01***, ***IEEE International Conference on Signal Processing,*** Salt Lake City, Utah, vol. 5, 2825-2828, May 2001.

[287] S. Bausson, José M. F. Moura, and D. Mauuary, "*Ocean Acoustic Tomography Structured Covariance Estimation,*" ***ICASSP'01***, ***IEEE International Conference on Signal Processing,*** Salt Lake City, vol. 5, 3125-3128, Utah, May 2001.

[288] Victor H. Ha and José M. F. Moura, "*Affine Invariant Wavelet Transform,*" ***ICASSP'01***, ***IEEE International Conference on Signal Processing,*** vol. 3, 1937-1940, Salt Lake City, Utah, May 2001.

[289] Q. Ye, D.Yang, M.Williams, D. S. Williams, C. Pluempitiwiriyawej, J. M. F. Moura, and C. Ho, "*In-Vivo Detection of Acute Rejection of Rat Renal Allograft by MRI with Ultrasmall Superparamagnetic Iron Oxide Particles*," **Ninth Scientific Meeting and Exhibition of the International Society for Magnetic Resonance in Medicine**, *ISMRM/ESMRMB Joint Annual Meeting*, Glasgow, Scotland, April 21 –27, 2001.

[290] Y. Sun, D. Yang, Q. Ye, C. Ho, and José M. F. Moura, "*A Novel Approach in Analyzing Dynamic Intrarenal Signals Using USPIO and MRI*," **Ninth Scientific Meeting and Exhibition of the International Society for Magnetic Resonance in Medicine**, *ISMRM/ESMRMB Joint Annual Meeting*, Glasgow, Scotland, April 21 –27, 2001.

[291] Pedro M. Q. Aguiar and José M. F. Moura, "*Weighted Factorization*," **ICIP '00, IEEE Proceedings of International Conference on Image Processing**, Vancouver, British Columbia Canada, October 2000.

[292] Marcelo G. Bruno and José M. F. Moura, "*Multiframe Bayesian Tracking of Cluttered Targets with Random Motion*," **ICIP '00, IEEE Proceedings of International Conference on Image Processing**, Vancouver, British Columbia Canada, October 2000.

[293] José M. F. Moura, J. Johnson, R. W. Johnson, M. Püschel, D. Padua, and M. M. Veloso, "*SPIRAL: Automatic Implementation of Signal Processing Algorithms*," **HPEC'00, VI High Performance Embedding Computing Workshop**, Lincoln Lab., Lexington, MA, September 20-22, 2000.

[294] Marcelo G. Bruno and José M. F. Moura, "*Optimal Multiframe Detection and Tracking in Digital Image Sequences*," **ICASSP'00**, **IEEE International Conference on Signal Processing**, Istanbul, Turkey, June 2000.

[295] Susan M. Schweitzer and José M. F. Moura, "*The Fully Adaptive GMRF Anomaly Detector for Hyperspectral Imagery*," **ICASSP'00**, **IEEE International Conference on Signal Processing**, Istanbul, Turkey, June 2000.

[296] Amir Asif and José M. F. Moura, "*Block Banded Matrix Approximations: Application to Kalman-Bucy filter*," **ICASSP'00**, **IEEE International Conference on Signal Processing**, Istanbul, Turkey, June 2000.

[297] Susan M. Schweitzer and José M. F. Moura, "*A Fully Adaptive Hyperspectral Detector*," **SPIE: Algorithms for Multispectral and Hyperspectral Imagery VI, Aerosense'00**, Orlando, FL, April 2000.

[298] José M. F. Moura, J. Johnson, M. Püschel, David Sepiashvili, and G. Haentjes, "*In Search of Optimal Implementations for Signal Processing Transforms*," in **Information Theoretic Imaging, Festschrift for Donald Snyder**, edt. J. A. O'Sullivan, Springer Verlag, St. Louis, MS, January 14-15, 2000.

[299] Pedro M. Q. Aguiar and José M. F. Moura, "*Fast 3D Modeling from Video*," **3th IEEE Workshop on Multimedia Signal Processing**, Copenhagen, Denmark, December 1999.

[300] Pedro M. Q. Aguiar and José M. F. Moura, *"A Fast Algorithm for Rigid Structure from Image Sequences,"* **ICIP '99, IEEE International Conference on Image Processing,** Yokoama, Japan, October 1999.

[301] Pedro M. Q. Aguiar and José M. F. Moura, *"Maximum Likelihood Inference of 3D Structure from Image Sequences,"* **EMMCVPR'99, Energy Minimization Methods in Computer Vision and Pattern Recognition,** July 1999.

[302] Pedro M. Q. Aguiar and José M. F. Moura, *"Factorization as a Rank 1 Problem,"* **CVPR'99**, **Computer Vision and Pattern Recognition Conference**, June 1999.

[303] Susan M. Schweitzer and José M. F. Moura, *"ML-Detection in Hyperspectral Imagery: A GMRF Modeling Approach,"* **SPIE: Algorithms for Multispectral and Hyperspectral Imagery V,** part of **Aerosense'99,** Orlando, FL, April 1999.

[304] Marcelo G. Bruno and José M. F. Moura, *"Performance of the Optimal Nonlinear Detector/ Tracker in Clutter,"* **ICASSP '99**, **IEEE International Conference on Signal Processing,** Phoenix, AZ, March 15-19, 1999.

[305] John T. Stonick, Virginia Stonick, and José M. F. Moura, *"Multi-Stage Adaptive Pre-distortion of HPA Saturation Effects for Digital Television Transmission,"* **ICASSP '99**, **IEEE International Conference on Signal Processing,** Phoenix, AZ, March 15-19, 1999.

[306] Susan M. Schweitzer and José M. F. Moura, *"Hyperspectral Sensors: Modeling and Detection,"* *invited paper* on session *Detection*, **1999 IEEE Information Theory Workshop on Detection, Estimation, Classification, and Imaging,** Santa Fe, NM, February 24-26, 1999.

[307] Alek Kavcic and José M. F. Moura, *"Information Maximizing Correlation Structures," invited paper* on session *Random Processes*, **1999 IEEE Information Theory Workshop on Detection, Estimation, Classification, and Imaging,** Santa Fe, NM, February 24-26, 1999.

[308] Jia-Ching Cheng and José M. F. Moura, *"Capture and Synthesis of Human Motion in Video Sequences,"* **2nd IEEE Workshop on Multimedia Signal Processing**, Santa Monica, CA, December 7-9, 1998.

[309] Aleksandar Kavcic and José M. F. Moura, *"Signal Dependent Correlation Sensitive Branch Metrics for Viterbi-like Sequence Detectors,"* **ICC'98, International Conference on Communications**, vol. 2:657-661, 1998.

[310] Pedro. M. Q. Aguiar and José M. F. Moura, *"Video Representation via 3D Shaped Mosaics."* **ICIP '98**, **IEEE Proceedings of International Conference on Image Processing,** Chicago, Illinois, October 1998.

[311] Ivars P. Kirsteins, José M. F. Moura, John W. Fay, and Sanjay K. Mehta, *"Ownship Interference Cancellation and Source Localization,"* **Oceans'98**, **IEEE International Conference on Ocean Engineering,** Nice, September 15-18, 1998.

[312] Marcelo G. Bruno and José M. F. Moura, *"Radar/ Sonar Multitarget Tracking"* **Oceans'98**, **IEEE International Conference on Ocean Engineering,** Nice, September 15-18, 1998.

[313] Marcelo G. Bruno and José M. F. Moura, "*Optimal Detection and Tracking of Randomly Moving Targets*" ***ITS'98, IEEE Telecommunications Symposium,*** vol. 1: 43-48, SBT/IEEE, September, 1998.

[314] Alek Kavcic and José M. F. Moura, "*Maximum Likelihood Sequence Estimation in Channels with Intersymbol Interference and Noise Memory,*" ***ISIT'98, IEEE International Symposium on Information Theory***, Cambridge, MA, August 16-21, 1998.

[315] Pedro M. Q. Aguiar and José M. F. Moura, "*Robust 3D Structure From Motion Under Orthography,*" ***IEEE Image and Multidimensional Digital Signal Processing Workshop'98***, Vienna, Austria, July 1998.

[316] Susan Schweitzer and José M. F. Moura, "*Modeling and Detection in Hyperspectral Imagery,*" ***ICASSP '98***, ***IEEE International Conference on Signal Processing,*** in *Special Session on Markov Processes for Signal Processing*, Volume IV, pages 2273-2275 Seattle, WA, May 12-15, 1998.

[317] João Xavier, Victor A. N. Barroso, and José M. F. Moura*, "Closed-Form Blind Identification of MIMO Channels,*" ***ICASSP '98, IEEE International Conference on Signal Processing,*** Volume VI, pages 3165-3168, Seattle, WA, May 12-15, 1998.

[318] Susan M. Schweitzer and José M. F. Moura, "*Detection in Hyperspectral Imagery,*" ***SPIE: Algorithms for Multispectral and Hyperspectral Imagery IV, Aerosense'98,*** Orlando, FL, April 1998.

[319] Pedro Aguiar and José M. F. Moura, "*Detecting and Solving Template Ambiguities in Motion Segmentation,*" ***ICIP'97, IEEE Proceedings of International Conference on Image Processing,*** Santa Barbara, CA, October 1997.

[320] Jia-Ching Cheng and José M. F. Moura*, "Tracking Human Walking in Dynamic Scene*s." ***ICIP'97, IEEE Proceedings of International Conference on Image Processing,*** Vol. I, pp. 137-140, Santa Barbara, CA, October 1997.

[321] José M. F. Moura and Chuang (Mike) He, "*Focusing in Synthetic Aperture Radar by Multiresolution Methods,*" in *invited session "Statistical Signal and Sensor Array Processing,"* ***IFAC - Symposium on System Identification***, ***IFAC-SYSID'97 SICE***, volume 2, pp. 547-552, Kitakyushu, Fukuoka, Japan, 8-11 July 1997. *Invited paper.*

[322] Jia-Ching Cheng and José M. F. Moura, "*Model Based Recognition of Human Walking in Dynamic Scenes.*" ***1st IEEE Workshop on Multimedia Signal Processing***, pp. 268-273, Princeton, NJ, June 1997.

[323] Nirmal Keshava and José M. F. Moura, "*Robust Classification of Targets in POL-SAR Using Wavelet Packets****." NATRAD '97***, ***IEEE National Radar Conference,*** Syracuse, NY, May 1997.

[324] José M. F. Moura and Chuang (Mike) He, "*Target Detection in Unfocused SAR/ISAR Images, A Geometric Approach,*" ***NATRAD '97***, ***IEEE National Radar Conference,*** Syracuse, NY, May 13-15, 1997.

[325] Alek Kavcic and José M. F. Moura, "*Experimental Validation of the Triangle Zig-Zag Transition Model.*" ***INTERMAG '97***, ***IEEE International Conference on Magnetics,*** New Orleans, LA, April 1997.

[326] Amir Asif and José M. F. Moura, "*Fast Recursive Reconstruction of Large Time Varying Multidimensional Fields,*" **ICASSP '97**, **IEEE International Conference on Signal Processing,** Volume IV, pages 3037-3039, Munich, Germany, April 1997.

[327] Chuang (Mike) He and José M. F. Moura, "*Detection of Multipath Random Signals by Multiresolution Subspace Design,*" **ICASSP '97**, **IEEE International Conference on Signal Processing,** Volume V, pages 3701-3703, Munich, Germany, April 1997.

[328] Nirmal Keshava and José M. F. Moura, "*Terrain Classification Using Polarimetric SAR,*" **ICASSP '97**, **IEEE International Conference on Signal Processing,** Volume I, pages 555-557, Munich, Germany, April 1997.

[329] Fernando Martins, Hirohisa Shiojiri and José M. F. Moura, "*3D-3D Registration of Free Formed Objects Using Shape and Texture,*" **VCIP '97**, **Conference on Visual Communications and Image Processing, SPIE Symposium on Electronic Imaging, Science and Technology,** San Jose, CA, February 1997.

[330] Alek Kavcic and José M. F. Moura, "*Signal Generation Model for High Density Magnetic Recording,*" *invited paper in Special Session on Signal Processing for Magnetic Recording*, **GlobeCom'96**, **IEEE Global Telecommunications Conference,** vol.2: 973-978, London, England, 18-22 November 1996.

[331] Nirmal Keshava and José M. F. Moura, "*Wavelets and Random Processes: Optimal Matching in the Battacharyya Sense,*" **30th Asilomar Conference on Signals, Systems, and Communications**, vol.2: 993-997, Monterey, CA, October 1996.

[332] Pedro Aguiar and José M. F. Moura, "*Incremental Motion Segmentation in Low Texture,*" **ICIP'96, IEEE International Conference on Image Processing**, Lausanne, Switzerland, September 1996.

[333] Chuang He and José M. F. Moura, "*Robust Detection via Multiresolution Subspace Design,*" in *Wavelet Design Session*, **SPIE Conference on Wavelet Applications in Signal and Image Processing IV**, *SPIE Proceedings #2825, International Symposium on Optical Science, Engineering, and Instrumentation,* Denver, CO, August 4-9, 1996.

[334] Radu S. Jasinschi and José M. F. Moura, "*Nonlinear Editing by Generative Video,*" in **ICASSP'96, IEEE International Conference on Acoustics, Speech, and Signal Processing**, Vol. II, pp. 1220-1223, Atlanta, GA, May 1996. *Special Session on Video Processing by Contents.*

[335] Chuang He, José M. F. Moura, and Steve Benno, "*Gap Detector for Multipath,*" in **ICASSP'96, IEEE International Conference on Acoustics, Speech, and Signal Processing**, Vol. V, pp. 2650-2653, Atlanta, GA, May 1996.

[336] José M. F. Moura, Chuang (Mike) He and Steve Benno, "*Robust Detection in Multipath,*" *invited paper*, **Forum Acousticum 1996, 1st Convention of the European Acoustic Association**, Antwerp, Belgium, April 1996.

[337] José M. F. Moura, R. S. Jasinschi, H. Shiojiri, and J-C. Lin, "*Video Over Heterogeneous Networks,*" in **Proceedings of SPIE "Wireless Personal Communications Technologies and**

Services," vol. SPIE-2603, *Invited paper in Session "PCS Data and Multimedia Applications."* Philadelphia, PA, October 1995.

[338]   A. Kavcic and José M. F. Moura, *"Triangle Zig-Zag Transition Modeling,"* in M. R. Raghuveer, S. A. Dianat, S. W. McLaughlin, and M. Hassner, editors, ***Proceedings of SPIE "Coding and Signal Processing for Information Storage,"*** Vol. SPIE-2605, pp. 13-23, *Special Session on Channels, Models, and Identification. Invited paper.* Philadelphia, PA, October 1995.

[339]   F. Martins and José M. F. Moura, *"3-D Video Compositing: Towards a Compact Representation for Video Sequences,"* in ***ICIP'95, Proceedings of International Conference on Image Processing,*** vol. 1, pp. 550-553. *IEEE*, October 1995.

[340]   R. S. Jasinschi and José M. F. Moura, *"Content-Based Video Sequence Representation,"* in ***ICIP'95, Proceedings of International Conference on Image Processing,*** vol. 2, pp. 229-232. *IEEE*, October 1995.

[341]   R. S. Jasinschi, J. M. F. Moura, J-C. Cheng, and A. Asif, *"Video Compression Via Constructs,"* in ***ICASSP '95, IEEE International Conference on Acoustics, Speech, and Signal Processing***, vol. IV, pp. IV-2165-2168, Detroit, MI, May 8-12, 1995.

[342]   J. Stonick, V. Stonick, and José M. F. Moura, *"Memoryless Polynomial Adaptive Predistortion,"* ***ICASSP '95, IEEE International Conference on Acoustics, Speech, and Signal Processing,*** vol. II, pp. II-981-984, Detroit, MI, May 8-12, 1995.

[343]   José M. F. Moura, M. João D. Rendas, and Georges Bienvenu. *"Environmental Limits to Source Localization,"* in ***ICASSP '95, IEEE International Conference on Acoustics, Speech, and Signal Processing***, vol. IV, pp. IV-2775-2778, Detroit, MI, May 8-12, 1995. *Special Session on Signal Processing in the Ocean Environment.*

[344]   S. Benno and José M. F. Moura, *"Nearly Shiftable Scaling Functions,"* ***ICASSP '95, IEEE International Conference on Acoustics, Speech, and Signal Processing***, vol. II, pp. II-1097-1100, Detroit, MI, May 8-12, 1995.

[345]   A. Asif and José M. F. Moura, *"Assimilation of Satellite Data in Beta-Plane Ocean Circulation Models,"* ***ICASSP '95, IEEE International Conference on Acoustics, Speech, and Signal Processing***, vol. V, pp. V-2789-2792, Detroit, MI, May 1995. *Special Session on Signal Processing in the Ocean Environment.*

[346]   Sauraj Goswami and José M. F. Moura, *"Sample Path Description of Gauss Markov Random Fields,"* in ***IEEE-IMS Information Theory Workshop on Image Processing and Statistics***, pp. 64, Alexandria, VA, October 1994.

[347]   S. Benno and José M. F. Moura, *"Shiftable Representations and Multipath Processing,"* ***IEEE International Conference on Wavelets***, pp. 397-400, Philadelphia, PA, November 1994.

[348]   M. J. D. Rendas, Georges Bienvenu, and José M. F. Moura, *"Sensitivity of Coherent and Incoherent Localization Methods,"* ***Oceans '94, IEEE Conference on Ocean Engineering***, Brest, France, October 1994.

[349] M. J. D. Rendas, Georges Bienvenu, and José M. F. Moura, "*Precision and Sensitivity of Coherent and Incoherent Inversion Methods: A Comparative Study,*" **Matched Field Workshop**, La Spezia, Italy, June 1994.

[350] S. Goswami and José M. F. Moura, "*Representation of Gauss Markov Random Fields,*" **Institute of Mathematical Statistics Annual Meeting**, Chapel Hill, NC, June 1994.

[351] M. Vea and José M. F. Moura, "*Multichannel Equalization for High Track Density Magnetic Recording,*" **ICC '94, IEEE International Conference on Communications,** New Orleans, pp. 1221-1225, New Orleans, LA, May 1994.

[352] José M. N. Leitão and José M. F. Moura, "*Nonlinear Phase Estimators Based on the Kullback Distance,*" **ICASSP '94, IEEE International Conference on Acoustics, Speech, and Signal Processing**, Adelaide, Australia, April 1994.

[353] M. João D. Rendas, Georges Bienvenu, and José M. F. Moura, "*Uncertainty Modeling for Ocean Tomography Systems,*" **Oceans '93, IEEE International Symposium on Oceanic Engineering**, Seattle, WA, October 1993.

[354] M. João D. Rendas and José M. F. Moura, "Performance Analysis of Ocean Tomography Systems," In **XIV GRETSI, Quatorzième Colloque sur le Traitement du Signal et ses Applications**, Juan Les Pins, France, September 1993.

[355] Nikhil Balram and Jose´ M. F. Moura, "*Predictive Coding Using Noncausal Models,*" **ICASSP '93, IEEE International Conference on Acoustics, Speech, and Signal Processing**, April 1993.

[356] M. João D. Rendas, and José M. F. Moura, "*Observability of Source Location in the Underwater Multipath Acoustic Channel,*" in *Acoustic Signal Processing for Ocean Exploration*, edts. José M. F. Moura and Isabel M. G. Lourtie, pp. 115-130, D. Reidel, Amsterdam, The Netherlands, January 1993.

[357] José M. F. Moura and Nikhil Balram, "*2D Linear Optimal Statistical Signal Processing on Finite Lattices*," in *Acoustic Signal Processing for Ocean Exploration*, edts. José M. F. Moura and Isabel M. G. Lourtie, pp. 413-432, D. Reidel, Amsterdam, The Netherlands, January 1993.

[358] Richard S. Bucy, José M. F. Moura, and S. C. Leung, "*Geometrical Methods for Direction Determination,*" in *Acoustic Signal Processing for Ocean Exploration*, edts. José M. F. Moura and Isabel M. G. Lourtie, pp. 187-192, D. Reidel, Amsterdam, The Netherlands, January 1993.

[359] José M. F. Moura and Nikhil Balram, "*Optimal Prdecitive Coding of 2D Fields,*" in **ISIT'93**, **IEEE International Symposium on Information Theory,** San Antonio, TX, January 1993.

[360] M. João D. Rendas and José M. F. Moura, "*Source Position Observability in a Multipath Channel,*" **Oceans '92, IEEE International Symposium on Oceanic Engineering**, October 1992.

[361] José M. F. Moura and M. João D. Rendas, "*Ambiguity Function in Sonar,*" **26th Asilomar Conference**, October 1992. *Invited paper.*

[362] M. João D. Rendas and José M. F. Moura, "*Channel Matched Source Location: Sensitivity to the Propagation Model**," ECUA '92, European Conference on Underwater Acoustics**,* September 1992.

[363] H. Tokuda, Y. Tobe, S. T.-C Chou, and J. M. F Moura. "Continuous media communication with dynamic QOS control using artss with an FDDI network." In *Proceedings of the ACM Symposium on Communications Architectures and Protocols (**ACM SIGCOM/ 92**), pages 88-98, Baltimore, October 1992.

[364] Victor A. N. Barroso and José M. F. Moura, "*A Maximum Likelihood Based Algorithm for the Simultaneous Detection of Outliers and Localization of Multiple Sources,*" **ICASSP '92, IEEE International Conference on Acoustics, Speech, and Signal Processing**, vol. 2, pp. 425-428, March 1992.

[365] M. João D. Rendas and José M. F. Moura, "*Ambiguity Structure of Multipath Channels,*" **ICASSP '92, IEEE International Conference on Acoustics, Speech, and Signal Processing**, vol. 2, pp. 509-512, March 1992.

[366] Nikhil Balram and José M. F. Moura, "*Parameter Estimation in 2D Fields,*" **ICASSP '92, IEEE International Conference on Acoustics, Speech, and Signal Processing**, vol. 3, pp. 345-348, March 1992.

[367] Mathew Vea and José M. F. Moura, "*Detection in Magnetic Recording with Cross-Track Interference,*" **25th Asilomar Conference,** Monterey, CA, November 1991. *Invited paper in session on Signal Processing and Coding for Data Storage.*

[368] Nikhil Balram and José M. F. Moura, "*Rapid Enhancement and Compression of Image Data,*" **SPIE VCIP '91**, Boston, MA, November 1991.

[369] M. João D. Rendas and José M. F. Moura, "*Ambiguity Function for Random Signals,*" **XIII GRETSI**, **Treizième Colloque sur le Traitement du Signal et ses Applications**, Juan Les Pins, France, September 1991.

[370] Paul McKee and José M. F. Moura, "*Neural Networks for Classification of ARMA Models: An Experimental Study,*" **IEEE Conference on Neural Networks for Ocean Engineering**, pp. 371-378, Washington, DC, August 1991.

[371] Carlos A. C. Belo and José M. F. Moura, "Qualitative Design of Nonlinear Stochastic Filters," **ISIT '91**, **IEEE International Symposium on Information Theory**, Budapest, Hungary, June 1991.

[372] M. João D. Rendas and José M. F. Moura, "*Ambiguity Analysis in Source Location with Unknown Signals,*" **ICASSP '91**, **IEEE International Conference on Acoustics, Speech, and Signal Processing**, vol. 2, pp. 1285-1288, Toronto, Canada, May 1991.

[373] Victor A. N. Barroso and José M. F. Moura, "Performance of the l_1 Beamformer in the Presence of Impulsive Noise," **ICASSP '91**, **IEEE International Conference on Acoustics, Speech, and Signal Processing**, vol. 2, pp. 1409-1412, Toronto, Canada, May 1991.

[374] Nikhil Balram and José M. F. Moura, "*Recursive Enhancement of Noncausal Images,*" ***ICASSP '91***, ***IEEE International Conference on Acoustics, Speech, and Signal Processing***, vol. 4, pp. 2997-3000, May 1991.

[375] Nikhil Balram and José M. F. Moura, "*Parameter Estimation for Noncausal Gauss Markov Random Fields,*" ***CISS'91, 25th Annual Conference on Information Sciences and Systems***, pp. 365-370, Baltimore, MD, March 1991.

[376] M. J. D. Rendas and José M. F. Moura, "*Cramér-Rao Bounds for Location of Unknown Multiple Sources in a Multipath Environment.*" ***IEEE Signal Processing 5th Workshop on Spectral Estimation and Modeling***, pp. 89-93, Rochester, NY, October 1990. *Invited paper*.

[377] Victor A. N. Barroso and José M. F. Moura, "*Robust Beamforming Under Unexpected Strong Impulsive Noise,*" ***EUSIPCO '90, European Signal Processing Conference***, Barcelona, Spain, September 1990.

[378] M. João D. Rendas and José M. F. Moura, "Performance Analysis of Passive Location With Stochastic Wideband Signals," ***EUSIPCO '90, European Signal Processing Conference***, Barcelona, Spain, September 1990.

[379] M. Isabel L. F. Ribeiro and José M. F. Moura, "*LD^2 –ARMA: A Novel ARMA Estimator,*" ***EUSIPCO '90, European Signal Processing Conference***, Barcelona, Spain, September 1990.

[380] M. João D. Rendas and José M. F. Moura, "*Cramér-Rao Bounds for Passive Range and Depth in a Vertically Inhomogeneous Medium,*" ***ICASSP '90, IEEE International Conference on Acoustics, Speech, and Signal Processing***, vol. 5, pp. 2779-2783, Albuquerque, NM, April 1990.

[381] Victor A. N. Barroso and José M. F. Moura, "Detection Performance of the l_1 Beamformer in the Presence of Underwater Burst Noise," ***ICASSP '90, IEEE International Conference on Acoustics, Speech, and Signal Processing***, vol. 5, pp. 2803-2806, Albuquerque, NM, April 1990.

[382] José M. F. Moura and Nikhil Balram. "*A Recursive Framework for Noncausal Gauss Markov Random Fields,*" ***CISS'90, 24th Annual Conference on Information Sciences and Systems***, pp. 608-613, Princeton, NY, March 1990.

[383] Carlos A. C. Belo and José M. F. Moura, "*First Order Error PDF for Nonlinear Stochastic Filters,*" ***ICASSP '90, IEEE International Symposium on Information Theory***, San Diego, CA January 1990.

[384] M. João D. Rendas and José M. F. Moura, "*Range Sensitivity in a Multipath Environment,*" ***OCEANS'89, IEEE International Symposium on Oceanic Engineering***, Seattle, WA, September 1989.

[385] M. J. D. Rendas and José M. F. Moura, "*Detectability Conditions of High Resolution Algorithms in the Presence of Correlated Arrivals,*" ***XII GRETSI, Douzième Colloque sur le Traitement du Signal et ses Applications***, Juan Les Pins, France, June 1889.

[386] José M. F. Moura and M. João D. Rendas. "Sensitivity of Range Localization in a Multipath Environment," ***ICASSP '89, IEEE International Conference on Acoustics, Speech, and Signal Processing***, vol. 4, pp. 2629-2632, Glasgow, May 1989.

[387] M. João D. Rendas and José M. F. Moura, "Resolving Narrowband Coherent Paths with Nonuniform Arrays." *ICASSP '89, IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 2625-2628, Glasgow, Scotland, May 1989.

[388] M. Isabel L. F. Ribeiro, Zerubia, José M. F. Moura, and G. Alengrin. "Comparison of Two ARMA Estimators," *ICASSP '89, IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 2186-2189, Glasgow, Scotland, May 1989.

[389] Victor A. N. Barroso and José M. F. Moura, "Adaptive Beamforming as an Inverse Problem," *ICASSP '89, IEEE International Conference on Acoustics, Speech, and Signal Processing*, vol 4, pp. 2597-2600, Glasgow, Scotland, May 1989.

[390] Isabel M. G. Lourtie and José M. F. Moura, "Joint Delay and Signal Determination," Y. T. Chan, editor, *Underwater Acoustic Data Processing*, pp. 531-536, D. Reidel, The Netherlands, April 1989, Kingston, Ontario, Canada.

[391] Victor A. N. Barroso and José M. F. Moura, "Optimal Estimation and Beamforming," Y. T. Chan, editor, *Underwater Acoustic Data Processing*, pp. 293-300, D. Reidel, The Netherlands, April 1989, Kingston, Ontario, Canada.

[392] Nikhil Balram, Carlos A. C. Belo, and José M. F. Moura, "Parallel Processing on Super-Computers: A Set of Computational Experiments," *Proceedings IEEE Supercomputing '88*, pp. 247-257, Orlando, FL, November 1988.

[393] José M. F. Moura and M. Isabel L. F. Ribeiro, "Linear Estimation of ARMA Processes," *IEEE Acoustics, Speech, and Signal Processing Fourth Workshop on Spectral Estimation and Modeling*, pp. 229-234, University of Minnesota, Minneapolis, MN, August 1988.

[394] M. João D. Rendas and José M. F. Moura, "Path Resolution by Coherent Averaging: Trading Spatial and Temporal Degrees of Freedom," *ICASSP '88, IEEE International Conference on Acoustics, Speech, and Signal Processing,* vol. 5, pp. 2626-2629, New York, April 1988.

[395] Isabel M. G. Lourtie and José M. F. Moura, "Optimal Estimation of Time-Varying Delay," *ICASSP '88, IEEE International Conference on Acoustics, Speech, and Signal Processing*, vol 5, pp. 2622-2625, New York, April 1988.

[396] M. Isabel L. F. Ribeiro and José M. F. Moura, "ARMA Processes: Order Estimation," *ICASSP '88, IEEE International Conference on Acoustics, Speech, and Signal Processing*, vol 4, pp. 2308-2311, New York, April 1988.

[397] Lennart Ljung, Sanjoy K. Mitter, and José M. F. Moura, "Optimal Recursive Maximum Likelihood Estimation," *IFAC '87, 10th World Congress on Automatic Control*, Munich, Federal Republic of Germany, July 27-31, 1987.

[398] Victor A. N. Barroso and José M. F. Moura, "A State Space Model for Nondirectional Random Fields," *XI GRETSI, Onzième Colloque sur le Traitement du Signal et ses Applications*, Nice, France, June 1987.

[399] M. Isabel L. F. Ribeiro and José M. F. Moura, "Dual Algorithm for ARMA Spectrum Estimation." ***ICASSP '87, IEEE International Conference on Acoustics, Speech, and Signal Processing***, vol. 12, pp. 2081-2084, Dallas, TX, April 1987.

[400] José M. F. Moura and M. Isabel L. F. Ribeiro, "*Parametric Spectral Estimation for ARMA Processes*," ***IEEE Acoustics, Speech, and Signal Processing Third Workshop on Spectral Estimation and Modeling***, pp. 37-40, Boston, MA, November 1986.

[401] J. M. Lemos and José M. F. Moura, "*Discretization of the Fokker-Planck Equation*," I. T. Young, J. Biemond, R. P. W. Duin, and J. J. Gerbrands, editors, ***EUSIPCO'86, Signal Processing III, Theories and Applications***, North-Holland, The Hague, The Netherlands, September 2-5, 1986.

[402] José M. F. Moura and M. João D. Rendas, "*Optimal Filtering in the Presence of Multipath*," ***ISIT '85***, ***IEEE International Symposium on Information Theory***, Brighton, England, June 1985. *Invited Session on Stochastic Processes for Underwater Signal Processing*.

[403] Carlos A. C. Belo and José M. F. Moura, "*On the Characterization of the Error in Nonlinear Filtering Problems*," ***ISIT '85, IEEE International Symposium on Information Theory***, Brighton, England, June 1985.

[404] Jorge N. S. Marques and José M. F. Moura, "*A Jump Detection Algorithm for Passive Source Location*," ***X GRETSI, Dixième Colloque sur le Traitement du Signal et ses Applications***, Nice, France, May 1985.

[405] Isabel M. G. Lourtie and José M. F. Moura, "*Time Delay Determination: Maximum Likelihood and Kalman-Bucy Type Structures*," ***ICASSP '85***, ***IEEE International Conference on Acoustics, Speech, and Signal Processing***, vol. 10, pp. 1750-1753, Orlando, FL, April 1985.

[406] Isabel M. G. Lourtie and José M. F. Moura, "*Delay Estimation with Stationary Signals and Correlated Observation Noises*," Heinz G. Urban, editor, ***Adaptive Methods in Underwater Acoustics***, pp. 235-247, D. Reidel, Dordrecht, Holland, April 1985, Lüneburg, Germany.

[407] José M. F. Moura, "*Range and Bearing Determination: Maximum Likelihood and Kalman-Bucy Techniques*," Heinz G. Urban, editor, ***Adaptive Methods in Underwater Acoustics***, pp. 217-233, D. Reidel, Dordrecht, Holland, April 1985, Lüneburg, Germany. *Invited paper*.

[408] José M. N. Leitão and José M. F. Moura, "*Reducing the Error Diffusion Rate in Absolute Phase Demodulation*," H. W. Schumber, editor, ***EUSIPCO'84, European Signal Processing Conference***, North Holland, Amsterdam, The Netherlands, 1984.

[409] José M. F. Moura, "*A Relation Between Discrete and Continuous Optimal Nonlinear Filtering*," ***ISIT '83, IEEE International Symposium on Information Theory***, St. Jovite, Quebec, Canada, September 1983.

[410] Carlos A. C. Belo and José M. F. Moura, "*Fokker-Planck Study of the Phase Locked Loop: Behavior on the Real Line*," ***IX GRETSI, Neuvième Colloque sur le Traitement du Signal et ses Applications***, Nice, France, May 1983.

[411] José M. F. Moura, "*Geometric Aspects in Array Processing*," In C. H. Chen, editor, *Issues in Acoustic Signal/Image Processing and Recognition*, pp. 139-154, Springer Verlag, Berlin, May 1983, San Miniato, Italy.

[412] José M. N. Leitão and José M. F. Moura, "*Experimental Studies in Phase Acquisition*," *ISIT '82*, *IEEE International Symposium on Information Theory*, Les Arcs, France, June 1982.

[413] José M. F. Moura, "*Recursive Techniques for Passive Sonar Location*," *ICASSP'82, IEEE International Conference on Acoustics, Speech, and Signal Processing,* Paris, France, May 1982.

[414] José M. F. Moura, "*Implementation of Optimal Nonlinear Filters*," *2nd IASTED Symposium on Modeling, Identification, and Control*, Davos, Switzerland, March 1982.

[415] José M. F. Moura, "*Range Estimation: A Recursive Framework*," *International Conference on Digital Signal Processing*, Florence, Italy, September 1981.

[416] José M. N. Leitão and José M. F. Moura, "*Implementation of a Two Dimensional Cyclic Phase Estimator*," *International Conference on Circuits and Systems*, North-Holland, Amsterdam, September 1981.

[417] José M. F. Moura, "*Optimal Nonlinear Filtering: Structures and Performance*," *Workshop on Realization and Synthesis of Nonlinear Systems*, Rome, Italy, June 1981.

[418] José M. N. Leitão and José M. F. Moura, "*Algorithm Structures for Cyclic Phase Estimation*," *VIII GRETSI*, *Huitième Colloque sur le Traitement du Signal et ses Applications*, Nice, France, May 1981.

[419] José M. F. Moura, "*Modeling, Algorithmic and Performance Issues in Deepwater Ranging Sound Systems*," L. Bjorno, editor, *Underwater Acoustics and Signal Processing*, pp. 433-439, D. Reidel, Dordrecht, Holland, 1981, Kollekole, Denmark.

[420] Richard S. Bucy, José M. F. Moura, and Jack Mallinckrodt, "*Entropy and Absolute Phase Demodulation*," *ISIT '81*, *IEEE International Symposium on Information Theory*, Santa Monica, CA, February 1981.

[421] José M. N. Leitão and José M. F. Moura, "*Nonlinear Filtering in Phase Acquisition*," M. Kunt and F. de Coulon, editors, *EUSIPCO'80, Signal Processing: Theories and Applications*, North-Holland, Amsterdam, The Netherlands, 1980.

[422] José M. F. Moura, "*Platform Location in Underwater Acoustics*," *Oceans '79, The Technical Challenge of Inner Space, IEEE International Symposium on Oceanic Engineering*, vol. 11, pp. 48-53, San Diego, CA, September 1979.

[423] José M. F. Moura and Victor A. N. Barroso, "*The Doppler Effect: A Second Look to its Information Contents*," *ISIT '79, IEEE International Symposium on Information Theory*, Grignano, Italy, June 1979.

[424] José M. F. Moura, "*A Navigation System for Air Traffic Precision Landing*," *VII GRETSI, Septième Colloque sur le Traitement du Signal et ses Applications*, Nice, France, May 1979.

[425]   José M. F. Moura and Victor A. N. Barroso, "*Estimação de Distâncias por Processamento do Efeito de Doppler,*" in ***Tema 8, Congresso dos Engenheiros***, Lisboa, Portugal, November 1977.

[426]   José M. F. Moura, Harry L. Van Trees, and Arthur B. Baggeroer, "*Spatial/Time Tracking by a Passive observer,*" ***Proceedings Fourth Symposium on Nonlinear Estimation Theory and its Applications***, San Diego, CA, September 1973; published by North Hollywood, Western Periodicals, pp. 193-204, 1974.

Editorials in Technical Journals

[427]   José M. F. Moura, "*Looking Forward, Reflecting on the Past, President's Message,*" IEEE Signal Processing Magazine, Vol. 27, Issue # 1, Page:, January 2010; DoI: 10.1109/MSP.2009.000000.

[428]   José M. F. Moura, "*What is signal processing?, President's Message,*" IEEE Signal Processing Magazine, Vol. 26, Issue # 6, Page: 6, November 2009; DoI: 10.1109/MSP.2009.934636.

[429]   José M. F. Moura, "*Your hard work, President's Message,*" IEEE Signal Processing Magazine, Vol. 26, Issue # 5, Page: 6 and 128, September 2009; DoI: 10.1109/MSP.2009.933375.

[430]   José M. F. Moura, "*A long, hot summer of our discontent, President's Message,*" IEEE Signal Processing Magazine, Vol. 26, Issue # 4, Page: 6, July 2009; DoI: 10.1109/MSP.2009.932407.

[431]   José M. F. Moura, "*A New Point of View, President's Message,*" IEEE Signal Processing Magazine, Vol. 26, Issue # 3, Page: 6, May 2009; DoI: 10.1109/MSP.2009.932159.

[432]   José M. F. Moura, "*Lend an ear–Or was that bend an ear? President's Message,*" IEEE Signal Processing Magazine, Vol. 26, Issue # 2, Page: 4, March 2009; DoI: 10.1109/MSP.2008.931086.

[433]   José M. F. Moura, "*A Positive Future, President's Message,*" IEEE Signal Processing Magazine, Vol. 26, Issue # 1, Page: 4, January 2009; DoI: 10.1109/MSP.2008.931110.

[434]   José M. F. Moura, "*Shopping for a New Suit? Try it On, President's Message,*" IEEE Signal Processing Magazine, Vol. 25, Issue # 6, Page:6, November 2008; DoI: 10.1109/MSP.2008.930497.

[435]   José M. F. Moura, "*A Look at the Technical Activities Board, President's Message,*" IEEE Signal Processing Magazine, Vol. 25, Issue # 5, Page: 6, 13, September 2008; DoI: 10.1109/MSP.2008.929079.

[436]   José M. F. Moura, "*Far and Near, President's Message,*" IEEE Signal Processing Magazine, Vol. 25, Issue # 4, Page:6, July 2008; DoI: 10.1109/MSP.2008.924958.

[437]   José M. F. Moura, "*Opening New Doors; Closing Others, President's Message,*" IEEE Signal Processing Magazine, Vol. 25, Issue # 3, Page: 6,150, May 2008; DoI: 10.1109/MSP.2008.920382.

[438]   José M. F. Moura, "*Bring Signal Processing to the Public, President's Message,*" IEEE Signal Processing Magazine, Vol. 25, Issue # 2, Page: 6, March 2008; DoI: 10.1109/MSP.2008.918817.

[439]   José M. F. Moura, "*Future Opportunities, President's Message,*" IEEE Signal Processing Magazine, Vol. 25, Issue # 1, Page: 4, January 2008; DoI: 10.1109/MSP.2008.4408432.

[440] José M. F. Moura, Markus Pueschel, Jack Dongarra, and David Padua, Editorial, Scanning the Issue,*Special Issue on Program Generation, Optimization, and Platform Adaptation*, Proceedings of the IEEE, Volume: 93, number 2, pp. 211-215, February 2005.

[441] Aleksander Kavcic, José M. F. Moura, and VijayaKumar Baghavatula, "*Iterative, Soft Signal Processing for Digital Communications*," *guest editorial*, **IEEE Signal Processing Magazine**, vol. 21:1, page 26-27 and 108, January 2004. *Special Issue on Iterative, Soft Signal Processing for Digital Communications*.

[442] José M. F. Moura, "*SPS Publications*," editorial, **IEEE Signal Processing Magazine**, 18(6):5-7, November 2001.

[443] José M. F. Moura "*A Good Reading*," editorial published on: **IEEE Signal Processing Letters**, 5(12), pp., December 2000.

[444] José M. F. Moura "*A Good Reading*," editorial published on: **IEEE Transactions on Acoustics and Speech Processing,** 8(6): 645, November 2000.

[445] José M. F. Moura "*A Good Reading*," editorial published on: **IEEE IEEE Transactions on Image Processing** 9(12): 2005, December 2000.

[446] José M. F. Moura "*A Good Reading*," editorial published on: IEEE **Transactions on Signal Processing**, 48(12): 933, December 2000.

[447] A. Hero, P. Moulin, José M. F. Moura, D. Snyder, and J. A. O'Sullivan, "," editorial published on **IEEE Transactions on Information Theory**, *Special Issue on Information Theoretic Imaging*, 46(5): 1709-1713, August, 2000.

[448] José M. F. Moura "*A Message from the Outgoing Editor-in-Chief*," editorial published on **IEEE Transactions on Signal Processing**, 48(4): 933 , April 2000.

[449] José M. F. Moura "*A Word from the Editor-in-Chief*," editorial, **IEEE Transactions on Signal Processing**, 44(5): 1061-1062, May 1996.

Seminars, Invited Lectures, Conferences, Scientific, and Professional Meetings

2012

[1] Nov 07-12   *IEEE November Series*, TAB/PSPB Products and Services Committee, Products and Services Publications Board (PSPB), TAB, Board of Governors, Hyatt Regency Hotel, New Brunswick NJ.

[2] Oct 12-14   *IEEE Awards Meeting*.

[3] Jul 26-28   *The Third International Conference on Computing, Communication and Networking Technologies (ICCCNT 2012)*, Chettinad College of Engineering and technology, Plenary Speaker, Karur, Taminadu, India

[4] 27-Jul 02   *IEEE Series Meeting*, TAB/PSPB Products and Services Committee, Products and Services Publications Board (PSPB), TAB, Board of Governors, The Westin Copley Place, Boston MA.

[5] Jun 17-20   **Sensor Array and Multichannel Signal Processing Workshop**, Invited Paper, Hoboken, NJ.

[6] May 28-30   *Cognitive Information Workshop*, Invited Plenary, Baleares, Spain.

[7] May 20-22   **2012 SIAM Conference on Imaging Science**, contributed paper, Philadelphia, PA.

[8] May 14   *CMU/Portugal Program*, Board Meeting, CMU, Pittsburgh PA.

[9] Apr20-23   *IEEE PSPB Strategic Planning Committee*, San Francisco, CA.

[10] Apr 07   *Deposition* in NYC, New York City NY.

[11] Mar24-31   *IEEE ICASSP*, Kyoto, Japan, 3 papers, Director Division IX presentation to IEEE Signal Processing Society Board of Governors, Grand Prince Hotel, Kyoto, Japan..

[12] Mar 12-18   *CMU/Portugal Program*, Working visit, Lisbon, Portugal.

[13] Mar 11-15   **SPIE Conference on Smart Structures and Nondestructive Evaluation**, San Diego, CA.

[14] Feb 15-20   *IEEE Series Meeting*, TAB/PSPB Products and Services Committee, Products and Services Publications Board (PSPB), TAB, Board of Governors, Pointe Hilton Squaw Peak Resort, Phoenix AZ.

[15] Feb 10-12   *IEEE Information Theory Workshop (ITA)*, Invited talk, Catamaran Resort Hotel, San Diego, CA.

[16] Feb 07-09   *NSF Panel*, Arlington VA.

[17] Feb 03-05   *CMU/Portugal Program*, Meeting with Secretary of State for Science and President of FCT, Lisbon Portugal.

[18] Jan 31-Feb02   *York University Visiting Committee*, EECS Program, Toronto, Canada

[19] Jan 20-24   *CMU/Portugal Program*, Board Meeting, Lisbon, Portugal.

[20] Jan 12-16   *IEEE Board of Directors Strategic Planning*, Hong Kong.

[21] Jan 09-11   *CMU/Portugal Program*, ERC, Lisbon, Portugal.

2011

[22] Dec 17-Jan 12 *CMU/Portugal Program,* working visit, ERC, Lisbon, Portugal.

[23] Dec 15-16   *The Fourth International Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP), Plenary Speaker*, San Juan, Puerto Rico.

[24]   Dec 12-15   *50th IEEE Conference on Decision and Control and European Control Conference*, Orlando FL.

[25]   Nov 16-19   *IEEE TAB Series Meetings*, Products and Services Publications Board (PSPB), New Brunswick, NJ.

[26]   Nov 15-16   *ONR Review Meeting*, Cambridge, MA.

[27]   Nov 08-13   *CMU|Portugal Program, Project Review*, working visit, ERC, Lisbon, Portugal.

[28]   Nov 06   *AFOSR Review Meeting*, Arlington, VA.

[29]   Nov 04   *Advanced Networks Colloquia Series*, Invited Seminar, University of Maryland, College Park, MD.

[30]   Nov 03   *Darpa Working Visit*, Arlington VA.

[31]   Oct 22-25   *CMU|Portugal Program, Academy of Finland Review*, working visit, Lisbon, Portugal.

[32]   Oct 18-21   **IEEE Ultrasonics Symposium**, Best Student Paper Award, Orlando, FL.

[33]   Sep 30-Oct 2 **49th Annual Allerton Conference on Communication, Control and Computing**, invited paper presented by co-authors, Monticello, IL.

[34]   Sep 29   *Panel Member, Ciclo Conferências "O Que É a América Hoje," "Existimos, Logo Usamos o Computador," Fundação Luso Americana do Desenvolvimento (FLAD)*, Casa da Música, Porto, Portugal.

[35]   Sep 30-Oct 04 *CMU|Portugal Program*, National Conference, Board Meeting, Lisbon, Portugal.

[36]   Sep 24   *ONR MURI Review*, Arlington, VA.

[37]   Sep19-22   *IEEE OCEANS,* two papers presented by co-authors, Santander, Spain.

[38]   Sep 16-18   *IEEE Products and Services Publications Board (PSPB) Strategic Planning Committee (SPC)*, Chicago, IL.

[39]   Sep 14-15   *Qualcomm*, San Jose, CA.

[40]   Sep 13-15   **International Workshop on Structural Health Monitoring**, Stanford, CA.

[41]   Sep 11-14   *IEEE International Symposium on Image Processing*, Brussels, Belgium

[42]   Sep 08-12   *ACCESS Distinguished Lecture Series, Invited Lecture,* KTH Royal Institute of Technology, Stockholm, Sweden.

[43] Sep 04-06 *7th International Symposium on Image and Signal Processing and Analysis, Plenary Speaker*, Dubrovnik, Croatia.

[44] Aug28-Sep02 *18th IFAC International Federation on Automatic Control World Congress*, Milano, Italy.

[45] Aug 10-28 *CMU/Portugal Program*, working visit.

[46] Jul 31-Aug 05 *IEEE International Symposium on Information Theory (ISIT)*, St. Petersburg, Russia.

[47] Jul 17-21 **Review of Progress in Quantitative Nondestructive Evaluation**, Burlington, VT.

[48] Jul 8-10 *Foundations of Computational Mathematics Conference, Workshop on Flocking, Swarming, and Control of Distributed Systems*, Invited speaker, Budapest, Hungary.

[49] Jun 22-25 *IEEE TAB Series Meetings*, Products and Services Publications Board (PSPB), Bellevue, Washington.

[50] Jun 19-21 *Peer Review Panel of the Signal Processing and Networked Sensing Program of ONR*, Panel Member, Fess Parker Double Tree Inn, Sta. Barbara, CA.

[51] Jun *MTS/OCEANS,* two papers presented by co-authors, Kona, HIU.

[52] May 29-Jun 3 *CMU/Portugal Program*, Working Visit, Lisbon, Portugal.

[53] May 23-28 **Meeting of the Acoustical Society of America**, Invited Presentation, Seattle, WA.

[54] May 22-27 *IEEE International Symposium on Signal Processing (ICASSP)*, Prague, Check Republic, 5 papers.

[55] May 07-10 Working visit, Cambridge, MA.

[56] Apr 26 *UPenn Seminar on Communications and Networking*, University of Pennsylvania, invited seminar, Philadelphia, PA.

[57] Apr 8-10 *IEEE PSPB Strategic Planning Committee***,** Products and Services Publications Board (PSPB), Boston, MA.

[58] Apr 01-04 Working visit, Cambridge, MA.

[59] Mar 23-25 Working visit, Cambridge, MA.

[60] Mar 17-20 Working visit, Cambridge, MA.

[61] Mar 23-25 *45th Annual Conference on Information Sciences and Systems (CISS)*, Baltimore, MD.

[62]   Mar 13   Working visit, Cambridge, MA.

[63]   Mar 2-5   ***Evaluation of National Research Network (NFN), Signal and Information Processing and Engineering***, Panel Member, FWF (Austria National Science Foundation,) Vienna, Austria.

[64]   Feb 16-18   ***IEEE TAB Series Meetings***, Products and Services Publications Board (PSPB), Miami, FL.

[65]   Feb 10   ***The Information Theory and Applications Workshop, Invited talk***, University of California at San Diego, La Jolla, CA.

[66]   Feb 04-06   Working visit, Cambridge, MA.

[67]   Jan 28   ***Harvard University, Electrical Engineering Seminar Series,*** Cambridge, MA.

[68]   Jan 21-25   ***CMU/Portugal Program***, Lisbon, Portugal.

[69]   Jan 15-16   Working visit, Cambridge, MA.

2010

[70]   Nov 19-20   ***IEEE TAB Series Meetings***, Educational Activities Board, New Brunswick, NJ.

[71]   Oct 12-17   ERC, ICI, Porto, Portugal.

[72]   Oct 07-09   ***École Polytechnique Federale de Lausanne*** (EPFL), ***Invited Seminar***, Lausanne, Switzerland.

[73]   Sep 28   ***The Chinese University of Hong Kong, Invited Seminar***, Hong Kong.

[74]   Sep26-30   ***IEEE International Symposium on Image Processing (ICIP)***, IEEE Signal Processing Society Long Range Strategic Planning Meeting, Hong Kong.

[75]   Sep 17-19   Cambridge, MA.

[76]   Sep 4-7   Cambridge, MA.

[77]   Aug 6-29   ICTI, Lisbon, Portugal.

[78]   Aug 4-6   Cambridge. MA.

[79]   Jul 18-31   ***The Australian National University (ANU),*** working visit, Prof. Brian D. O. Anderson's research group, ***Invited Seminar July 30***, Canberra, Australia.

[80]   Jul 9-11   Cambridge, MA.

[81]   Jun 25   ***Universidad Carlos III de Madrid, Invited Seminar***, Madrid, Spain.

[82]   Jun 21-26   **BBVA Foundation**, Awards Ceremony, Madrid, Spain.

[83]   Jun 30-Jul 2   **American Control Conference (ACC)**, **invited paper**, Baltimore, MD**.**

[84]   Jun 21   Cambridge, MA

[85]   Jun 13-16   ICTI, Lisbon, Portugal.

[86]   May 25- May 30   Cambridge, MA.

[87]   May 18-21   ICTI, Lisbon, Portugal.

[88]   May 4   *ONR and Darpa working visits*, Arlington, VA

[89]   Apr 28- May 2   ICTI, Lisbon, Portugal.

[90]   Apr 16   *Tsinghua University, Invited seminar*, Beijing, Peoples Republic of China.

[91]   Apr 15   *Huaqiao University, Invited seminar*, Xiamen, Peoples Republic of China.

[92]   Apr 13   *International Conference on Image Analysis and Signal Processing, Plenary Speaker*, Xiamen, Peoples Republic of China.

[93]   Apr 7   *ONR working visit,* Arlington, VA

[94]   Mar 17-19   **SAIC**, Research Meeting discussion, Harbor Island Drive, La Jolla, CA.

[95]   Mar 14-19   **35th IEEE International Conference on Acoustics, Speech, and Signal Processing**, papers presented, Dallas, TX.

[96]   Mar 5-8   Boston, MA, working visit.

[97]   Mar 1   *Westinghouse Research Center*, Churchill, Pittsburgh, PA.

[98]   Fe 20-25   *ICTI Meeting*, Lisbon, Portugal.

[99]   Feb 16-17   *University California, Berkeley*, Working visit, Berkeley, CA.

[100]   Feb 12-13   *IEEE TAB Series Meetings*, Educational Activities Board, Atlanta, GA.

[101]   Jan 11-12   **European Commission**, Panel Member, Brussels, Belgium.

2009

[102]   Dec 21-Jan 02   **Working visit to Portugal**, including meeting with several CMU|Portugal partners.

[103] Dec 13-16 **CAMSAP, 3rd IEEE International Workshop on Computational Advances in Multi- Sensor Adaptive Processing**, **invited paper**, Aruba, Dutch Antilles.

[104] Nov 30-Dec 4 **IEEE GlobeCom**, paper presented by co-author, Hawaii.

[105] Nov 22-25 **European Commission**, Panel Member, Brussels, Belgium.

[106] Nov 18-21 **IEEE TAB Series Meetings**, SPPECCOM lunch, Presidents' Forum, TAB Meeting, New Brunswick, NJ.

[107] Nov 12-14 **Paths Ahead Workshop**, LIDS, MIT, Cambridge, MA.

[108] Nov 7-10 **ICIP'09, IEEE International Conference on Image Processing**, paper, Chaired Board of Governors of IEEE Signal Processing Society and other Board Meetings, Cairo, Egypt.

[109] Nov 1-4 **43rd IEEE Asilomar Conference on Signals, Systems, and Computers**, four papers presented by coauthors, Pacific Grove, CA.

[110] Oct 26-30 **158th Meeting of the Acoustical Society of America**, paper presented by co-author, San Antonio, TX.

[111] Oct 26 **IEEE Signal Processing Society Dinner, Speaker**, hosted dinner with Government Officials, Washington DC.

[112] Oct 23 **MURI** "**From Individuals to Populations: Biologically-Informed Multi-Modal Situation Understanding**," MURI Review, ONR, Arlington, VA.

[113] Oct 21-22 **Challenges in Information Evaluation and Extrication in Distributed Sensing Systems, Panel Member**, Army Research Office Workshop, MIT, Cambridge, MA.

[114] Oct 16 **Philipp Dowd Fellowship Award, ICES**, **Invited Talk**, Carnegie Mellon University, Pittsburgh, PA.

[115] Oct 9 **Boston University and MIT**, working visits (lunch with Profs. Mitter and Kalman), Boston and Cambridge, MA.

[116] Sep 30-Oct 2 **47th Annual Allerton Conference on Communication, Control and Computing**, invited paper and paper presented by co-authors, Monticello, IL.

[117] Sep 24-27 **1st IFAC Workshop on Estimation and Control of Networked Systems, Invited Plenary Speaker**, Centro Culturale, Don Orione Artigianelli, Venice, Italy.

[118] Sep 15-19 **CMU|Portugal ICTI Board Meeting**, Lisboa, Portugal.

[119] Sep 11-14 **External Review Committee**, CMU|Portugal Program, Aveiro, Portugal

[120] Sep 9-11 **7th International Workshop on Structural Health Monitoring**, paper presented by co-author, Stanford Univ., CA.

[121] Aug 28 **University Michigan**, Working visit, Ann Arbor, MI.

[122] Jul 22-24 **Universidade da Madeira**, Signing of Madeira Ineractive Technologies Institute MoU with Carnegie Mellon University, Funchal, Madeira, Portugal.

[123] Jul 9-11 **NCA IEEE International Symposium on Network Computing and Applications**, paper presented by co-author, Cambridge, MA, USA.

[124] July 9-10 **International Symposium on Signals, Circuits, and Systems, Invited Plenary Speaker**, Technical University Iasi, Iasi, Romania.

[125] Jul 6 **Multimedia, Mathematics, and Machine Learning II, Invited Speaker**, BIRS, Banf, Alberta, Canada.

[126] Jun 29 **IEEE ISBI, International Symposium on BioImaging**, Boston, MA.

[127] Jun 28-Jul 3 **IEEE ISIT'09 International Symposium on Information Theory**, Seoul, Korea.

[128] Jun 24-28 **IEEE TAB Series Meetings**, SPPECCOM lunch, Presidents' Forum, TAB Meeting, Los Angeles, CA.

[129] Jun 20-23 **ICTI 1st Workshop**, Palácio da Bolsa, Porto, Portugal.

[130] May 27-29 **ICTI and CMU|Portugal Board Meeting**, hosted, Carnegie Mellon University, Pittsburgh, PA.

[131] May 19-23 **Working visit to Portugal**, including meeting Secretary of State, President of FCT, several partners and other parties.

[132] May 2-9 **Professional Masters Evaluation Committee**, accompanied Committee, Universidades Madeira, Lisboa, Coimbra, and Aveiro, Portugal.

[133] Apr 19-24 **34th IEEE International Conference on Acoustics, Speech, and Signal Processing**, **Invited paper in Special Session** and three other papers, Chaired Board of Governors of IEEE Signal Processing Society and other Board Meetings, Taipei, Taiwan**.**

[134] Apr 15-16 **NSF Panel**, Arlington, VA.

[135] Apr 3 ***BBN, Invited Talk***, Cambridge, MA.

[136] Mar 18-20 **CISS 2009, 43rd Annual Conference on Information Sciences and Systems**, paper presented by coauthor, Baltimore, MD.

[137] Feb 25 **Association of International Education Administrators (AIEA), Invited Talk**, Atlanta, GA.

[138] Feb 18 **DARPA VORTEX Workshop**, invited talk, Arlington, VA.

[139] Feb 10-14   **IEEE TAB Series Meetings**, hosted SPPECCOM lunch, Presidents' Forum, TAB Meeting, San Juan, Puerto Rico.

[140] Jan 27-Feb 1 **Working visit to Portugal**, including meeting Secretary of State, President of FCT, several partners and other parties.

[141] Jan 21   **Olympus Show and Tell, Talk**, Carnegie Mellon, University, Pittsburgh, PA.

[142] Jan 4-7   **IEEE 13th Digital Signal Processing Workshop and 5th Signal Processing for Education Workshop**, K**eynote speaker**, Marco Island, Florida on January 4-7, 2009.

2008

[143] Dec 18-Jan 02 **Working visit to Portugal**, including meeting Rectors from Universidades de Lisboa, Aveiro, Coimbra, and Porto. Several Meetings with other parties.

[144] Dec 10   **Dymonds**, CMU Meeting with Energy Industry, Pittsburgh

[145] Dec 10   **BME Retreat**, Holiday Inn, Pittsburgh, PA

[146] Nov 17   **Hosted LPM at CMU**, CMU-Portugal Program, CMU, Pittsburgh

[147] Nov 10-15   **IEEE TAB Series**, SPS New EICs orientation (Nov 10), SPS ExCOM Strategic Planning Workshop (Nov 11), TAB November Series, Piscataway and New Brunswick, NJ

[148] Nov 06-07   **ICTI Board Meeting**, CMU-Portugal Program, Lisbon, Portugal

[149] Nov 03-05   **ICTI External Review Commitee**, CMU-Portugal Program, Lisbon, Portugal

[150] Oct 27-29   **Asilomar Conference,** papers presented by coauthors, Asilomar grounds, Monterey, CA.

[151] Oct 25   **ABB Fest**, Invited presentation, MIT, Cambridge, MA

[152] Oct 23-24   **Hosted Portugal PIs**, CMU, Pittsburgh PA

[153] Oct 13-19   **ICIP**, also ExCom and BoG Meetings, San Diego, CA.

[154] Oct 09-10   **MURI-ONR Review**, Stanford University, CA.

[155] Oct 08   **Hosted Prof. Alek Kavcic (Hawai Univ.)**, CMU

[156] Sep 30-Oct 01 **Lockeed Martin**, CMU, Pittsburgh.

[157] Sep 23-24   **Allerton Conference**, invited papers, UIUC, Monticello, IL.

[158] Sep 18-21   **Working visit to Portugal**, Meetings with several parties.

[159] Sep 18   **Panel on sensor networks**, PIMRC. Nice France.

[160] Sep 17 **Laboratoire de Informatique, Signaux, et Systèmes**, invited talk, Sophie Antipolis, France.

[161] Sep 03 **Advisory Board Grove City College**, Grove City, PA.

[162] Aug 14-Sep 02 **Working visit**, Portugal.

[163] Aug 10-11 **Workshop on Time Reversal**, presentation on time reversal, Air Force Base, Dayton, OH.

[164] Jul 29-31 **IEEE PSPB Strategic Planning Meeting**, San Francisco, CA.

[165] Jul 25 **Vanu Inc**, working visit on Viterbi decoding, Cambridge, MA

[166] Jul 12-19 **Working visit to Portugal**, meeting with interested parties, Portugal.

[167] Jun 24 **Vanu Inc**, working visit with presentation on Spirl, Cambridge, MA.

[168] Jun 18-22 **TAB June Series**, Denver CO.

[169] Jun 17 **Keynote address, Fifth International Conference on Networked Sensing Systems**, Kanazawa, Japan.

[170] Jun 12 T**utorial in sensor networks**, IEICE, Keio University, Yagami campus, Japan.

[171] June 10-18 **Visit to Japan**, INSS, working visit with prof. Yoshito Tobe, Denki University, also visited Keio University.

[172] May 14-17 **IEEE International Symposium on BioImaging (ISBI)**, paper presented and attended the Steering Committee Meeting of ISBI.

[173] May 18-20 **Working visit to Portugal**, meetings with interested parties.

[174] April 28-29 **Darpa Desa Review**, Hilton Head, SC.

[175] Apr 24 **NSF Workshop on Cyber-Physical Systems**, St. Louis, MI.

[176] Apr 20 **IPSN Workshop on Signal Processing for Sensor Networks**, chaired session and invited paper, St. Louis, MI.

[177] Apr 17 **ECE Colloquium**, *Tufts University*, Medford, MA.

[178] Apr 14 **Drarpa Meeting**, Arlington VA .

[179] Apr 10-11 **Graduate Seminar, Department of Electrical and Systems Engineering, Washington University, St. Louis**, St. Louis, MI.

[180] Apr 2 **CTAP Products and Services Publications Board**, New Brunswick, NJ.

[181] Mar 31- Apr 06 **IEEE ICASSP, International Conference on Signal Processing**, papers presented by coauthors, SPS ExCom and BoG, Las Vegas, NV.

[182] Mar 25-26 **Hosted João Barros**, Universidade do Porto.

[183] Mar 24 **Hosted Miguel Rodrigues**, Universidade do Porto.

[184] Mar 10 **CMU Energy Workshop**, talk, CMU, Pittsburgh.

[185] Feb 24-29 **Working visit to Portugal**, meetings with interested parties.

[186] Feb 17 **ExCom SPS**, Strategic Planning Workshop, Louisville KY.

[187] Feb 13-16 **TAB February Series**, Louisville, KY.

2007

[188] Dec 10-22 **ICTI External Review Commitee**, CMU-Portugal Program, Lisbon, Portugal (including visits to Aveiro and Coimbra, meetings with Portugal Telecom, Gulbenkian Foundation.)

[189] Nov 26 **Invited paper**, *IEEE Globecomm*, Washington DC.

[190] Nov 19 **DESA Darpa Workshop**, Darpa DSO Review, CMU, Pittsburgh PA

[191] Nov 15-18 **IEEE TAB Series**, Lowes Hotel, Boston, MA

[192] Nov 7-8 **Darpa Time Reversal Workshop**, Darpa DSO Review, Santa Clara, CA.

[193] Oct 30-31 **Intel Workshop on Spiral**, Beaverton, OR.

[194] Oct 19 **MIT**, Working visit, Cambridge MA.

[195] Oct 14-16 **Invited Lecture**, *Orthogonal Polynomials Workshop*, Casa de Carmona, Carmona, Spain.

[196] Oct 11-13 **CMU-Portugal Program**, Working Visit, Lisbon, Portugal.

[197] Oct 6-8 **Chair, Visiting Committee**, Ireland Science Foundation Center for Sensor Networks, Cork University, Cork, Ireland.

[198] Sep 29 **DESA Workshop**, Carnegie Mellon University, Pittsburgh, PA.

[199] Sep 16-21 **IEEE ICIP**, IEEE Signal Processing Society ExCom and Board of Governors Meetings, San Antonio, TX.

[200] Aug 4 **ECE Alumnae Event**, Museum of Science, Boston, MA.

[201] July 26 **Seminar**, *Woods Hole Oceanographic Institute*, Woods Hole, MA.

[202] Jul 23 **IEEE Signal Processing Society ExCom Strategic Planning Workshop**, New Brunswick, NJ.

[203] Jul 18-21   **ICTI Board of Directors Meeting**, CMU-Portugal Program, Lisbon, Portugal.

[204] Jul 15-17   **Microsoft Faculty Summit**, Bellevue, WA

[205] Jul 12   **DESA**, Darpa Review Workshop, Carnegie Mellon University, Pittsburgh, PA.

[206] Jul 10-11   **Provas de Agregação** (outside member, arguent, Prof. Bioucas Dias,) Instituto Superior Técnico, Lisbon, Portugal.

[207] Jul 8-11   **CMU-Portugal Program**, Working visit, Lisbon, Portugal.

[208] Jun 19-20   **Presentation**, MURI Kickoff, Stanford University, Palo Alto, CA

[209] Jun 15-17   **IEEE TAB Series**, Lowes Hotel, Boston, MA.

[210] June 1-10   **CMU-Portugal Program** Working visit to Portugal.

[211] May 31   **CMU-Portugal Program**, Presentation at MIT, Cambridge MA.

[212] May 29-30   **NSF Panel**, Washington DC.

[213] May 16   **Presentation,** *Darpa Mathematical Time Reversal Workshop*, Darpa DSO Review, Stanford Renaissance hotel, San Francisco, CA.

[214] Mar 24   **Invited Presentation**, PAPS, Columbia University, New York City.

[215] Mar 8-12   **CMU-Portugal** working visit to Portugal.

[216] Mar 2   **Colloquium**, *North Carolina State University*, *Distinguished Lecture Series on Sensor Networks*, Raleigh, NC.

[217] Feb 21   **Colloquium**, Boston University, Electrical and Compouer Engineering Department, Boston, MA.

[218] Feb 17-18   **ExCom Startegic Planning Workshop**, Chaired, Universal Studios, Los Angeles, CA.

[219] Feb 13-16   **CMU-Portugal Program**, *Portugal Telecom*, Presentation, Lisbon, Portugal

[220] Jan 22   **Distinguished lecture,** *Iowa State University*, *Distinguished Lecture on Sensor Networks*, IA.

[221] Jan 19   *Purdue University, Computer Science Department*, *Invited Seminar on Automatic Performance Tuning*, LaFayette, IN.

[222] Jan 18   *Purdue University, Electrical Engineering Department*, *Invited Seminar on Sensor Networks*, LaFayette, IN.

[223] Jan 8-11   **Invited seminar**, *Workshop on Challenges and Opportunities in Sensor Networks*, Institute for Pure and Applied Mathematics, UCLA, Los Angeles, CA.

2006

[224] Dec 19-23   ***Working Meeting CMU-Portugal***, Lisbon, Porto, Guimarães, Portugal.

[225] Nov 29   ***MIT, Stochastic Systems Group***, Seminar on Sensor Networks, Cambridge, MA.

[226] Nov 20   ***University of California Los Angeles***, *invited seminar on sensor networks*, Seminar Series in Electrical Engineering, Los Angeles, CA.

[227] Nov 17-18   ***NSF Workshop on Critical Infrastructures***, Arlington, VA.

[228] Nov 7   ***Discovery and Exploitation of Structure in Algorithms (DESA) Workshop***, Darpa Review, Arlington, VA.

[229] Nov 2   ***MIT Signal Transformation and Information Representation Group***, Talk on Sensor Networks, Cambridge, MA.

[230] Oct 27-28   ***CMU-Portugal Cooperation Signing Ceremony***, Aveiro, Portugal.

[231] Oct 24   ***Mathematical Time Reversal Methods***, Darpa Workshop, Coeur D'Alene Resort, Coeur D'Alene, ID.

[232] Oct 20   ***IEEE TAB Periodicals Review Committee***, Hyatt Regency Hotel, Morristown, NJ.

[233] Oct 10-13   ***IEEE Signal Processing Society***, Chaired Workshop on Long Range Planning, participated in Board of Governor Meeting, Atlanta, GA.

[234] Oct 10-13   ***IEEE International Conference on Image Processing (ICIP)***, attended several Board Meetings.

[235] Sep 27-29   ***44th Allerton Conference on Communications, Control, and Computing***, Paper presented by coauthor in *invited session on sensor networks*, Allerton House, IL.

[236] Sep 28-29   ***NSF Workshop on Complex Systems***, Arlington, VA.

[237] Aug 2   ***NMR Center Annual Review Meeting***, CMU, Pittsburgh, PA.

[238] Jul 23-24   ***Portugal Telecom Workshop***, Organizer and Chair, Aveiro, Portugal.

[239] Jun 29   ***ECE Faculty Retreat***, Sheraton Station Square Hotel, Pittsburgh, PA.

[240] Jun 22-23   ***Hosted Portugal Telecom Visit to CMU***, Pittsburgh, PA.

[241] Jun 22   ***IEEE TAB Periodicals Review Committee***, Hyatt Regency, Minneapolis-St. Paul, MN.

[242] Jun 15-16   ***NSF Committee of Visitors (COV)***, Computing and Communication Foundations Division, Directorate for Computer and Information Science and Engineering (CISE); Chair of Sub-committee on Theoretical Foundations Cluster.

[243] Jun 9   ***Discovery and Exploitation of Structure in Algorithms (DESA) Workshop***, Darpa Review, Arlington, VA.

[244] Jun 6-7   ***Adaptive Sensor Array Processing Workshop***, *Chaired Session*, Lincoln Lab, Lexington, MA.

[245] May 23-27   ***CMU-Portugal Cooperation Evaluation Panel***, visit to several Portuguese Universities and Research Institutions, Portugal.

[246] May 14-21   ***IEEE International Conference on Signal Processing (ICASSP)***, 5 papers (two invited in special sessions), ExCom, Board of Governors, several Boards and Technical Committees, Chair of Technical Directions Committee Meeting. Toulouse, France.

[247] May 3   ***Mathematical Time Reversal Methods***, Renaissance Fort Lauderdale Plantation Hotel, Plantation, FL.

[248] Apr 24-25   ***INTEL Adaptive Library Workshop***, "*SPIRAL, Background, Current Status, and Future Plans*," Hilton Garden Inn, Beaverton, OR.

[249] Apr7-8   ***IEEE International Symposium on BioImaging***, two papers presented by coauthors and Bio Imaging and Signal Processing Technical Committee, Crystal Gateway Marriott Hotel, Crystal City, VA.

[250] Mar 27   ***National Energy Technology Laboratory (NETL)***, working visit, Morgantown, WV.

[251] Mar 24   ***ECE New Students Open House***, *Signals and Systems*, CMU, Pittsburgh PA.

[252] Mar 15   ***University of California Berkeley***, Department of Mathematics, working visit.

[253] Mar 14   ***DARPA Waveform Adaptive Shape (WAS) Workshop***, Benson Hotel, Portland, OR.

[254] Mar 10   ***New Horizons Workshop***, ***plenary talk,*** "*Sensor Networks: Decision Making and the Role of Connectivity*," Aveiro, Portugal.

[255] Mar 10   ***Signing Cerimony of CMU-Portugal Memorandum of Understanding,*** Aveiro, Portugal.

[256] Mar 3   ***University of Massachusetts, Amherst***, i***nvited seminar*** "*Where algebra meets signal processing: generating SW/HW implementations of linear transforms*," Amherst, MA.

[257] Feb 24   ***IBM T. J. Watson Research Laboratory***, Hawthorne, ***invited seminar*** on "*Distributed Decision in Sensor Networks*," Hawthorne, NY.

[258] Feb 19 *IEEE Signal Processing Society ExCom Strategic Planning Workshop*, Hilton Phoenix Airport, Phoenix, AZ.

[259] Feb 17-18 *2006 AAAS Annual Meeting*, St. Louis, MO.

[260] Feb 16 *IEEE TAB Leadership Orientation Workshop*, AJW Marriott Resort SPA, Scottsdale, AZ.

[261] Feb 3 *CenSCIR Workshop*, PAA, Pittsburgh, PA.

[262] Jan 24-25 *DESA Workshop*, CMU and Duke, CMU, Pittsburgh, PA.

[263] Jan 12 *University of Florida*, Gainesville, working visit.

<div align="center">

2005

</div>

[264] Nov 29 *Mathematical Time Reversal Imaging Phase II Kickoff Meeting*, Strategic Analysis, Arlington VA.

[265] Nov 14 *DARPA Visibuilding Workshop*, Booz Allen Hamilton, Tyson Square, Greensboro Drive, McLean, VA.

[266] Nov 9-10 *IEEE TAB Periodicals Review Committee*, Hilton Walt Disney World Hotel, FL.

[267] Nov7-8 *IMA Workshop on Frontiers in Imaging*, University of Minnesota, Minneapolis-St. Paul, MN.

[268] Nov 1 *Darpa discussion with DESA program manager*, Arlington VA.

[269] Oct 30-Nov 2 *38th Asilomar Conference on Signals, Systems, and Communications*, two papers presented by co-authors, Asilomar, Monterey, CA.

[270] Oct 24-25 *INTEL Adaptive Libraries Workshop*, SIPRAL Presentation and Discussion, Schaumburg, IL.

[271] Oct 18 *NSF Networking of Sensor Systems (NOSS) Workshop*, Harvard University, Cambridge, MA.

[272] Oct 14-15 *Robust Signal Processing and Stochastic Eigen-Analysis Workshop (SEA05)*, Hosted by Department of Mathematics and Center for Ocean Engineering, MIT, **Invited Speaker** and **Panel Member**.

[273] Oct 13 **External Committee Member**, Agregação Exam, Universidade Técnica de Lisboa, Instituto Superior Técnico, Lisbon, Portugal.

[274] Oct 3 *2nd IEEE/CreateNet Workshop on BroadBand Advanced Sensor Networks (BaseNetS 2005)*, Radisson Hotel, Boston, MA, *Invited Speaker*.

[275] Sep 24-25 **Working visit** to University of Illinois Urbana Champaign.

[276] Sep 12-14 *Wireless Sensor Networks –From Sensor Networks to Smart Dust*, at the *16TH IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications*, Berlin, Germany, *Member of Panel*.

[277] Jul 24-27 *Banff International Research Station Multimedia and Mathematics Workshop*, Banff, Alberta, Canada, *Invited Speaker*.

[278] Jun 15-17 *NSF SRC Review Panel*, UCLA, Los Angeles, CA.

[279] Nov 9-10 *IEEE TAB Periodicals Review Committee*, Hilton Walt Disney World, Orlando, FL.

[280] Nov 7-11 *IMA, Workshop on Computational and Mathematical Imaging,* Minneapolis-St. Paul, MN.

[281] Jul 18 *NMR Center Advisory Board*, talk on ",", NMR Center, CMU, Pittsburgh, PA.

[282] Jul 3-8 *2005 IEEE AP-S IEEE International Symposium and USNC/URSI National Radio Science Meeting on Antennas and Propagation*, Omni Shoreham Hotel, Washington DC (paper presented by coauthor).

[283] Jun 15-16 *IEEE TAB Periodicals Review Committee*, Westfield Marriot Hotel, Chantilly, VA.

[284] Jun 14-15 *ARO/AMRDEC Information Theoretic Image Processing*, invited presentation, Atlanta GA.

[285] Jun 7-8 *Space-Time Adaptive Processing Workshop*, STAP'05, Lincoln Laboratory, Lexington, MA.

[286] Jun 6 *IEEE Proceedings Editorial Board Meeting*, Piscataway, NJ.

[287] May 26-27 *Project Evaluation*, European Union, Brussels, Belgium.

[288] May 23-24 *Mathematical Time Reversal Methods*, DARPA DSO Review Program, Florida.

[289] Apr 28-29 *SENSIP Workshop*, invited lecture, "*Sensor Networks: Detection and Estimation Under Constraints***,"** Tempe, Arizona**.**

[290] Apr 17-23 *Project Evaluation*, European Union, Brussels, Belgium.

[291] Apr 5-7 *IEEE International Conference on Magnetics, INTERMAG'05*, "*Partition-and-shift LDPC Codes for High Density Magnetic Recording*," paper presented, Nagoya, Japan.

[292] Apr 4 **DSSC Mini Review**, presentation on "*Good Performance and Regular Structured LDPC Codes: Partition and Shift LDPC Codes*," Nara, Japan.

[293] Mar 18-22 *IEEE ICASSP, International Conference on Acoustics, Speech, and Signal Processing*, four papers presented.

[294] Mar 6-10 *Invited Seminar*, "*Energy Minimization: Segmentation and Registration in MRI Sequences*," Computer Science Department, National University of Singapore, Singapore.

[295] Feb 23 *Northrop-Grumman*, working visit, BWI, Baltimore, MD.

[296] Feb 16-17 *IEEE TAB Periodicals Review Committee*.

[297] Feb 4 *IEEE Proceedings subcommittee meeting*, Marriot Hotel, Newark, NJ.

2004

[298] Nov 23 *Next Wave Digital Home/Community Products, Services, and Opportunities Symposium*, Keynote speaker, "*Sensor Networks: Challenges and Applications*," Institute for Information Industry, Taipei, Taiwan.

[299] Nov 17-18 *IEEE TAB Periodicals Review Committee*, Hyatt Hill Country Hotel, San Antonio, TX.

[300] Nov 4 *INTEL meeting*, Chicago, IL.

[301] Oct 24-27 *ICIP '04, IEEE Proceedings of International Conference on Image Processing*, two papers, Singapore.

[302] Oct *Darpa Mathematical Time Reversal Workshop*, presentation, Salish Lodge SPA, Snoqualmie, WA.

[303] Oct 15 *IEEE Proceedings subcommittee meeting*, Marriot Hotel, Newark, NJ.

[304] Oct 10-14 *FiO'04, Frontiers in Optics, Optical Society of America 88th Annual Meeting*, *invited talk* on "*Fusion in Sensor Networks*," Chicago, IL.

[305] Sep 28 *Presentation to Northrop-Grumman visitors*, CMU, Pittsburgh PA.

[306] Sep 26-30 *MICCAI 2004, 7th International Conference on Medical Imaging Computing and Computer Assisted Intervention*, one paper, Rennes, Saint-Malo, France.

[307] Sep 24 *Presentation at GM Lab*, CMU, Pittsburgh PA.

[308] Jul 19-21 *SAM'04, IEEE Sensor and Multichannel Array Processing Workshop*, **Distinguished Lecturer**, "Matched Field Time Reversal," Stieges, Barcelona, Spain.

[309] Jul 12-14 **Forum Internacional de Investigadores Portugueses no Estrangeiro, 5th Encontro, chaired** session on Robótica e Engenharia Electrotécnica, Coimbra, Portugal.

[310] Jul 12-14 *SPAWC'04, IEEE 5th International Workshop on Signal Processing Advances in Wireless Communications*, **Plenary Speaker**, Lisbon, Portugal.

[311] Jul 5-9 *MTNS 2004, 16th International Symposium on Mathematical Theory of Networks and Systems*, paper presented by coauthor, Katholieke Universiteit Leuven, Leuven, Belgium.

[312] Jun 28-Jul 2 *ISIT'04, IEEE International Symposium on Information Theory*, paper presented by coauthor, Chicago, IL.

[313] Jun 28 *NMR Center Advisory Board*, talk on "," NMR Center, CMU, Pittsburgh, PA.

[314] Jun 21-24 *ICC'04, IEEE International Conference on Communications*, two papers, Paris, Disneyland, France.

[315] Jun 16-17 *IEEE TAB Periodicals Review Committee*, The Kansas City Marriot Hotel, Kansas City, MO.

[316] Jun 9-11 *NSF ITR PI's meeting*, summary presentation of "*ITR-NGS-Intelligent HW/SW Compilers for DSP Applications*," Crystal City, VA.

[317] May 26 *IEEE Proceedings Editorial Board* Meeting, Piscataway, NJ.

[318] May 17-21 *IEEE ICASSP, International Conference on Acoustics, Speech, and Signal Processing*, four papers; attendance of Sensor and Multichannel Signal Processing Technical Committee lunch and IEEE Signal Processing Magazine Editorial Board breakfast; and awarded *IEEE Signal Processing Society 2003 Meritorious Service Award*, Monreal, Québec, Canada.

[319] Apr 15-18 *ISBI'04, IEEE International Symposium on BioImaging: From Micro to Nano*, three papers presented and attendance of ISBI steering committee meeting in representation of IEEE Signal Processing Society.

[320] Mar 30 *IBM T. J. Watson Research Laboratory*, Hawthorne, *invited seminar* on "*The Network as the Sensor*," Hawthorne, NY.

[321] Feb 26 *Darpa Time Reversal Kickoff Workshop*, talk on "*EM Time Reversal Imaging: Analysis and Experimentation*," Marriot Hotel, Chicago O'Hara Airport, Chicago, IL.

[322] Feb 20 *Darpa discussion with program manager*, Arlington, VA.

[323] Feb 11-12 *IEEE TAB Periodicals Review Committee*, The Westin Savannah Harbor Hotel, Savannah, GA.

[324] Jan 25-31 *FCT EECS Research Units Site Visit Panel*, Chaired Panel, Portugal.

[325] Jan 16 *Working visit MIT*, Cambridge, MA.

2003

[326] Dec 14-20 *FCT EECS Research Units Site Visit Panel*, Chaired Panel, Portugal.

[327] Dec 4 *UC Berkeley*, working visit, Berkeley, CA.

[328] Dec 2-5   *IEEE Globecom*, paper presented by coauthor, San Francisco, CA.

[329] Dec 2   *UCLA*, Working Visit on Darpa Mosaic project, Westwood, Los Angeles, CA.

[330] Nov 19-20   *Lockheed Martin*, talk on *"Distributed Sensing and Processing: A Graph Approach,"* Orlando, FL.

[331] Nov 12-14   *IEEE TAB Periodicals Review Committee and TAB Periodicals Committee*, The Renaissance Madison Hotel, Seattle, WA.

[332] Nov 4   *Darpa discussion with program manager*, Arlington, VA.

[333] Oct 30   *Intel FFT Workshop*, talk on *"SPIRAL,"* and discussion, Intel Champaign, IL.

[334] Oct 22   *Darpa Mosaic Review Workshop*, Darpa, Arlington, VA.

[335] Oct 21   *Intel visit to CMU*, Pittsburgh, PA.

[336] Oct 15   *NSF ITR program manager visit to CMU*, Dr. Darema, talk on *"Intelligent HW/SW Compilers for DSP Applications,"* CMU, Pittbsurgh, PA.

[337] Oct 14-15   *Statistical and Applied Mathematical Sciences Institute*, *SAMSI Sensors Network Workshop*, invited lecture on *"Distributed Sensing and Processing: A Graph Approach,"* Research Triangle Park, NC.

[338] Oct 13   *Working visit*, ARO, Research Triangle Park, NC.

[339] Oct 7-10   *Darpa Integrated and Sensing Processing Workshop*, talk on *"The Network as the Sensor,"* Darpa ACMP Review Workshop, St. Petersburg, FL.

[340] Sep 28 – Oct 1   *SSP'03, IEEE Statistical Signal Processing Workshop*, papers presented by coauthors, including paper in *Invited Session on Statistical Inferences on Manifolds with Applications in Image Analysis*, St. Louis, MO.

[341] Sep 14-17   *ICIP '03, IEEE Proceedings of International Conference on Image Processing,* papers presented by co-authors, Barcelona, Spain.

[342] Sep 8-9   *National Science Foundation*, *Wireless Networked Sensor and Actuator Systems Workshop*, UCLA, Los Angeles, CA.

[343] Jul 31   *Invited talk, Siemens Corporate Research*, *"MRI Techniques for Noninvasive Monitoring of Transplanted Organs,"* Princeton, NJ.

[344] Jul 22   *NMR Center NIH Site Visit*, talk on *"MR Bioimaging: Monitoring the Function of Transplanted Organs,"* NMR Center, CMU, Pittsburgh, PA.

[345] Jun17-19   *IEEE TAB Periodicals Review Committee and TAB Periodicals Committee*, Gaylord Opryland, Nashville, TX.

[346] Jun 13-17   *SPAWC'03, IEEE Signal Processing and Wireless Communications Workshop*, two papers presented, Rome Italy.

[347] May 22-25   *FCT Projects Evaluation Panel*, Chaired Panel, Lisbon, Portugal.

[348] May 21-22   *IEEE Proceedings Editorial Board Meeting*, IEEE Headquarters, Piscataway, NJ.

[349] May 1-3   *Invited talk*, "*SMART: Finding Structure in DSP Transforms*," University of Illinois, Urbana-Champaign, Urbana, IL.

[350] Apr 30   *Darpa Mosaic Review Workshop*, poster on "*Detection in Single Electron Spin Microscopy*," The Renaissance Madison Hotel, Seattle, WA.

[351] Apr 6-11   *IEEE ICASSP, International Conference on Acoustics, Speech, and Signal Processing*, Hong-Kong, China (cancelled due to SARS).

[352] Apr 4-5   *IEEE Panel of Editors Meeting*, Chaired Transactions TAB Committee, Grand Hyatt, Washington DC.

[353] Mar 20-21   *UCLA*, Working Visit on Darpa Mosaic project, Westwood, Los Angeles, CA.

[354] Feb 27-28   *National Science Foundation*, Arlington, VA.

[355] Feb 11-12   *IEEE TAB Periodicals Review Committee and TAB Periodicals Committee*, Fairmont Hotel, Dallas, TX.

<p align="center">2002</p>

[356] Dec 23   *Instituto Superior Técnico*, Relator, Ph. D. Thesis Defense, Mr. João Xavier, Lisbon, Portugal.

[357] Dec 17   *Mosaic project working visit*, hosted at CMU J. Johnson (Drexel Univ.) and R. Johnson (Cloudnet), CMU, Pittsburgh, PA.

[358] Dec 5   *IBM T. J. Watson Research Lab*, "*SPIRAL: Tuning DSP Transforms to Computing Platforms*," Invited Seminar, Yorktown Heights, NY.

[359] Nov 25   *NMR Center NIH Site Visit*, talk on "*TRD Project 4, MR Bioimaging Methodologies for Monitoring Function of Transplanted Organs*," NMR Center, CMU, Pittsburgh, PA.

[360] Nov 21   *DARPA Discovering and Exploiting Structure in Algorithms (DESA) Workshop*, "*SPIRAL: A Library Generator for DSP Algorithms*," invited talk; also rapporteur for Working Group 1, Arlington, VA.

[361] Nov 12-3   *IEEE TAB Periodicals Review Committee and TAB Periodicals Committee*, Wyndham Norwest Chicago Hotel, Itasca (Chicago), IL.

[362] Nov 8   ***INRIA***, Raporteur, Ph. D. Thesis defense of Mr. Guillaume Rellier, Sophia-Antipolis, France.

[363] Nov 7   ***Laboratoire Signaux et Systèmes (L2S)***, "*Blind Recovery of Intrinsic Shape*," Sophie-Antipolis, Fr., Invited Seminar.

[364] Nov 4-6 ***36th Asilomar Conference on Signals, Systems, and Communications***, paper presented by co-author, Invited paper in Special Session, Asilomar, Monterey, CA.

[365] Nov 1   ***IEEE Panel of Editors Conference Call***.

[366] Oct 18   ***CIT Ad-Hoc Committee***, CMU, Pittsburgh, PA.

[367] Oct 16   ***DARPA MOSAIC Program Review***, talk on "*Detection in Single Electron Spin Microscopy*," Beverly Hills, Los Angeles, CA.

[368] Oct 15   ***UCLA***, Working Visit on Mosaic project, Westwood, Los Angeles, CA.

[369] Oct 11   ***Darpa CMU visit***, presentation on ISP project, Hosted Dr. Carey Schwartz, CMU, Pittsburgh, PA.

[370] Sep 24-6   ***ICIP '02, IEEE Proceedings of International Conference on Image Processing***, paper presented by co-author; attendance of Executive Committee Meeting, Board of Governors, and Long-Range Planning Workshop, Signal Processing Society, Rochester, NY.

[371] Sep 23   ***VI HPEC, High Performance Embedded Computing Workshop***, paper presented by co-author. Lincoln Laboratory, MIT. Lexington, MA.

[372] Sep 22   ***CIT Ad-Hoc Committee***, CMU, Pittsburgh, PA.

[373] Sep 20   ***Northrop-Grumman visit at CMU***, talk on "*Distributed Sensing and Processing: A Graphical Model Approach*," CMU, Pittsburgh, PA

[374] Sep 18-19   ***DARPA ISP Program Kickoff Meeting***, talk on "*Distributed Sensing and Processing: A Graphical Model Approach*," Annapolis, Maryland.

[375] Sep 18   ***BioMedical Engineering Department Launch***, member of round table on BME Research.

[376] Aug 6   ***DARPA Caltech Bio: Info: Micro Program Site Visit***, Member of Site Visit Committee, Pasadena, CA.

[377] Aug 5   ***UCLA***, working visit (MOSAIC project), Los Angeles, CA.

[378] Jul   ***UIUC***, working visit (SPIRAL project), Urbana-Champaign, IL.

[379] Jul 7-10   ***ISBI'02, IEEE International Symposium on BioImaging: From Micro to Nano***, talk on paper "*Kidney Segmentation in MRI Sequences Using Temporal Dynamics*," Washington DC.

[380] Jun 23-28 *Science Foundation Ireland*, Baseline Assessment of the Public Research System in Ireland, Information and Communications Technologies, Galway, Limmerick, and Cork, Ireland.

[381] Jun 21 *McMaster University*, working visit with Prof. Simon Haykin, Hamilton, Ontario, Canada.

[382] Jun 19-20 *IEEE TAB Periodicals Review Committee and TAB Periodicals Committee*, Wyndham Harbour Castle Hotel, Toronto, Ontario, Canada.

[383] Jun 17 *University of Florida, Gainesville, FL*, "*SPIRAL: Tuning DSP Transforms to Computing Platforms,*" Invited Seminar.

[384] Jun 14-5 *IEEE Sensors Council Administrative Council Meeting*, Ex-Com Meeting and and attendance of Ad-Com Meeting, Vice-President Publications report, Hyatt Hotel, Orlando, FL.

[385] Jun 14 *NMR Center Advisory Board*, talk on "*MR Bioimaging: Monitoring the Function of Transplanted Organs,*" NMR Center, CMU, Pittsburgh, PA.

[386] Jun 10 *L'Institut Nationale Polytechnique de Grenoble (INPG)*, Ph. D. thesis, Mr. Sébastien Bausson.

[387] May 30-31 *BioMedical Engineering Department Advisory Board*, presentation on "*BioImaging and BioSignal Processing,*" CMU, Pittsburgh, PA.

[388] May 23 *IEEE Proceedings Editorial Board Conference Call*.

[389] May 20-21 *UCLA*, Mosaic project, working visit, Los Angeles, CA.

[390] May 13-18 *ICASSP'02, IEEE International Conference on Signal Processing,* two papers presented by co-authors; chair of Signal Processing Society Publications Board; attendance of Technical Committee on SAM and Technical Committee on Multimedia Signal Processing Meetings; attendance of Executive Committee Meeting and of Board of Governors Meeting, participation in Strategic Directions Workshop, Orlando, FL.

[391] May 8 *ARO Site Visit*, DARPA ISP Program, talk on "*Distributed Sensing and Processing: A Graphical Model Approach,*" Hosted Dr. John Lavery, CMU, Pittsburgh, PA.

[392] Apr 25-6 *Center for Wireless and Broadband Networking*, talk on "*Signal Processing and Coding in Wireless,*" CWBN Workshop, CMU, Pittsburgh, PA.

[393] Ap 21–27 *Tenth Scientific Meeting and Exhibition of the International Society for Magnetic Resonance in Medicine*, paper presented by coauthor, Hawai.

[394] Apr 18 *University of Maryland*, College Park, "*3D Models from Monocular Video,*" Invited Seminar.

[395] Apr16-7 *DARPA, MOSAIC Program Kickoff Meeting*, Marriot Conference Center, Georgetown University, Washington DC.

[396] Apr 14   *IEEE Transactions on Multimedia Steering Committee*, Annual Board Meeting, Marriot Hotel, Newark, NJ.

[397] Apr13   *IEEE Signal Processing Publications Board Meeting*, Chaired Board Meeting, Newark, NJ.

[398] Apr 8   *Instituto Superior Técnico*, Ph. D. Thesis Defense, Mr. João Maciel, Lisbon, Portugal.

[399] Mar 25   *UCLA*, working visit, MOSAIC project, Los Angeles, CA.

[400] Mar 19   *DARPA*, *ACMP*, participation in discussion on HW/SW/Algorithms Codesign, Washington DC.

[401] Mar 12   *IEEE Signal Processing Publications Office*, working visit, IEEE Headquarters, Piscataway, NJ.

[402] Feb 18   *IEEE ASW Signal Processing for Communications and Multimedia Workshop*, "*3D Video representations, Structure from Motion,*" Invited Talk, Tempe Mission Palms, Tempe, Arizona.

[403] Feb 16   *IEEE Signal Processing Society Executive Committee Meeting*, Hilton Airport Hotel, Tempe, Arizona.

[404] Feb 13-4   *IEEE TAB Periodicals Review Committee and TAB Periodicals Committee*, Tempe, Arizona.

2001

[405] Nov   *V HPEC, High Performance Embedded Computing Workshop*, paper presented. Lincoln Laboratory, MIT. Lexington, MA.

[406] Oct 8-12   *ICIP '01, IEEE Proceedings of International Conference on Image Processing*, paper presented by co-author, Thessalonica, Greece.

[407] Aug 6-8   *IEEE 11th Workshop on Statistical Signal Processing*, *invited plenary talk*, "*A Geometric and Multiresolution Analysis Approach to Robust Detection,*" Orchid Country Club Singapore.

[408] May 28-30   *ICCS '01, International Conference on Computational Science*, Special Session "*Architecture-Specific Automatic Performance Tuning,*" San Francisco, CA.

[409] May 24   *IEEE Proceedings Editorial Board*, Piscataway, NJ.

[410] May 7-13   *ICASSP'01, IEEE International Conference on Signal Processing*, three papers presented by co-authors; chair of Signal Processing Society Publications Board; attendance of Technical Committee on SAM and Technical Committee on Multimedia Signal Processing Meetings; attendance of Executive Committee Meeting and of Board of Governors Meeting, participation in Strategice Directions Workshop, Snowbird, UT.

[411] May 2-6 *IEEE National Radar Conference*, paper presented by coauthor, Atlanta GA.

[412] Ap 21–27 *Ninth Scientific Meeting and Exhibition of the International Society for Magnetic Resonance in Medicine*, paper presented, Glasgow, Scotland.

[413] Apr 4-6 *ACMP Review, DARPA*, presentation: *"SPIRAL: A Library of Optimized Portable Signal Processing Algorithms,"* Fairfax, VA.

[414] Apr 9-11 3rd *FIIP*, coordinating and chairing a session, Universidade do Algarve, Algarve, Portugal.

[415] Mar 29- Apr 1 *IEEE Signal Processing Publications Board and IEEE Panel of Editors Meeting*, chair Pub Board and participation in IEEE Panel of Editors Meeting, and Transactions on MultiMedia Editorial Board. San Diego, CA.

[416] Feb 22-23 *NSF Signal Processing Panel*, NSF, Fairfax, VA.

[417] Feb 21 *Los Alamos National Lab*, *invited lecture*, *"Anomaly Detection in Hyperspectral Imaging,"* Los Alamos, NM.

[418] Feb 19 *IEEE Signal Processing Society Executive Committee Meeting*, Hyatt Regency Hotel, Dalas For Worth Airport, TX.

[419] Jan 22-24 *ARESII, Advanced Research and Experiments in Sensing II*, Panel of the National Academy of Sciences and Office of the Undersecretary of Defense for Acquisition (OUSDA). Panel Member on *Impact of Advanced Research and Engineering on the Development of Sensors* for use in the Defense and National Security Interests of the United States. Arnold and Mabel Beckman Center of the National Academy of Sciences and Engineering. Irvine, CA.

2000

[420] Dec 12-16 *ARESII, Advanced Research and Experiments in Sensing II*. Panel Member. Arnold and Mabel Beckman Center of the National Academy of Sciences and Engineering. Irvine, CA.

[421] Oct 28 *IEEE Sensors Council*, AdCom Meeting, as Vice-President Publications of Sensors Council, Newark, NJ.

[422] Oct 10-11 *DSSC Fall Review*, presentation on "Soft Decision and Decoding in High Density Recording," CMU, Pittsburgh, PA.

[423] Oct 6-9 *LIDS, MIT*, working visit. Cambridge, MA.

[424] Sep 29 *DARPA, "SPIRAL: A Library of Optimized Portable Signal Processing Algorithms,"* presentation, Fairfax, VA.

[425] Sep 20-22 *IV HPEC, High Performance Embedded Computing Workshop*, paper presented. Lincoln Laboratory, MIT. Lexington, MA.

[426] Sep11-15   *ICIP'00, IEEE International Conference on Image Processing*, 2 papers presented. Attended Executive Committee Meeting and Board of Governors Meeting of IEEE Signal Processing Society. Vancouver, British Columbia, Canada.

[427] Aug 31-Sep1   *LIDS, MIT*, working visit. Cambridge, MA.

[428] Jul 27   *ISR, IST*, invited lecture on "*Soft Decision and Detection,*" Instituto de Sistemas e Robótica, Instituto Superior Técnico, Lisbon, Portugal.

[429] Jul 19   *CRL, COMPAQ Cambridge Research Laboratory*, invited seminar on "*Recovery of 3D Structure by Surface Based Factorization.*" Cambridge, MA.

[430] Jun 26   *Alphatech,* invited talk on "*Hyperspectral Adaptive Anomaly Detection.*" Burlington, MA.

[431] Jun 21-22   *McMaster University*, two invited talks on "*The Viterbi Algorithm and Markov Noise Memory,*" and "*Geometric Approach to Robust Detection,*" Hamilton, Ontario, Canada.

[432] Jun   *Signal Processing and Stochastic Control Group Seminar, LIDS, MIT*, seminar on "*Qualitative Design of Nonlinear Filters,*" Cambridge, MA.

[433] Jun 5-9   *ICASSP'00, IEEE International Conference on Acoustics, Speech, and Signal Processing*, three papers. Chaired Signal Processing Publications Board, attended Executive Committee Meeting and Board of Governors Meeting, IEEE Signal Processing Society; attended Sensor Array and Multichannel Processing Technical Committee Meeting. Istanbul, Turkey.

[434] May 5   *Graduate Seminar, Drexel University*, invited seminar on "3D Shape from Monocular Video: Surface Based Factorization." Department of Computer Science, Drexel University. Philadelphia, PA.

[435] Apr 24   *SPIE: Algorithms for Multispectral and Hyperspectral Imagery VI, Aerosense'00*, paper presented. Orlando, FL.

[436] Apr17-19   *FCT*, *Chair* International Panel of Project Evaluations, Lisbon, Portugal.

[437] Apr 6-8   *Publications Board Meeting (IEEE Signal Processing Society), and IEEE Panel of Editors Meeting*, Chaired Pub Board Meeting of IEEE Signal Processing Society. Newark, NJ.

[438] Mar 16   *Stochastic Systems Group, LIDS, MIT*, seminar on "Video Meta Representations: From Pixels and Frames to Content." Cambridge, MA.

[439] Mar 1-2   *Phillips Research Laboratory*, invited talk on "*What is in a Video: Automatic Extraction of 2D and 3D Content.*" NY.

[440] Feb 21-25   *European Union*, Member of International Panel of Projects Evaluation. Brussels, Belgium.

[441] Feb 9   *Executive Committee Meeting*, IEEE Signal Processing Society, Houston, TX.

[442] Jan31-Feb5 *FCT*, Chair International Panel of Evaluation of Research Units on Electrical Engineering and Computer Science. Lisbon, Portugal.

[443] Jan 14-15 *Symposium in Honor of D. Snyder*, invited presentation. St. Louis, MI.

[444] Jan 3-4 *MCT Symposium*, participation by invitation, Lisbon, Portugal.

1999

[445] Dec 20 *Computational Biology/ Bioinformatics Workshop*, CMU/ University of Pittsburgh, Pittsburgh, PA.

[446] Dec 6-10 *FCT*, Chair International Panel of Evaluation of Research Units on Electrical Engineering and Computer Science. Lisbon, Portugal.

[447] Nov 29 *DARPA*, *"SPIRAL: A Library of Optimized Portable Signal Processing Algorithms,"* presentation, Fairfax, VA.

[448] Nov 6 *IEEE Sensors Council*, AdCom Meeting, in representation of IEEE Signal Processing Society, Newark, NJ.

[449] Nov 16 *LIDS Colloquium, MIT, "Detection in Hyperspectral Imagery,"* Cambridge, MA.

[450] Oct 23 *USC,* Working meeting at University of Southern California, Department of Electrical and Computer Engineering, Los Angeles, CA.

[451] Oct 21-22 *IEEE Signal Processing Society Board of Governors Meeting*, San Francisco, CA

[452] Oct 15 *Symposium on System Theory, "SPIRAL: A Library of Optimized Portable Signal Processing Algorithms," invited talk*, Symposium in honor of Sanjoy Mitter on occasion of his 65th Anniversary, Royal Sonesta Hotel, Cambridge, MA.

[453] Jun 30 *ACMP Review, DARPA*, two presentations: *"Robust Detection in SAR,"* and *, "SPIRAL: A Library of Optimized Portable Signal Processing Algorithms,"* San Francisco, CA.

[454] May 21 *NIST*, *invited seminar*, *"Meta Video: Representations and Applications,"* and working visit, Gaithersburg, MD.

[455] Apr 8 *OCADE*, *"Meta Video: Representation and Applications," **invited lecture**,* transmitted by video-satellite links to multiple industrial high-tech companies in the Oregon-Washington States, OCADE, Portland, OR. Also, visit to Oregon State University, Corvalis, OR, April 8, 1999.

[456] Apr 7 *Graduate Seminar, Oregon State University, Department of Electrical Engineering*, *invited lecture*, *"Hard and Soft Detection in Signal-Dependent Correlated Noise,"* also, visited the Department. Corvalis, OR.

[457] Apr   ***DARPA***, "*Robust Detection in SAR,*" presentation to program manager ACPM, Fairfax, VA.

[458] Apr   ***SPIE: Algorithms for Multispectral and Hyperspectral Imagery V, Aerosense'99,*** "*ML-Detection in Hyperspectral Imagery: A GMRF Modeling Approach,*" paper presented by co-author. Orlando, FL (not present).

[459] Mar 15-19   ***ICASSP'99, IEEE International Conference on Signal Processing,*** gave *plenary summary of papers on Sensor and Array Methods*; two papers presented by co-authors; chair of Transactions on Signal Processing Editorial Board; attendance of Signal Processing Society Publications Board; attendance of Technical Committee on SAM and Technical Committee on Multimedia Signal Processing Meetings; and attendance of Board of Governors Meeting. Phoenix, AZ.

[460] Feb 24-26   ***1999 IEEE Information Theory Workshop on Detection, Estimation, Classification, and Imaging,*** organizer and chair of invited session on *Random Processes*, two invited papers presented by co-authors, Santa Fe, NM.

[461] Feb 11   ***IEEE Publications Activities Board,*** part of the IEEE Signal Processing Society representation presenting to IEEE TAB a report on the IEEE Signal Processing Society Publications. Hilton Head Island, NC.

[462] Jan 25   ***Graduate Seminar***, "*SPIRAL: A Library of Optimized Portable Signal Processing Algorithms,*" Invited lecture, Department of Electrical Engineering, University of Pittsburgh, Pittsburgh, PA.

[463] Jan 22-23   ***OPAL Review***, ***ACMP Darpa***, "*SPIRAL: A Library of Optimized Portable Signal Processing Algorithms,*" Santa Monica, CA.

<div align="center">

1998

</div>

[464] Dec 7-9   ***IEEE 2nd Workshop on Multimedia Signal Processing*** "*Capture and Synthesis of Human Motion in Video Sequences*." Santa Monica, CA.

[465] Nov 2-4   ***33th Asilomar International Conference on Signals, Systems, and Communications,*** "*Translation Invariance and Robust Detection,*" *invited presentation,* Monterey, CA.

[466] Oct   ***ICIP '98, IEEE Proceedings of International Conference on Image Processing***, paper presented by co-author, attended IEEE Signal Processing Society Board of Governors Meeting, Chicago, Illinois.

[467] Sep 15-18   ***Oceans'98, IEEE International Conference on Ocean Engineering,*** two papers presented by co-authors, also chaired a session, Nice, France.

[468] Aug 16-21   ***ISIT'98, IEEE International Symposium on Information Theory***, paper presented by co-author, Cambridge, MA.

[469] Jul 2   ***ACMP Review, DARPA,*** "*Robust Receivers,*" poster, Fairfax, VA.

[470] Jul   ***IEEE Image and Multidimensional Digital Signal Processing Workshop'98***, paper presented by co-author, Vienna, Austria, (not present).

[471] May 12-15   ***ICASSP'98, IEEE International Conference on Signal Processing,*** 2 papers presented by co-authors. Chaired *Editorial Board of Transactions on Signal Processing*; attended *Signal Processing Publications Board Meeting*; attended *Statistical and Adaptive Methods in Signal Processing Technical Committee Meeting*, Seattle, WA.

[472] Apr 13-15   ***SPIE: Algorithms for Multispectral and Hyperspectral Imagery IV, Aerosense'98,*** paper presented by co-author, Orlando, FL (not present).

[473] Apr 11-12   ***IEEE Editors Panel Meeting***, attended meeting, Newark International Airport, NJ.

<div align="center">

1997

</div>

[474] Nov 20   ***Northrop-Grumman***, "*Focusing SAR Images*," invited lecture**,** Baltimore, MD.

[475] Oct 30   ***Rome Laboratories, Hanscom Air Force Base,*** "*Focusing SAR Images*," *invited lecture*, Lexington, MA.

[476] Oct 16-17   ***Symposium of Electronics Engineers***, "*Digital Video*," *invited lecture*, Instituto Superior Tecnológico de Monterey (ISTM), Monterey, Mexico.

[477] Oct   ***ICIP'97, International Conference on Image Processing***, two papers presented by co-authors, Santa Barbara, CA (not present).

[478] Oct 10-11   ***CISE NSF Workshop***, *participation by invitation*, Skamania Lodge, Columbia River Gorge, WA.

[479]Sep 11   ***DARPA Computational and Applied Mathematics Program Review***, "*Robust Receivers*," presentation, Fairfax, VA.

[480] Jul 8-11   ***11th IFAC Symposium on System Identification***, *invited session* on "*Statistical Signal and Sensor Array Processing*," *invited paper*, Kitakyushu, Fukuoka, Japan.

[481] Jul 7   ***NEC***, "*Video Representations*," invited lecture and visit to NEC Laboratories, Tokyo, Japan.

[482] Jul 2-4   ***1st International Conference on Technology Policy and Innovation***, Chair of Session "*Multimedia Technologies*," *invited lecture*, member of advisory committee, Macau.

[483] Jun 23-25   ***IEEE 1st Workshop on Multimedia Signal Processing***, paper presented by co-author, Princeton, NJ.

[484] May 13-15   ***NATRAD'97, IEEE National Radar Conference***, 2 papers presented by co-authors, Syracuse, NY (not present).

[485] Apr 20-24   ***ICASSP '97, IEEE 1997 International Conference on Acoustics, Speech, and Signal Processing***, 3 papers presented by co-authors. Chaired *Editorial Board of Transactions on*

Signal Processing; attended *Signal Processing Publications Board Meeting*; and attended *Signal Processing Society Underwater Acoustics Technical Committee Meeting*, Munich, Germany.

[486] Apr *INTERMAG '97, IEEE International Conference on Magnetics*, paper presented by co-author, New Orleans, LA (not present).

[487] Apr 12 *IEEE Editors Panel Meeting*, attended meeting, Piscataway, NJ.

[488] Feb 8-14 *Conference on Visual Communications and Image Processing, VCIP '97, SPIE Symposium on Electronic Imaging, Science and Technology,* San Jose, CA, paper presented by co-author, February 8-14, 1997 (not present).

1996

[489] Nov *GlobeCom'96, IEEE International Conference for Global Communications, invited paper* presented by co-author, *Session for Signal Processing for Magnetic Recording*, London, UK, (not present).

[490] Oct 26-30 *30th Asilomar Conference on Signals, Systems, and Communications,* paper presented by co-author, Monterey, CA (not present).

[491] Sep *ICIP'96, IEEE International Conference on Image Processing,* paper presented by co-author, Lausanne, Switzerland (not present).

[492] Aug *SPIE Conference on Wavelet Applications in Signal and Image Processing IV,* paper presented by co-author, Denver, CO (not present).

[493] Jul 10 *International Study Institute on Advanced Broadband Communications*, (*ABC '96*), "*Video Over Wireless*," *invited lecture*, University of Aveiro, Aveiro, Portugal (and live ATM-broadcast to 17 world cities ranging from Toronto to Berlin).

[494] Jun 1-3 *DARPA Computational and Applied Mathematics Program Review*, "*Robust Detection*," presentation, Arlington, VA.

[495] Jun 1 *Atlantic Aerospace Electronics Corporation (AAEC)*, "*Robust Detection*," invited seminar, Greenbelt, MD.

[496] May 6-9 *ICASSP'96, IEEE 1997 International Conference on Acoustics, Speech, and Signal Processing*, two papers presented by co-authors, chaired editorial board of *Transactions on Signal Processing*, and participated at meeting of Underwater Acoustics and Radar Technical Committee, Atlanta, GA.

[497] Apr 1-4 *Forum Acusticum, 1st Convention of the European Acoustic Association, EAA*, *invited paper*, Antwerp, Belgium.

[498] Mar 18-20 *ONR Time-Frequency Analysis Workshop,* "*Geometric Approach to Robust Detection*," invited talk, Princeton, NJ.

1995

[499] Oct 26 ***SPIE Conference on Wireless Personal Communications Technologies and Services,*** invited paper in Session "*PCS Data and Multimedia Applications*," Philadelphia, PA.

[500] Oct 23 ***SPIE Conference on Coding and Signal Processing for Information Storage***, *invited paper in Special Session on Channels, Models, and Identification.* Philadelphia, PA.

[501] Oct 23-25 ***ICIP'95, IEEE International Conference on Image Processing***, two papers presented by co-authors. Crystal City, VA.

[502] Oct 19 ***Graduate Seminar***, "*Digital Video,*" Department of Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA.

[503] Aug 15 ***American Statistical Society Annual Meeting***, *Organizer and Chair of Special Session on "Statistics and the Ocean Sciences,"* Orlando, FL.

[504] Aug 14 ***NRL Stennis Space Center***, "*Efficient Algorithms for Data Assimilation,*" *invited lecture*, Stennis, MS.

[505] Jul 11 ***Bellcore***, "*Generative Video,*" *invited lecture*. Redbanks, NJ.

[506] Jul 10 ***Atlantic Aerospace Electronics Corporation (AAEC)***, "*Detection and Classification using Gabor/ Wavelet, and Zak Transforms,*" *invited seminar*. Greenbelt, MD.

[507] May 23-24 ***CIT Research Review***, "*Video Over Heterogenoeus Networks,*" presentation, CMU, Pittsburgh, PA.

[508] May 8-12 ***ICASSP '95, IEEE International Conference on Acoustics, Speech, and Signal Processing,*** five papers presented by co-authors. Detroit, MI.

[509] Mar 15-17 ***IEEE Adaptive Sensor Array Processing Workshop***, "*Ray Path Identification in Ocean Acoustic Tomography,*" *invited paper*, Lincoln Laboratory, MIT, Lexington, MA.

1994

[510] Oct 27-29 ***IEEE Information Theory Workshop on Image Processing and Statistics***, paper presented by co-author. Alexandria, VA (not present).

[511] Oct 25-28 ***IEEE International Conference on Wavelets,*** paper presented by co-author. Philadelphia, PA (not present).

[512] Oct 3-7 ***Oceans '94, IEEE Conference on Ocean Engineering***, paper presented by co-author. Brest, France (not present).

[513] Aug 24-26 ***ONR Random Fields Workshop***, "*Representation of Gauss-Markov Random Fields,*" presentation, Santa Barbara, CA.

[514] Jun 27-30 ***Matched Field Workshop***, paper presented by co-author. La Spezia, Italy (not present).

[515] Jun 20-24   ***Institute of Mathematical Statistics Annual Meeting,*** paper presented by co-author. Chapel Hill, NC (not present).

[516] May 25-26   ***CIT Research Review***, *Chair* Session on "*Signal Processing,*" CMU, Pittsburgh, PA.

[517] May 2-6   ***ICC '94, IEEE International Conference on Communications,*** paper presented by co-author. New Orleans, LA (not present).

[518] Apr19-22   ***ICASSP '94, IEEE International Conference on Acoustics, Speech, and Signal Processing,*** paper presented by co-author. Adelaide, Australia (not present).

[519] Mar 9-10   ***Laboratoire de Systèmes et Signaux (L3S)***, Université of Nice, Nice, France, working visit.

[520] Mar 7-8   ***CEPHAG, Institut National Polytechnique de Grenoble (INPG)***, "Raporteur," in Doctoral Thesis Defense of Mr. Didier Mauuary, Grenoble, France.

[521] Jan 19-22   ***Workshop on Miami Isopycnic Circulation Ocean Model***, *Lecture* on "*2D Signal Processing,*" Rosenstiel Graduate School, University of Miami, Miami, FL.

1993

[522] Oct.   ***University of Pittsburgh, Department of Electrical Engineering,*** Graduate Seminar, "*A Statistical Approach to Image Compression,*" Pittsburgh, PA.

[523] Oct   ***Oceans '93, IEEE International Symposium on Oceanic Engineering***, paper presented by co-author. Seattle, WA (not present).

[524] Oct 22-24   ***IEEE Press Board Meeting***, Phoenix, AZ.

[525] Oct 7   ***Academia das Ciências de Lisboa***, Seminar on "*2D Statistical Signal Processing,*" Lisbon, Portugal.

[526] Sep   ***XIV GRETSI, Quatorzième Colloque sur le Traitement du Signal et ses Applications***, paper presented by co-author. Juan Les Pins, France (not present).

[527] May 26-27   ***CIT Research Review***, *Chair* Session on "*Signal Processing,*" CMU, Pittsburgh, PA.

[528] Apr 27-30   ***ICASSP '93, IEEE International Conference on Acoustics, Speech, and Signal Processing***, paper presented. Minneapolis, MN.

[529] Apr 21-23   ***ONR Random Fields Workshop***, *Lecture* on "*2D Optimal Recursive Processing with Sparse Data,*" Sta. Monica, CA.

[530] Jan 17-22   ***ISIT'93, IEEE International Symposium on Information Theory,*** paper presented. San Antonio, TX.

1992

[531] Oct26-30   ***Oceans '92, IEEE International Symposium on Oceanic Engineering***, paper presented by co-author. Newport, RI (not present).

[532] Oct26-28   ***26th Asilomar Conference on Signals, Systems, and Computers***, *invited paper, "Ambiguity for Sonar*," Monterey, CA.

[533] Sep   ***ECUA '92, European Conference on Underwater Acoustics***, September 1992.

[534] Jul26-Aug7   ***NATO Advanced Study Institute on "Acoustic Signal Processing for Ocean Exploration,"*** Co-Director, and Lecturer, Funchal, Madeira, Portugal.

[535] Jun   ***ACM SIGCOM/ 92***, paper presented by coauthor (not present).

[536] Apr1-3   ***ONR-ARI Workshop on "Random Fields for Oceanographic Modeling,"*** lecture presented, Miami, FL.

[537] Mar 25   ***INI Alumni Conference***, *invited lecture* on "*Coding for Multimedia*," Pleasanton, CA.

[538] Mar23-26   ***ICASSP '92, IEEE International Conference on Acoustics, Speech, and Signal Processing***, three papers. San Francisco, CA.

[539] Mar18-22   ***USC, Department of Aerospace***. Working visit. Los Angeles, CA.

[540] Feb20-21   ***Palo Alto Phillips Research Lab***, seminar on "*High Definition Video Coding for Multimedia Networks*," Palo Alto, CA.

[541] Jan 8   ***Bellcore Research Laboratory***, Lecture on "*Video Coding for Broadband Networks*," in "Information Networking at CMU: A Symposium at Bellcore." Morristown, NJ.

1991

[542] Nov 11-13   ***SPIE VCIP '91, Conference on Visual Communications and Image Processing***, paper presented by co-author. Boston, MA (not present).

[543] Nov 4-6   ***25th Asilomar Conference,*** *invited paper* in session on "*Signal Processing and Coding for Data Storage*." Monterey, CA.

[544] Oct16-18   ***COMCON'91, The Third International Conference on Advances in Communication and Control Systems***, paper presented, Victoria, B.C., Canada.

[545] Sep23-25   ***IEEE Workshop on Multidimensional Signal Processing***, paper presented by coauthor, NY (not present).

[546] Sep 5-6   ***ONR Workshop on Matched Field Processing***, Fairfax, VA.

[547] Sep   ***XIII GRETSI, Treizième Colloque sur le Traitement du Signal et ses Applications***, paper presented by co-author. Juan Les Pins, France (not present).

[548] Aug15-17 *CNNOE'91, IEEE Conference on Neural Networks for Ocean Engineering*, paper, Washington, DC.

[549] Jun *ISIT '91, IEEE International Symposium on Information Theory*, paper presented by co-author. Budapest, Hungary (not present).

[550] May 20-27 *Ruhr University of Bochum*, visit and *invited seminar* on *"Markov Random Fields."* Bochum, Germany.

[551] May 14-17 *ICASSP '91, IEEE International Conference on Acoustics, Speech, and Signal Processing*, three papers. Toronto, Canada.

[552] Mar 20-22 *CISS'91, 25th Annual Conference on Information Sciences and Systems*, paper presented by co-author. Baltimore, MD.

[553] Mar 20-22 *Symposium on Applications of Wavelets to Signal Processing*, Air Force Institue of Technology, Wright-Patterson Air Force Basis, Dayton, OH.

[554] Feb 12-14 *ONR Workshop on "Random Fields for Oceanographic Modeling,"* presentation on *"The Structure of Markov Random Fields,"* Santa Barbara, CA.

[555] Jan 8 *Bellcore Navsink Research Center*, presentation on *"Image Processing and Video Coding,"* in "Information Networking at CMU: A Symposium at Bellcore." Navsink, NJ.

<div align="center">

1990

</div>

[556] Oct24-26 *LIDS 25th Anniversary*, MIT, Cambridge, MA.

[557] Oct10-12 *IEEE Signal Processing 5th Workshop on Spectral Estimation and Modeling*, invited paper on *"Cramér-Rao Bounds for Location of Unknown Multiple Sources in a Multipath Environment,"* Rochester, NY.

[558] Sep17-21 *EUSIPCO '90, European Signal Processing Conference*, three papers presented by co-authors on "Robust Beamforming Under Unexpected Strong Impulsive Noise," on "Performance Analysis of Passive Location With Stochastic Wideband Signals," and on "LD^2 – ARMA: A Novel ARMA Estimator," Barcelona, Spain.

[559] Jun18-29 *Radar and Sonar Institute for Mathematics and Its Applications (IMA) Summer Program*, invited presentation on *"Ambiguity in Sonar,"* University of Minnesota, Minneapolis, MN.

[560] Apr17-28 *Workshop on Random Fields for Oceanographic Modeling*, ONR Board of Mathematical Sciences, National Academy of Sciences, communication presented on *"Recursive Structure of Gauss Markov Random Fields,"* Washington DC.

[561] Apr3-6 *ICASSP '90, IEEE International Conference on Acoustics, Speech, and Signal Processing,* two papers presented by co-authors on "Cramér-Rao Bounds for Passive Range and Depth in a Vertically Inhomogeneous Medium," and on "Detection Performance of the l_1 Beamformer in the Presence of Underwater Burst Noise," Albuquerque, NM.

[562] Mar21-23   ***CISS'90, 24th Annual Conference on Information Sciences and Systems,*** paper presented on "*A Recursive Framework for Noncausal Gauss Markov Random Fields,*" Princeton, NJ.

[563] Jan16-17   ***NSF Workshop on Advanced Data Storage Technology for Computer Systems***, Pittsburgh, PA.

[564] Jan14-18   ***ISIT '90, IEEE International Symposium on Information Theory,*** paper presented by co-author on "First Order Error PDF for Nonlinear Stochastic Filters," San Diego, CA.

[565] Jan11-12   ***2ND Storage Research Centers Faculty Meeting***, IBM General Products Divison, San Jose, CA.

1989

[566] Oct18-20   ***IEEE 1989 ASSP Workshop on Underwater Acoustics and Signal Processing***, Whispering Pines Conference Center, University of Rhode Island, Alta Jones Camp, communications presented, RI.

[567] Sep 29   ***Seminar at Bellcore***, "Markov Random Fields for Image Processing," Morristown, NJ.

[568] Sep19-23   ***OCEANS'89, IEEE International Symposium on Oceanic Engineering,*** paper presented by co-author on "Range Sensitivity in a Multipath Environment," Seattle, WA (not present).

[569] Jun12-16   ***XII GRETSI, Douzième Colloque sur le Traitement du Signal et ses Applications,*** paper presented by co-author on "Detectability Conditions of High Resolution Algorithms in the Presence of Correlated Arrivals," Juan Les Pins, France (not present).

[570] Jun12-14   ***6TH International Symposium on Unmanned Unthetered Submersible Technology***, Turf Valley Hotel & Country Club, Ellicot City, MD.

[571] May23-26   ***ICASSP '89, IEEE International Conference on Acoustics, Speech, and Signal Processing,*** four papers presented on "Sensitivity of Range Localization in a Multipath Environment," on "Resolving Narrowband Coherent Paths with Nonuniform Arrays," on "Comparison of Two ARMA Estimators," and on "Adaptive Beamforming as an Inverse Problem," Glasgow, Scotland, UK.

1988

[572] Nov 15   ***Mathematics Systems Center, University of Florida***, *invited seminar*, "*Error Distributions for Nonlinear Filters,*" Gainesville, FL.

[573] Nov14-18   ***IEEE Supercomputing '88,*** paper presented on "Parallel Processing on Super-Computers: A Set of Computational Experiments," Orlando, FL.

[574] Oct25-26   ***Project MAC 25th Anniversary Symposium,*** Laboratory for Computer Science, MIT, Cambridge, MA.

[575] Oct 3-5   *NCF-88, National Communications Forum,* O'Hara, Rosemont, IL.

[576] Aug3-5   *IEEE Acoustics, Speech, and Signal Processing Fourth Workshop on Spectral Estimation and Modeling*, *invited paper* "Linear Estimation of ARMA Processes," Minneapolis, MN.

[577] Jul18-29   *Nato Advanced Study Institute on Underwater Acoustic Data Processing,* *invited lecture* and two papers presented by co-authors on "Joint Delay and Signal Determination," and on "Optimal Estimation and Beamforming," Kingston, Ontario, Canada.

[578] Apr11-14   *ICASSP '88, IEEE International Conference on Acoustics, Speech, and Signal Processing,* three papers presented by co-authors on "Path Resolution by Coherent Averaging: Trading Spatial and Temporal Degrees of Freedom," on "Optimal Estimation of Time-Varying Delay," and on "ARMA Processes: Order Estimation," New York, NY.

1987

[579] Sep. 16   *LIDS, MIT*, working visit, Cambridge, MA.

[580] Sep13-15   *IEEE ASSP Workshop on Underwater Acoustic Signal Processing*, Alton Jones Campus, University of Rhodes Island, paper presented, RI.

[581] Jul.26-31   *IFAC '87, 10th World Congress on Automatic Control,* paper presented by co-author on "Optimal Recursive Maximum Likelihood Estimation," Munich, Federal Republic of Germany (not present).

[582] Jun.   *XI GRETSI, Onzième Colloque sur le Traitement du Signal et ses Applications,* paper presented by co-author on "A State Space Model for Nondirectional Random Fields," Nice, France.

[583] Apr.6-9   *ICASSP '87, IEEE International Conference on Acoustics, Speech, and Signal Processing,* paper presented by co-author on "Dual Algorithm for ARMA Spectrum Estimation." Dallas, TX.

[584] Jan10-12   *Workshop on Modulation and Coding for Digital Recording Systems*, University of California San Diego, San Diego, CA.

1986

[585] Nov19-21   *LIDS, MIT*, working visit, Cambridge, MA.

[586] Nov17-18   *IEEE Acoustics, Speech, and Signal Processing Third Workshop on Spectral Estimation and Modeling,* paper presented on "Parametric Spectral Estimation for ARMA Processes," Boston, MA.

[587] Sep. 2-5   *EUSIPCO'86, Signal Processing III, Theories and Applications,* paper presented by co-author on "Discretization of the Fokker-Planck Equation," The Hague, The Netherlands (not present).

[588] Jul9-17 ***Nato Advanced Study Institute on Mathematical Limits for Communications Systems,*** invited lecturer, *"Nonlinear Filtering: Limits on Performance and Implementation,"* Il Ciocco, Castelvecchio, Italy.

[589] May26-30 ***New Horizons in System Theory***, participation by invitation by the Director (R. Kalman), *invited lecture*, *"Recursive Maximunm Likelihood,"* Villa Olmo, Cuomo, Italy.

[590] May 14 ***Stochastics Systems Seminar, Laboratory for Information and Decision Systems (LIDS), MIT,*** seminar on *"Recursive Identification of Dynamical Systems,"* Cambridge, MA.

[591] May 12 ***Acoustics Seminar, Department of Ocean Engineering, MIT***, seminar on *"Statistical Phase Unwrapping of Arctic Signals,"* Cambridge, MA.

1985

[592] Oct 7 ***LIDS Seminar, MIT***, seminar on *"Pole-Zero Identification for ARMA Models,"* Cambridge, MA.

[593] Aug12-Sep6 ***XLV Les Houches Summer School on Signal Processing,*** *invited set of five lectures*, *"Stochastic Filtering : Linear and Nonlinear,"* Les Houches (Grenoble), France.

[594] Jun24-28 ***ISIT '85, IEEE International Symposium on Information Theory***, *invited paper* on *"Optimal Filtering in the Presence of Multipath,"* in *Invited Session on Stochastic Processes for Underwater Signal Processing*, and paper presented on *"On the Characterization of the Error in Nonlinear Filtering Problems,"* Brighton, England.

[595] May20-24 ***X GRETSI, Dixième Colloque sur le Traitement du Signal et ses Applications,*** paper presented by coauthor, Nice, France (not present).

[596] May 6 ***Acoustics Seminar, Department of Ocean Engineering, MIT***, seminar on *"A New Method for Spectral Analysis of ARMA Models,"* Cambridge, MA.

[597] May ***ICASSP '85, IEEE International Conference on Acoustics, Speech, and Signal Processing,*** paper presented by co-author on "Time Delay Determination: Maximum Likelihood and Kalman-Bucy Type Structures," Orlando, FL (not present).

[598] Jan8-15 ***Department of Aerospace Engineering, University of Southern California (USC)***, working visit, Los Angeles, CA.

1984

[599] Oct. 15 ***Acoustics Seminar, Department of Ocean Engineering, MIT***, seminar on *"Optimal Phase Demodulation,"* Cambridge, MA.

[600] Sep. ***EUSIPCO'84, European Signal Processing Conference,*** paper presented by co-author on "Reducing the Error Diffusion Rate in Absolute Phase Demodulation," Amsterdam, The Netherlands.

[601] Jul30-Aug10   *Nato Advanced Study Institute on Adaptive Methods in Underwater Acoustics*, invited lecturer, "*Range and Bearing Determination: Maximum Likelihood and Kalman-Bucy Techniques*," and paper presented by co-author "*Delay Estimation with Stationary Signals and Correlated Observation Noises*," Lüneburg, Germany.

[602] Jun26-Jul12   *Université de Nice and Thomson-CSF (Signal Processing Division), DTAS*, working visit, Valbonne, France.

<div align="center">

1983

</div>

[603] Nov26-Dec2   *Université de Nice and Thomson-CSF (Signal Processing Division), DTAS*, working visit, Valbonne, France.

[604] Oct12-15   *Workshop on Architectures for Signal Processing*, invited lecture, "*Array Architectures for Signal Processing*," Universidade de Aveiro, Aveiro, Portugal.

[605] Oct3-8   *LIDS Seminar, MIT*, seminar on "*Optimal Filtering and Phase Demodulation*," and working visit, Cambridge, MA.

[606] Sep26-30   *ISIT '83, IEEE International Symposium on Information Theory*, paper presented on "*A Relation Between Discrete and Continuous Optimal Nonlinear Filtering*," St. Jovite, Quebec, Canada.

[607] Sep12-16   *EUSIPCO-83, 2ND European Signal Processing Conference*, paper presented by coauthor, Erlangen, Germany (not present).

[608] Jul21-Aug3   *Escuela de Informática, Universidad Politécnica de Barcelona*, working visit, Barcelona, Catalonia, Spain.

[609] May16-20   *IX GRETSI, Neuvième Colloque sur le Traitement du Signal et ses Applications*, paper presented on "*Fokker-Planck Study of the Phase Locked Loop: Behavior on the Real Line*," Nice, France.

[610] May9-15   *Escuela de Informática, Universidad Politécnica de Barcelona*, working visit, Barcelona, Catalonia, Spain.

<div align="center">

1982

</div>

[611] Aug 8   *Saclant Center*, working visit, La Spezia, Italy.

[612] Aug5-7   *Workshop on Issues in Acoustic Signal Processing and Recognition*, invited lecture, "*Geometric Aspects in Array Processing*," San Miniato, Italy.

[613] Jun26-30   *ISIT '82, IEEE International Symposium on Information Theory*, paper presented on "*Experimental Studies in Phase Acquisition*," Les Arcs, France.

[614] May16-28   *Nato Advanced Study Institute on Nonlinear Stochastic Problems*, co-director, invited lecture, "*Phase Demodulation and Nonlinear Filtering*," Armação de Pêra, Algarve, Portugal.

[615] May2-5 ***ICASSP'82, IEEE International Conference on Acoustics, Speech, and Signal Processing,*** paper presented on "*Recursive Techniques for Passive Sonar Location,*" Paris, France.

[616] Mar. ***ETH-Seminar on Digital Communications***, Zurich, Switzerland.

[617] Mar. ***2nd IASTED Symposium on Modeling, Identification, and Control,*** paper presented on "*Implementation of Optimal Nonlinear Filters,*" Davos, Switzerland.

<div align="center">

1981

</div>

[618] Sep. ***International Conference on Digital Signal Processing,*** paper presented by coauthor on "*Range Estimation: A Recursive Framework,*" Florence, Italy.

[619] Sep. ***International Conference on Circuits and Systems,*** paper presented by coauthor on "*Implementation of a Two Dimensional Cyclic Phase Estimator,*" Amsterdam, The Netherlands.

[620] Jul-Aug ***Department of Aerospace Engineering (Control Group), University of Southern California***, visiting scholar, Los Angeles, CA.

[621] Jul10-12 ***2nd Joint Ibero Workshop on Signal Processing,*** *organizer and chair of special session on Signal Processing Applications*, and three papers presented by co-authors, Vigo, Spain.

[622] Jun30-Jul14 ***Workshop on Realization and Synthesis of Nonlinear Systems,*** paper presented on "Optimal Nonlinear Filtering: Structures and Performance," Université de Rome, Rome, Italy.

[623] Jun 1-5 ***VIII GRETSI***, ***Huitième Colloque sur le Traitement du Signal et ses Applications,*** paper presented on "*Algorithm Structures for Cyclic Phase Estimation,*" Nice, France.

[624] Mar11-12 ***Journées sur le Filtrage Nonlinéaire,*** *invited lecture*, "*Démodulation Absolue de la Phase*," Laboratoire d'Automatique et d'Analyse de Systèmes (LAAS), Toulouse, France.

[625] Feb9-12 ***ISIT '81***, ***IEEE International Symposium on Information Theory,*** paper presented by co-author on "Entropy and Absolute Phase Demodulation," Santa Monica, CA (not present).

<div align="center">

1980

</div>

[626] Dec16-19 ***Systems Analysis and Optimization***, INRIA, Versailles, France.

[627] Sep16-18 ***EUSIPCO'80, Signal Processing: Theories and Applications,*** paper presented by co-author on "*Nonlinear Filtering in Phase Acquisition,*" Lausanne, Switzerland (not present).

[628] Aug26-28 ***Nato Advanced Study Institute on Underwater Acoustics and Signal Processing,*** *invited lecture*, "*Modeling, Algorithmic and Performance Issues in Deepwater Ranging Sound Systems,*" Kollekole, Denmark.

[629] Aug2-12 ***Nato Advanced Study Institute on Advances on Communications and Multiaccess Computer Networks***, Norwich, UK.

[630] Jun-Jul   *Department of Aerospace Engineering (Control Group), University of Southern California*, visiting scholar, Los Angeles, CA.

1979

[631] Sep.17-19   *Oceans '79, The Technical Challenge of Inner Space, IEEE International Symposium on Oceanic Engineering,* paper presented on *"Platform Location in Underwater Acoustics,"* San Diego, CA.

[632] Jul-Aug   *Department of Aerospace Engineering (Control Group), University of Southern California*, visiting scholar, Los Angeles, CA.

[633] Jun.   *ISIT '79, IEEE International Symposium on Information Theory,* paper presented on *"The Doppler Effect: A Second Look to its Information Contents,"* Grignano, Italy.

[634] May28-Jun2   *VII GRETSI, Septième Colloque sur le Traitement du Signal et ses Applications,* paper presented on *"A Navigation System for Air Traffic Precision Landing,"* Nice, France.

1978

[635] Jul-Aug   *Department of Aerospace Engineering (Control Group), University of Southern California*, visiting scholar, Los Angeles, CA.

[636] Mar.   *INRIA* (Rocquencourt), *Laboratoire de Signals et Systèmes* (LSS) (Université de Paris et École Supérieur de Électricité, Gif-Sur-Yvette), and *Laboratoire d'Automatique et d'Analyse de Systèmes* (LAAS, Toulouse), visit at invitation of Services Culturels, Ambassade de France, France.

1977

[637] Nov.   *Tema 8, Congresso dos Engenheiros,* chaired session, *invited paper*, "*Teoria dos Sistemas*," and three papers on "*Ensino de Engenharia Electrotécnica*," "*Calendário Escolar*," and "*Estimação de Distâncias por Processamento do Efeito de Doppler*," Lisboa, Portugal.

1976

[638] Jun.   *ISIT '76, IEEE International Symposium on Information Theory,* paper, Stockolm, Sweden (unable to attend).

1973

[639] Sep10-12   *Fourth Symposium on Nonlinear Estimation and its Applications,* paper presented on *"Spatial/Time Tracking by a Passive Observer,"* San Diego, CA.

Technical Reports

[1] F. C. M. Martins and José M. F. Moura, "*Representing Video with 3D Object Models and Pose Estimates,*" Technical Report, Department of Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA, November 1997.

[2] José M. F. Moura and Marcelo G. Bruno, "*DCT/DST and Gauss Markov Fields: Conditions for Equivalence*," Technical Report, Department of Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA, 30 pages, September 1996.

[3] Sauraj Goswami and José M. F. Moura, "*Covariance and Sample Path Characterization of Gauss-Markov Random Fields*," Technical Report, Department of Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA, April 1995.

[4] R. S. Jasinschi and José M. F. Moura, "*Generative Video*," Technical Report, Department of Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA, July 1994.

[5] R. S. Jasinschi and José M. F. Moura, "*Representing Global Motion on Lattices: Model-Based Image Sequence Analysis*," Technical Report, Department of Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA, October 1993.

[6] M. João D. Rendas and José M. F. Moura, "*Wideband Ambiguity Analysis in Underwater*," Technical Report, Department of Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA, 1994.

[7] Derek B. Noonburg, G. A. Slavenburg, José M. F. Moura, and John P. Shen, "*Architecture Design of a Single-Chip VLIW Processor for Real-Time Image/Video Compression*," Technical Report, Department of Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA, December 1992.

[8] Nikhil Balram and José M. F. Moura, "*Eigenvalues of Interaction Matrices*," Technical Report, Department of Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA, January 1993.

[9] M. Isabel L. F. Ribeiro and José M. F. Moura, "*LD^2–ARMA Estimator: Statistical Analysis*," Technical Report, Department of Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA, January 1990.

[10] José M. F. Moura and Carlos A. C. Belo, "Nonlinear Stochastic System Performance Evaluation: An Interactive Graphical Approach," Technical Report, Department of Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA, 16 pages, January 1989.

[11] José M. F. Moura and Sanjoy K. Mitter, "*Identification and Filtering: Optimal Recursive Maximum Likelihood Approach*," Technical Report **LIDS-P-1587**, Laboratory for Information and Decision Systems, Massachusetts Institute of Technology, Cambridge, MA, August 1986.

[12] Jorge N. S. Marques and José M. F. Moura, "Location Receivers for Constant Curvature Arrays," Technical report, CAPS, Instituto Superior Técnico, Lisboa, Portugal, 26 pages, October 1985.

[13] M. Isabel L. F. Ribeiro and José M. F. Moura, "Dual Estimation of the Poles and Zeros of an ARMA (p,q) Process," Technical Report **LIDS-P-1521**, Laboratory for Information and Decision Systems, Massachusetts Institute of Technology, Cambridge, MA, 34 pages, September 1985.

[14] José M. F. Moura, "*Narrow Band Passive Systems Theory with Applications to Positioning and Navigation*," **RLE Technical Reports' Series 490**, Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge, MA, April 1976.

[15] José M. F. Moura, "*Range Estimation Performance with Narrow-Band Passive Signals*," **QPR vol. 114**, Research Laboratory of Electronics, Massachusetts Institute of Technology, July 1974.

[16] José M. F. Moura, "*An Integrated Approach to the Dynamics of a Moving Source by a Passive Observer*," **QPR vol. 108**, Research Laboratory of Electronics, Massachusetts Institute of Technology, January 1973.

Thesis

[1] José M. F. Moura, "*Estimation of the Dynamics of a Moving Source by an Integrated Spatial and Temporal Processing*," **Master Sc. Thesis,** Department of Electrical Engineering, Massachusetts Institute of Technology, March 1973.

[2] José M. F. Moura, "*Global Acquisition Strategies from Doppler and Triangulation,*" Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology, 196 pages, January 1974. Doctoral Thesis proposal.

[3] José M. F. Moura, "*Narrow Band Passive Systems Theory with Applications to Positioning and Navigation,*" **Ph. D. Thesis**, Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology, March 1975. Doctor of Science Thesis; also published as **RLE Technical Reports' Series 490**, Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge, MA, April 1976.

Lecture Notes

[1] José M. F. Moura, "*Applied Stochastic Processes,*" Lecture Notes in Book form, Department of Electrical and Computer Engineering, Carnegie Mellon University, 1st edition, 1993; several revised editions.

Companies

2009-	Founder, Reckonen
2009-	Founder, SPIRALGen

Consulting Activities (selection)

Lincoln Laboratory, MathStar, Atlantic Aerospace and Electronics Company, Ministro da Ciência e Tecnologia (Portugal), Fundação da Ciência e Tecnologia, European Union Commission. Over the years, retained as expert consultant in litigation cases for several law firms, including as an expert consultant for a large CA law firm in a widely advertised litigation suite on copyright matters against a .com (details kept confidential by agreement).

CMU Activities (selection)

2010-11	College of Engineering (CIT) Ad-Hoc Promotions and Tenure Committee
2007	College of Engineering (CIT) Ad-Hoc Promotions and Tenure Committee
2006-	Founding Director, Information and Communications Technologies Institute (ICTI@CMU)
2005-	Founding Co-Director of CenSCIR (Center for Sensed Critical Infrastructure Research)
2005-06	ECE Undergraduate Advising Committee
2004-05	ECE Head Search Committee, Chair
2004-05	ECE Undergraduate Advising Committee
2003-04	ECE Undergraduate Studies Committee
2002-03	ECE Undergraduate Studies Committee
2002-03	CIT Ad-Hoc Promotions and Tenure Committee
2001-03	CHAIR, BioMedical Engineering Department Faculty Recruiting Committee
2001-03	ECE Undergraduate Studies Committee
2001-02	ECE ABET Assessment Committee
2000-01	ECE Graduate Education Committee
1998-99	ECE Faculty Search Committee
1998-99	Chair Graduate Education Committee
1997-99	ECE Facilities Committee
1997-98	CIT Ad-Hoc Promotions and Tenure Committee
1997-98	Undergraduate Education Committee
1996	Coordinator and Rapporteur of Vision Paper Subcommittee on Signal Processing,
1995-97	Graduate Education Committee
1993-95	Graduate Admissions Committee
1992-99	Information Network Institute (INI) Executive Committee in representation of CIT, the College of Engineering

1989-90	Faculty Senate
1988-89	CIT Ad-Hoc Promotions and Tenure Committee
1987-89	Chair, Graduate Admissions Committee
1987	University Strategic Planning, representing ECE
	Through the years, member of numerous ECE ad-hoc committees on education, research, and other initiatives.