

Schedule of Talks

December 5, 2018 (Wednesday)

Venue: LT7, Yasumoto International Academic Park (YIA)

8:50-8:55	Opening
8:55-9:00	Opening speech by Prof. Zuowei Xie, Dean, Faculty of Science
Chair	Jun Zou
9:00-9:30	Olof Widlund <i>Domain Decomposition Algorithms for IGA and Linear Elasticity</i>
9:30-10:00	Kwai Lam Wong <i>Research Projects in the RECSEM REU Program</i>
10:00-10:30	Jin-Yun Yuan <i>Complexity Bounds for Optimization</i>
10:30-10:50	Coffee Break
10:50-11:20	Hong Yan <i>Tensor Models for Real-time Human Facial Expression Recognition</i>
11:20-11:50	Zhong-Zhi Bai <i>Computing Eigenpairs of Hermitian Matrices in Perfect Krylov Subspaces</i>
11:50-12:20	Zhengjian Bai <i>A Riemannian Derivative-Free Polak-Ribiere-Polyak Method for Tangent Vector Field</i>
12:20-14:00	Lunch (by invitation)
Chair	Jianfeng Cai
14:00-14:30	Nicola Mastronardi <i>The QR Steps with perfect shifts</i>
14:30-15:00	Luigi Brugnano <i>Line Integral Methods for Conservative Problems</i>
15:00-15:30	Xiaojun Chen <i>Spherical designs and non-convex minimization for recovery of sparse signals on the sphere</i>
15:30-15:50	Coffee break
15:50-16:20	Esmond G. Ng <i>Some Recent Results on the Combinatorial Aspect of Sparse Matrix Computation</i>
16:20-16:50	Wen Li <i>Numerical Analysis on multilinear PageRank</i>
16:50-17:10	Min Tao <i>Decomposition Methods for Computing Directional Stationary Solutions of a Class of Nonsmooth Nonconvex Optimization Problems</i>
17:10-17:40	Ke Chen <i>On Two New Variational Models for Selective Image Segmentation</i>

December 6, 2018 (Thursday)

Venue: LT7, Yasumoto International Academic Park (YIA)

Chair	Michael Ng
9:00-9:30	Nick Trefethen <i>Laplace Equation in a Polygon</i>
9:30-10:00	Wai-Ki Ching <i>A Higher-order Interactive Hidden Markov Model and Its Applications</i>
10:00-10:30	Haiwei Sun <i>Exponential Quadrature Rule for Fractional Diffusion Equations</i>
10:30-10:50	Coffee Break
10:50-11:20	Xue-Cheng Tai <i>Convex shape priori with level set representation</i>
11:20-11:50	Xiaoqun Zhang <i>Image Reconstruction by Splitting Deep Learning Regularization from Iterative Inversion</i>
11:50-12:20	Rongjie Lai <i>Understanding manifold-structure data via geometric modeling and learning</i>
12:20-12:30	Group Photo
12:30-14:00	Lunch (by invitation)
Chair	Wai-Ki Ching
14:00-14:30	Andrew Wathen <i>Preconditioning for non-symmetric Toeplitz matrices and its use in a parallel-in-time solver for evolutionary PDEs</i>
14:30-15:00	Eric Chung <i>Model reduction using deep learning</i>
15:00-15:30	Yat Tin Chow <i>Direct sampling methods for coefficient determination inverse problems</i>
15:30-15:50	Coffee break
15:50-16:20	Zuowei Shen <i>Image Restoration and Beyond</i>
16:20-16:50	Hongkai Zhao <i>Intrinsic Complexity and its Scaling Law: From Approximation of Random Vectors to Random Fields</i>
16:50-17:10	Thomas P.Y. Yu <i>Conforming vs non-conforming methods for solving geometric variational problems</i>
17:10-17:40	Guojian Yin <i>A contour-integral based method for generalized non-Hermitian eigenvalue problems</i>

December 7, 2018 (Friday)

Venue: LT7, Yasumoto International Academic Park (YIA)

Chair	Tieyong Zeng
9:00-9:30	Lothar Reichel <i>Generalized Krylov subspace methods for l_p-l_q minimization with application to image restoration</i>
9:30-10:00	Yimin Wei <i>Statistical Condition Estimates and Randomized Algorithms for Large-Scale Total Least Squares Problems</i>
10:00-10:30	Xiaoqing Jin <i>A preconditioned Riemannian Gauss-Newton Method for Least Squares Inverse Eigenvalue Problem</i>
10:30-10:50	Coffee Break
10:50-11:20	Marc Van Barel <i>Biorthogonal Extended Krylov Subspace Methods</i>
11:20-11:50	Shuqin Zhang <i>Simultaneous clustering of multiview biomedical data using manifold optimization</i>
11:50-12:20	Haixia Liu <i>Scattering Transform and Sparse Linear Classifiers for Art Authentication</i>
12:20-14:00	Lunch (by invitation)
Chair	Ronald Lui
14:00-14:30	Roland Glowinski <i>On the Numerical Solution of Some Nonlinear Eigenvalue Problems for the Monge-Ampère Operator</i>
14:30-15:00	Ken Hayami <i>Cluster Gauss-Newton method for sampling multiple solutions of nonlinear least squares problems - with applications to pharmacokinetic models</i>
15:00-15:30	Furong Lin <i>On the accuracy and stability of CN-WSGD schemes</i>
15:30-15:50	Coffee break
15:50-16:20	Peter P.T. Tang <i>Sparse coding by spiking neural networks: Convergence theory and computational results</i>
16:20-16:50	Alan W.K. Wong <i>Central Moments, Stochastic Dominance, Moment Rule, and Diversification</i>
16:50-17:10	Qiang Zhang <i>A Theory for the growth Rates of Fingers in Richtmyer-Meshkov Instability</i>
17:10-17:40	Alfred Ma <i>Implementation Shortfall for Algorithmic Trading</i>
18:00-18:30	Banquet Reception (by invitation)
18:30-21:00	Banquet (by invitation)

December 8, 2018 (Saturday)

Venue: LT4, Yasumoto International Academic Park (YIA)

Chair	Eric Chung
9:00-9:30	Xiao-Chuan Cai <i>Nonlinear Preconditioning and Applications</i>
9:30-10:00	Yifei Lou <i>A scale-invariant L^1 approach for sparse signal recovery</i>
10:00-10:30	Suhua Wei <i>Regularization Approach for x-ray Image Reconstruction and Restoration</i>
10:30-10:50	Coffee Break
10:50-11:20	Daniel Potts <i>Sparse high-dimensional FFT based on rank-1 lattice sampling</i>
11:20-11:50	Xavier Bresson <i>Convolutional Neural Networks on Graphs</i>
11:50-12:20	Michael Hintermueller <i>Structural total variation regularization with applications in inverse problems</i>
12:20-12:30	Raymond Chan