

CONFERENCE SCHEDULE

Update: 2012/07/09

Conference Venue: Conference Centre, Shanghai Normal University

Sunday, July 15, 2012	
13:30-17:00	Registration
	1. Shanghai Everbright Convention & Exhibition Centre International Hotel (上海光大国际酒店)
	2. Shanghai International Center For Educational Exchange (上海国际教育交流中心)
	3. Conference centre, Shanghai Normal University, 100 Guilin Road (上海师范大学 会议中心)
18:30-20:00	Reception
	Conference centre, Shanghai Normal University, 100 Guilin Road

Monday, July 16, 2012		
08:00-11:00	Registration on-site Conference Centre, Shanghai Normal University	
08:20-09:00	Welcome Ceremony (Lecture Hall No.1)	
09:00-09:30	Photo Session	
09:30-09:50	<i>Coffee Break</i>	
	Plenary Session1 (Lecture Hall No.1)Chair: Junzhi Cui	
09:50-10:30	Some new error estimates of finite element methods for the fourth order elliptic problem	Zhongci Shi
10:30-11:10	Asymptotic expansion of the Tricomi-Carlitz polynomials and their zeros	Roderick S. Wong
11:10-11:50	The foundations of a unified approach to mathematical modelling of angiogenesis	Brian Sleeman
12:00-13:30	<i>Lunch</i>	
	Plenary Session 2 (Lecture Hall No.1)Chair: Brian Sleeman	
13:30-14:10	Second-order two-scale analysis for bending behaviors of composite plate with 3-D small periodic configuration	Junzhi Cui
14:10-14:50	Recovering exponential accuracy from spectral partial sum of piecewise smooth functions	Chiwang Shu
14:50-15:30	TBA	Shi Jin

15:30-15:50	<i>Coffee Break</i>	
	Invited Session 1 (Lecture Hall No.1)Chair: Shi Jin	
15:50-16:30	Spectral deferred correction methods on general quadrature nodes	Tao Tang
16:30-17:10	Multiscale methods and analysis for the nonlinear Klein-Gordon equation in the nonrelativistic limit regime	Weizhu Bao
17:10-17:50	Enumerating of branched orientable coverings of a nonorientable surface	Jin Ho Kwak
	Invited Session 2 (Lecture Room No.3)Chair: Yunqing Huang	
15:50-16:30	Extrapolation cascadic multigrid method on piecewise uniform mesh	Chuanmiao Chen
16:30-17:10	Energy-conserved identities and high order energy-conserved S-FDTD schemes for Maxwell's equations	Dong Liang
17:10-17:50	Spectral collocation methods for Volterra integro-differential equations	Yanping Chen
18:00-19:00	<i>Dinner</i>	

	Tuesday, July 17, 2012	
	Plenary Session3 (Lecture Hall No.1)Chair: Roderick S. Wong	
08:20-09:00	Exact boundary synchronization for a coupled system of 1-D wave equations	Daqian Li
09:00-09:40	Mathematical models for the cardiovascular system: numerical simulation, control and optimization, applications	Alfio Quarteroni
09:40-10:20	Multiphysics Modeling of Optical Responses of a Nano Medium	Gang Bao
10:20-10:40	<i>Coffee Break</i>	
	Plenary Session 4 (Lecture Hall No.1)Chair: Yvon Maday	
10:40-11:20	Subspace techniques for nonlinear optimization	Ya-xiang Yuan
11:20-12:00	A source transfer domain decomposition method for Helmholtz equations in unbounded domain	Zhiming Chen
12:00-13:30	<i>Lunch</i>	
	Plenary Session 5 (Lecture Hall No.1)Chair: Tao Tang	
13:30-14:10	Basics and new applications of the reduced basis method	Yvon Maday
14:10-14:50	Numerical studies of phase and phase transition	Pingwen Zhang

14:50-15:10	<i>Coffee Break</i>	
	Invited Session 3 (Lecture Hall No.1) Chair: <i>Chuanmiao Chen</i>	
15:10-15:50	A boundary layer equations and applications to the shape control	Kaitai Li
15:50-16:30	Fast spectral-Galerkin methods for high-dimensional PDEs	Jie Shen
	Invited Session 4 (Lecture Room No.3) Chair: <i>Yaxiang Yuan</i>	
15:10-15:50	From nonlocality to fractional calculus: computational challenges	Luis Vazquez
15:50-16:30	From fundamental theorem of algebra to Hohenberg-Kohn theorem	Aihui Zhou
18:30-20:00	Banquet (Banquet starts at 18:30. Board the bus at 17:00)	

	Wednesday, July 18, 2012	
	Plenary Session6 (Lecture Hall No.1) Chair: <i>Chiwang Shu</i>	
08:20-09:00	Mathematical problems in petroleum recovery	Lung-an Ying
09:00-09:40	Some progress of computational geometry	Renhong Wang
09:40-10:20	How to compute saddle point without Hessian	Qiang Du
10:20-10:40	<i>Coffee Break</i>	
	Plenary Session 7 (Lecture Hall No.1) Chair: <i>Mark Ainsworth</i>	
10:40-11:20	Theory and modeling of rare events	Weinan E
11:20-12:00	Finite element analysis of electromagnetics in metamaterials	Yunqing Huang
12:00-13:30	<i>Lunch</i>	
	Invited Session 5(Lecture Hall No.1) Chair: <i>Huazhong Tang</i>	
13:30-14:10	TBA	Min Chen
14:10-14:50	Local multilevel methods for elliptic problems with highly discontinuous coefficients	Xuejun Xu
14:50-15:30	Conservative front-tracking method for 2D Euler system and numerical simulation of shock-bubble interactions.	Dekang Mao
	Invited Session 6 (Lecture Room No.3) Chair: <i>Weinan E</i>	
13:30-14:10	Fractional partial differential equations: modeling and computation	Chuanju Xu

14:10-14:50	Robust numerical methods for singularly perturbed systems of differential equations	J. J. H. Miller
14:50-15:30	A second-order finite difference method for option pricing under jump-diffusion models	Yong Hoon Kwon
15:30-15:50	<i>Coffee Break</i>	
Invited Session 7 (Lecture Hall No.1)Chair: Jin Cheng		
15:50-16:30	A direct Eulerian GRP scheme for one- and two-dimensional (special) relativistic hydrodynamics	Huazhong Tang
16:30-17:10	Fickian diffusion and anomalous diffusion, their fast numerical simulation	Hong Wang
17:10-17:50	An hp-version error analysis of a discontinuous Galerkin method for linear elasticity	Jianguo Huang
Invited Session 8(Lecture Room No.3) Chair: Qiang Du		
15:50-16:30	Stability and convergence of Galerkin discretizations of the Helmholtz equation	Markus Melnek
16:30-17:10	Fast high-order time-domain computation of wave scattering problems	Lilian Wang
17:10-17:50	Recovery type a-posteriori error estimators for the finite element methods based on anisotropic meshes	Weiming Cao
18:00-19:00	<i>Dinner</i>	

Thursday, July 19, 2012		
Plenary Session8 (Lecture Hall No.1)Chair: Alfio Quarteroni		
08:20-09:00	A type of multilevel correction method for eigenvalue problem by finite element method	Qun Lin
09:00-09:40	Optimally blended spectral-finite element scheme for wave propagation and nonstandard reduced integration	Mark Ainsworth
09:40-10:20	On construction of high-efficiency algorithms for 2-nd order PDE eigen-computation	Jiachang Sun
10:20-10:40	<i>Coffee Break</i>	
Plenary Session 9 (Lecture Hall No.1)Chair: Renhong Wang		
10:40-11:20	Domain decomposition algorithms and theory for almost incompressible elasticity	Olof B. Widlund

	and for $H(\text{curl})$	
11:20-12:00	Finite element methods for fourth order obstacle problems	Susanne C. Brenner
12:00-13:30	<i>Lunch</i>	
	Invited Session 9(Lecture Hall No.1)Chair: Dehao Yu	
13:30-14:10	Preconditioned iterative methods for Sinc-Galerkin systems from certain second-order partial differential equations	Zhongzhi Bai
14:10-14:50	Regularization in Banach space and inverse problems for PDE	Jin Cheng
14:50-15:30	Superconvergence: unclaimed territories	Zhimin Zhang
	Invited Session 10(Lecture Room No.3) Chair: Dong Liang	
13:30-14:10	Error estimates for numerical approximation of an optimal control problem governed by stationary Navier-Stokes equations with many global constrains	Danping Yang
14:10-14:50	Nonlinear eigenvalue problems	Yangfeng Su
14:50-15:30	Finite difference methods for Helmholtz equation	Yaushu Wong
15:30-15:50	<i>Coffee Break</i>	
	Invited Session 11(Lecture Hall No.1)Chair: Kaitai Li	
15:50-16:30	A domain decomposition method based on natural BEM and mixed FEM for stationary Stokes equations on unbounded domains	Dehao Yu
16:30-17:10	Numerical schemes for long time statistical properties (climate) of dissipative chaotic dynamical systems	Xiaoming Wang
17:10-17:50	Simple physical models for complex fluid flow simulations	Yuehong Qian
	Invited Session 12(Lecture Room No.3) Chair: Jianguo Huang	
15:50-16:30	Some new reconstruction algorithms for inverse obstacle/medium problems	Jun Zou
16:30-17:10	Weak Galerkin finite element methods: basic principles and applications	Junping Wang
17:10-17:50	TBA	Jialin Hong
18:00-19:00	<i>Dinner</i>	

Friday, July 20, 2012		
Plenary Session 10 (Lecture Hall No.1)Chair: <i>Lung-an Ying</i>		
08:20-09:00	On an asymptotic analysis of polynomial approximation to halfband filters	Charles Michelli
09:00-09:40	Adaptive Fourier and Legendre Galerkin methods	Claudio Canuto
09:40-10:00	<i>Coffee Break</i>	
Plenary Session 11 (Lecture Hall No.1)Chair: <i>Jiachang Sun</i>		
10:00-10:40	The higher-order finite volume method for solving elliptic problems	Yuesheng Xu
10:40-11:20	TBA	Zhi-Ying Wen
12:00-13:30	<i>Lunch</i>	
18:00-19:00	<i>Dinner</i>	