Department of Mathematical Sciences Colloquium

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Multimedia Processing Based on Computational Intelligence and Ordered Structure

In the first part of this presentation, image/video compression methods based on ordered structure are introduced, where we use fuzzy algebra and max-plus algebra (which are commutative and idempotent semirings). Essentially, image compression problem is an inverse problem, and in this presentation we formulate the inverse problem based on these algebras. Efficient solution methods for these inverse problems are also introduced. Second part shows computational intelligence and multi-media processing based on ordered structure. As computational intelligence based on ordered structure, neural networks based on max-plus algebra and their efficient learning methods are explained. As multi-media processing based on ordered structure, formal concept analysis that generates concept lattices from vast multi-media is studied.

Friday, October 6, 2006 at 3 pm in Bell Hall 143
The University of Texas at El Paso

Refreshments will be served in front of the colloquium room, 15 minutes before the start of the colloquium.

For further information, please contact Dr. Pavel Šolín, Bell Hall 220. Phone: (915) 747-6770, email: `solin@utep.edu`.