

## Programme Schedule

<b>January 6 (Monday) morning</b> (LECTURE THEATRE 18)	
8:15-8:50 am	<i>Registration</i>
<b>Chairman: Ya Yan LU</b>	
8:50-9:00 am	<i>Opening Ceremony : Professor Roderick WONG, Dean of Faculty of Science and Engineering</i>
9:00-9:45 am	<b>Jean-Claude NÉDÉLEC</b> <i>Preconditioners for the integral operators of the acoustic and Maxwell scattering problems</i>
9:45-10:30 am	<b>Xiao-Ping WANG</b> <i>Study of magnetic domain structures by micromagnetic simulations</i>
10:30-11:00 am	<i>Coffee Break</i>
<b>Minisymposium I: LECTURE THEATRE 18</b> <b>Chairman: Yaoping LIN</b>	
11:00-11:30 am	<b>Amiya Kumar PANI</b> <i>Expanded mixed finite element method : a natural choice for partial integro-differential equations</i>
11:30-12:00 noon	<b>Ben SOMMEIJER</b> <i>Splitting methods for partial Volterra integro-differential equations</i>
12:00-12:30 pm	<b>Wei WU</b> <i>Generalized difference methods (finite volume methods) for partial differential equations</i>
12:30-2:00 pm	<i>Lunch break</i>
<b>January 6 (Monday) afternoon</b> (LECTURE THEATRE 18) <b>Chairman: Raymond CHAN</b>	
2:00-2:45 pm	<b>Hermann BRUNNER</b> <i>Collocation methods for nonlinear functional integro-differential equations</i>

**January 6 (Monday) afternoon**

<b>Minisymposium I: LECTURE THEATRE 18</b> <b>Chairman: Yanping LIN</b>		<b>Minisymposium II: LECTURE THEATRE 17</b> <b>Chairman: Junji YAMAUCHI</b>	
2:45-3:15 pm	<b>Da XU</b> The numerical analysis on a Volterra equation with asymptotically periodic solution	<b>Yaowu LIU</b> Surface current second-order differential equation for wire antennas by using MEI method	
3:15-3:45 pm	<b>Yanping LIN</b> The immersed finite element methods for the elliptic interface problems	<b>Bo ZHANG</b> An alternating direction finite-difference time-domain method for the three-dimensional Maxwell equations	
Coffee Break			
	<b>Session A: LECTURE THEATRE 18</b> <b>Chairman: Dongwoo SHEEN</b>	<b>Session B: LECTURE THEATRE 17</b> <b>Chairman: Benny HON</b>	<b>Session C: P4701</b> <b>Chairman: Wei CAI</b>
4:05-4:25 pm	<b>Naoyuki ISHIMURA</b> On a stable finite difference scheme for a model equation of phase separation	<b>C. MOCENNI</b> Analysis and simulation of ecological models for shallow lagoons	<b>Siu Lit CHUI</b> A wide-angle full-vector beam propagation method based on ADI preconditioner
4:25-4:45 pm	<b>Tatsuyuki NAKAKI</b> Computations on relaxation oscillation of five pointed vortices	<b>Yau Shu WONG</b> Nonlinear dynamic prediction using expert data mining system	<b>Takanori MUGITA</b> Yee-mesh-based real-axis beam-propagation method
4:45-5:05 pm	<b>Hong Kun XU</b> The Dykstra algorithm and its applications	<b>Cristina Adela POPESCU</b> Applications of the EM algorithm for the study of aeroelastic systems with structural non-linearities	<b>Pui Lin HO</b> Improving the beam propagation method for TM polarization
5:05-5:25 pm	<b>Boris N. AZARENOK</b> Moving adaptive meshes and their application in hyperbolic problems of gas dynamics	<b>Guang Lin ZHAO</b> A real space approach of ab-initio calculations for the electronic structure of complex nanomaterials	<b>Atsushi YAMAHIRA</b> An iterative time-domain beam-propagation method for the wide-band analysis of optical circuits
5:25-5:45 pm			<b>Jianxin ZHU</b> Eigenvalue analysis of Pekeris waveguides with a perfectly matched layer

<b>January 7 (Tuesday) morning</b> (LECTURE THEATRE 18)	
<b>Chairman: Weiwei SUN</b>	
9:00-9:45 am	<b>Robert D. RUSSELL</b> <i>Moving mesh methods for time-dependent PDEs</i>
9:45-10:30 am	<b>Shiyi CHEN</b> <i>Atomistic/continuum simulation of nano-fluidics</i>
10:30-11:00 am	Coffee Break
<b>Minisymposium III: LECTURE THEATRE 18</b> <b>Chairman: Gang BAO</b>	
11:00-11:30 am	<b>Habib AMMARI</b> <i>Imaging small dielectric inhomogeneities</i>
11:30-12:00 noon	<b>Wei CAI</b> <i>Numerical methods for photonic devices</i>
12:00-12:30 pm	<b>Jun LIU</b> <i>An accurate numerical solution for electromagnetic scattering from a cavity in a ground plane</i>
12:30-2:00 pm	Lunch break
<b>January 7 (Tuesday) afternoon</b> (LECTURE THEATRE 18) <b>Chairman: Eitan TADMOR</b>	
<b>Frank NATTERER</b> <i>Marchings schemes for inverse Helmholtz problems</i>	
2:00-2:45 pm	<b>Minisymposium IV: LECTURE THEATRE 17</b> <b>Chairman: Ping LIN</b>
2:45-3:15 pm	<b>S. WANG</b> <i>A fitted finite volume method for the Black-Scholes equation</i>
3:15-3:45 pm	<b>Yong Hong WU</b> <i>Modelling of granular flows through a domain with frictional contact boundary</i>
3:45-4:05 pm	Coffee Break

<b>January 7 (Tuesday) afternoon</b>	
	<b>Session A: LECTURE THEATRE 18</b> <b>Chairman: Amiya Kumar PANI</b>
4:05-4:25 pm	<b>Chang-Ock LEE</b> <i>A FETI-DP preconditioner for elliptic problems on nonmatching grids</i>
4:25-4:45 pm	<b>Pingbing MING</b> <i>Locking-free quadrilateral finite elements for Reissner Mindlin plate</i>
4:45-5:05 pm	<b>Eun-Jae PARK</b> <i>Domain decomposition procedure based on nonconforming elements</i>
5:05-5:25 pm	<b>Dongwoo SHEEN</b> <i>Naturally parallel methods for time-dependent problems</i>
5:25-5:45 pm	<b>Kewei LIANG</b> <i>Numerical solution of blow-up problems using mesh-dependent variable temporal steps</i>
6:30 pm	Banquet

**Session B: LECTURE THEATRE 17**  
**Chairman: Yau Shu WONG**

**June-Yub LEE**  
*A numerical method for electrical impedance tomography with magnetic resonance image technique*

**Pascal ROUBIDES**  
*Influence functions for the numerical solution of the inverse bioelectric field model*

**Guozheng YAN**  
*Inverse scattering for transmission problem*

**Ryuichi ASHINO**  
*Microlocal filtering of images with Parseval wavelet frames*

**Jinyang HUANG**  
*A high order adaptive algorithm for flow reversal reactor models*

	<b>January 8 (Wednesday) morning</b> (LECTURE THEATRE 18)	
	<b>Chairman: Tao TANG</b>	
9:00-9:45 am	<b>Eitan TADMOR</b> <i>High resolution central schemes for nonlinear advection problems</i>	
9:45-10:30 am	<b>Eusebius DOEDEL</b> <i>Continuation of periodic solutions in conservative systems with application to the N-Body problem</i>	
10:30-11:00 am	Coffee Break	
	<b>Minisymposium V: LECTURE THEATRE 18</b> <b>Chairman: Jie SHEN</b>	<b>Minisymposium VI: LECTURE THEATRE 17</b> <b>Chairman: Zhimin ZHANG</b>
11:00-11:30 am	<b>Wai Sun DON</b> <i>High order numerical methods for the Richtmyer-Meshkov instability</i>	<b>Yunqing HUANG</b> <i>Uniform convergent iteration methods for P-Laplacian equations with applications to variational inequalities</i>
11:30-12:00 noon	<b>Ben-yu GUO</b> <i>Legendre rational spectral and pseudospectral methods for nonlinear partial differential equations on the whole line</i>	<b>Ningning YAN</b> <i>Supercvergence and a posteriori error estimates of gradient recovery type for FEM of optimal control</i>
12:00-12:30 pm	<b>Kaitai LI</b> <i>The Navier-Stokes equations in stream layer and on stream surface and a dimension split method</i>	<b>Aihui ZHOU</b> <i>Superconvergence for finite element eigenvalue approximations</i>
12:30-2:00 pm	Lunch break	
	<b>January 8 (Wednesday) afternoon</b> (LECTURE THEATRE 18)	
	<b>Chairman: Robert D. RUSSELL</b>	
2:00-2:45 pm	<b>Kevin BURRAGE</b> <i>A computational framework for the efficient simulation of stochastic chemical kinetics</i>	
	<b>Minisymposium III: LECTURE THEATRE 18</b> <b>Chairman: Gang BAO</b>	<b>Minisymposium VI: LECTURE THEATRE 17</b> <b>Chairman: Zhimin ZHANG</b>
2:45-3:15 pm	<b>Shan ZHAO</b> <i>Numerical solution of the Helmholtz equation with high wavenumbers</i>	<b>Zhimin ZHANG</b> <i>Polynomial preserving gradient recovery</i>
3:15-3:45 pm	<b>Aihui ZHOU</b> <i>A regularized Whittaker-Kotel'nikov-Shannon sampling expansion and its applications</i>	<b>Qiding ZHU</b> <i>Superconvergence derivative recovery operator and two fundamental conditions</i>
3:45-4:05 pm	Coffee Break	

<b>January 8 (Wednesday) afternoon</b>			
	<b>Session A: LECTURE THEATRE 18</b> <b>Chairman: Eun-Jae PARK</b>	<b>Session B: LECTURE THEATRE 17</b> <b>Chairman: Aihui WOOD</b>	<b>Session C: P4701</b> <b>Chairman: Lei LI</b>
4:05-4:25 pm	<b>Victor DIDENKO</b> <i>The Muskhelishvili equation and approximation methods for the biharmonic problem</i>	<b>De-hao YU</b> <i>Analysis and comparison of some numerical methods for exterior boundary value problems</i>	<b>Wu ZHANG</b> <i>Scalable parallel tridiagonal solver and application to PDEs</i>
4:25-4:45 pm	<b>Iliia V. BOIKOVA</b> <i>Optimal algorithms of calculation of singular integrals and solutions of singular integral equations</i>	<b>Chunxiang ZHENG</b> <i>Artificial boundary conditions for three-dimensional exterior problem of elasticity</i>	<b>Detang LU</b> <i>High performance computing in digital bridge</i>
4:45-5:05 pm	<b>Alla I. BOIKOVA</b> <i>On method of interpolation and its application to calculation of hypersingular integrals and solution of hypersingular integral equations</i>	<b>Yuexia HUANG</b> <i>Nonlinear local orthogonal transformation for acoustical waveguide with a curved bottom</i>	<b>Yimin WEI</b> <i>The perturbation theory of weighted truncated SVD and its application in regularization</i>
5:05-5:25 pm	<b>Iliia V. BOIKOV / Alla I. BOIKOVA</b> <i>Boundary elements methods for solution of elliptic equations</i>	<b>Xuefei YUAN</b> <i>Numerical solution of Helmholtz equation in Pekeris waveguide with PML</i>	<b>Kazuya KISHI</b> <i>Parallel asynchronous iteration calculation with arbitrary splitting form on SMP cluster</i>
5:25-5:45 pm	<b>Shaher MOMANI</b> <i>Numerical solution of differential equations of non-integer order</i>	<b>Qiaoxian ZHOU</b> <i>Numerical computation of optical propagation</i>	<b>Yuji KOBAYASHI</b> <i>Comparison of performance evaluation of H-matrix</i>

	<b>January 9 (Thursday) morning</b> (LECTURE THEATRE 18)	
	<b>Chairman: Z. C. SHI</b>	
9:00-9:45 am	<b>Mike J. BAINES</b> <i>A moving finite element method using monitor functions</i>	
9:45-10:30 am	<b>Pingwen ZHANG</b> <i>Computational modeling of complex fluids</i>	
10:30-11:00 am	Coffee Break	
	<b>Minisymposium V: LECTURE THEATRE 18</b> <b>Chairman: Jie SHEN</b>	<b>Minisymposium VII: LECTURE THEATRE 17</b> <b>Chairman: G. FAIRWEATHER</b>
11:00-11:30 am	<b>Heping MA</b> <i>Hermite spectral methods with a time-dependent weight for second-order differential equations</i>	<b>Tao LIN</b> <i>Immersed finite element electric field solvers for ion optics modelling</i>
11:30-12:00 noon	<b>Richard PASQUETTI</b> <i>High-order methods for the simulation of transitional to turbulent wakes</i>	<b>Graeme FAIRWEATHER</b> <i>Discrete-time finite element Galerkin methods for vibration problems</i>
12:00-12:30 pm	<b>Jie SHEN</b> <i>A new dual-Petrov-Galerkin method for third and higher odd-order differential equations: application to the KDV equation</i>	<b>M. GANESH</b> <i>Finite element methods with quadrature: hyperbolic problems</i>
12:30-2:00 pm	Lunch break	
	<b>January 9 (Thursday) afternoon</b> (LECTURE THEATRE 18) <b>Chairman: Jean-Claude NÉDÉLEC</b>	
2:00-2:45 pm	<b>Takashi KAKO</b> <i>Numerical method for the Helmholtz equation in unbounded region and its applications</i>	
	<b>Minisymposium V: LECTURE THEATRE 18</b> <b>Chairman: Jie SHEN</b>	<b>Minisymposium VII: LECTURE THEATRE 17</b> <b>Chairman: G. FAIRWEATHER</b>
2:45-3:15 pm	<b>Chuanju XU</b> <i>A fractional step method for the unsteady viscous/inviscid coupled equation</i>	<b>Mi-Young KIM</b> <i>A collocation method for a model of population dynamics with finite life-span</i>
3:15-3:45 pm	<b>Jian-Ping WANG</b> <i>Recent progress on finite spectral method</i>	<b>Chuanmiao CHEN</b> <i>Approximations to multiple solutions of nonlinear problem</i>
3:45-4:05 pm	Coffee Break	

<b>January 9 (Thursday) afternoon</b>			
	<b>Session A: LECTURE THEATRE 18</b> <b>Chairman: Ya Yan LU</b>	<b>Session B: LECTURE THEATRE 17</b> <b>Chairman: De-hao YU</b>	<b>Session C: P4701</b> <b>Chairman: Hong Kun XU</b>
4:05-4:25 pm	<b>Indra GUNAWAN</b> <i>Redundant paths and reliability bounds in gamma network</i>	<b>Zhenghui XIE</b> <i>A moving boundary problem and its applications to land-atmosphere interaction</i>	<b>Ioana DIACONESCU</b> <i>Condensation phenomena and heat transfer in paper-drying cylinder</i>
4:25-4:45 pm	<b>Tak-Ming LAW</b> <i>Intranet web based data security and access privileges by the applications of hash chains</i>	<b>Chi-Tien LIN</b> <i>On the reduction of numerical dissipation in central-upwind schemes</i>	<b>Masayoshi KIKUCHI</b> <i>Creation of the university timetable using the genetic algorithm</i>
4:45-5:05 pm	<b>Kieu Van HUNG</b> <i>Codes concerning roots of words</i>	<b>Lizhou WANG</b> <i>Spectral Galerkin approximation of branches of non-singular solutions for the Navier-Stokes equations</i>	<b>Sun-Chul KIM</b> <i>Long Time computation of two-dimensional vortex sheet by point vortex method</i>
5:05-5:25 pm	<b>Xiaoqun CHEN</b> <i>Interval polynomial curves approximation of offset curves</i>	<b>Yanren HOU</b> <i>A small eddy correction method for the Navier-Stokes equations</i>	<b>Satoru NATE</b> <i>A VLSI floorplanning method based on a reinforcement learning</i>
5:25-5:45 pm			<b>Zhiwu LIN</b> <i>Stability and instability of some ideal plane flows</i>