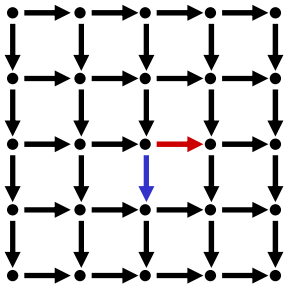
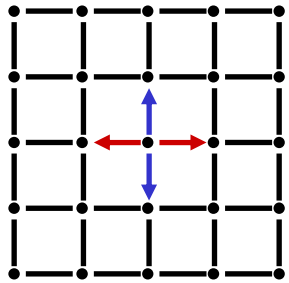
18-799F Algebraic Signal Processing Theory

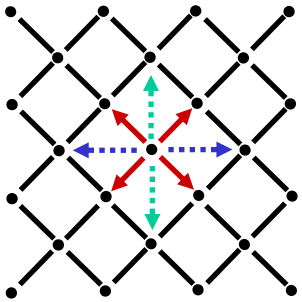
- Instructor: Markus Pueschel
- Spring 2007
- 12 units
- Requirements:
  - signals & systems, matrix algebra
  - one grad SP course
- Questions: pueschel@ece.cmu.edu



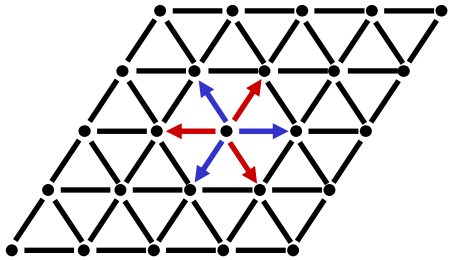
2-D time, separable



2-D space, separable



2-D space, nonseparable



2-D space, nonseparable

- A new approach to the foundations of linear signal processing (SP): axiomatic, algebraic, general
- Get a deeper understanding of existing and novel ways of doing SP
- Discover that there are many types of "z-transforms," forms of convolution, Fourier transform, etc.
- Discover 1-D and 2-D space SP
- Understand the many existing and novel transforms in SP
- Understand separable and non-separable 2-D SP
- Expand your math knowledge

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