

THURSDAY
NOVEMBER 18, 2004

Scaife Hall Auditorium
Room 125

4:00 PM
Refreshments—3:30 PM



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Anil Jain is a University Distinguished Professor in the Departments of Computer Science & Engineering at Michigan State University. He received his B.Tech. degree from I.I.T., Kanpur and M.S. and Ph.D. degrees from Ohio State University. His research interests include statistical pattern recognition, texture analysis, document image understanding and biometric authentication. He received awards for best papers in 1987 and 1991 from the Pattern Recognition Society and in 1996 from the IEEE Neural Network Society. He was the Editor-in-Chief of the IEEE Transactions on Pattern Analysis and Machine Intelligence (1991-1994). He is a fellow of the IEEE, ACM, and International Association of Pattern Recognition (IAPR). He has received a Fulbright Research Award, a Guggenheim fellowship and the Alexander von Humboldt Research Award. He delivered the 2002 Pierre Devijver lecture sponsored by IAPR. He holds six patents in the area of fingerprint matching. He is the author of a number of books, including Handbook of Fingerprint Recognition, Springer 2003 (received the PSP award from the Association of American Publishers) and BIOMETRICS: Personal Identification in Networked Society, Kluwer 1999. He is a member of the study team on "Whither Biometrics" that is being conducted by the National Academy of Sciences.

For more information:
<http://www.ece.cmu.edu/seminar>

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BIOMETRIC RECOGNITION: HOW DO I KNOW WHO YOU ARE?

A wide variety of systems require reliable personal recognition schemes to either confirm or determine the identity of an individual requesting their services. The purpose of such schemes is to ensure that only a legitimate user, and not anyone else, accesses the rendered services. Examples of such applications include (i) secure access to buildings, computer systems, ATMs, and cellular phones, (ii) obtaining driver licenses and welfare benefits, and (iii) issuing passports and visas. Biometric recognition, or simply biometrics, refers to the automatic recognition of individuals based on their physiological and/or behavioral characteristics (e.g., fingerprint, face, iris, voice). Biometrics allows us to confirm or establish an individual's identity based on "who she is", rather than by "what she possesses" (e.g., an ID card) or "what she remembers" (e.g., a password). Biometric systems also introduce an aspect of user convenience; they alleviate the need for a user to "remember" multiple passwords associated with different applications. However, a biometric system has to contend with problems related to non-universality of the trait, limited degrees of freedom, large intra-class variability, and spoof attacks. Some of these problems can be addressed by multimodal biometric systems that fuse the evidence presented by multiple identity traits of a user. In spite of the fact that the first Automatic Fingerprint Identification System (AFIS) was installed around 1965, biometric recognition remains a difficult pattern recognition problem. In this talk, we will give an overview of biometrics, representation and matching algorithms for fingerprints, state-of-the-art performance figures and the associated system security and privacy issues.

For More Information: <http://biometrics.cse.msu.edu>