



## SEMINAR ANNOUNCEMENT

### **Augmented Lagrangian method for ROF, vectorial TV and high order models**

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**Date :** 7 October 2009 (Wednesday)  
**Time :** 4.30 pm – 5.30 pm  
**Venue:** SPMS-Executive Classroom 1, MAS-03-06  
School of Physical and Mathematical  
Sciences

In image restoration such as deblurring and denoising, the ROF, vectorial TV and high order models have been demonstrated to be very successful. However, as they are nonlinear and non-differential, these models are difficult to be efficiently solved by traditional methods such as gradient descent. In this talk, I will present augmented Lagrangian method applied to these models, which dramatically improve the computational efficiency. In our approach, the objective function of each iteration is separated into two sub-problems which can be solved via FFT or a closed form solution. Our method produces much better restoration results in a comparable cpu cost than some Matlab built-in functions.

#### **Speaker Biography**

Dr. Chunlin Wu got his Bachelor and Ph.D. degrees in University of Science and Technology of China in 2001 and 2006, respectively. He is now a research fellow in MAS, SPMS, NTU. Dr. Wu's research interests include computer graphics and image processing.

Host: Division of Mathematical Sciences, School of Physical and Mathematical Sciences

#### **SCHOOL OF PHYSICAL AND MATHEMATICAL SCIENCES**

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