



International Workshop on High-Performance Computing for Electromagnetic and Multiphysics Modeling

📍 International Campus,
Zhejiang University, Haining

May 11–13, 2017

The objectives are to provide a forum for top international and domestic scholars to share and exchange new ideas and latest achievements in the fields of high-performance computing, computational electromagnetics, and multiphysics modeling, and to introduce the state-of-the-art research to young Chinese researchers and expose students to new opportunities of graduate study and future career. The workshop will be held as a part of celebration of the 120th anniversary of Zhejiang University. The registration fee is 650RMB to cover the costs of the workshop handouts, coffee break supplies, lunches and banquet.

Invited Speakers

- Narayana Aluru, University of Illinois, USA
- Amir Boag, Tel-Aviv University, Israel
- Wei Cai, University of North Carolina, USA
- Tiejun Cui, Southeast University, China
- Jun Hu, University of Electronic Science and Technology of China
- Dan Jiao, Purdue University, USA
- Stephane Lanteri, INRIA, France
- Hao Ling, University of Texas, USA
- Qing Huo Liu, Duke University, USA
- Eric Michielssen, University of Michigan, USA

- Balasubramanian Shanker, Michigan State University, USA
- Xin-Qing Sheng, Beijing Institute Technology, China
- Chao-Fu Wang, National University of Singapore
- Ming-Yao Xia, Beijing University, China
- Wenhua Yu, Jiangsu Normal University/2COMU, USA
- Hai-Jing Zhou, Institute of Applied Physics and Computational Mathematics, China

Preliminary Agenda: See page 3

Hotel:

The student attendees are recommended to stay in the ZJU International Campus Residential College for 50RMB per night (Contact: 浙江大学海宁国际校区书院, 唐老师: 87572190).

Other attendees can book one of the following hotels:

海宁朗豪酒店(0573)87897888;

海宁香榭丽酒店(0573)87286128.

Organizers:

Jian-Ming Jin,
University of Illinois at Urbana-Champaign
Er-Ping Li,
ZJU-UIUC Institute, Zhejiang University
Wen-Yan Yin,
Zhejiang University

Sponsors:

ZJU-UIUC Institute, Zhejiang University
Faculty of Information Technology,
Zhejiang University

Cosponsors:

Shanghai Jiaotong University
Hangzhou Dianzi University

Registration:

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浙江大学
120周年校庆
120TH ANNIVERSARY OF
ZHEJIANG UNIVERSITY
— 1897-2017 —



浙江大学信息学部



ZJU-UIUC INSTITUTE

Preliminary Agenda:

	May 12, 2017		May 13, 2017
			Session 3: High-Performance Computing
08:00 08:30 08:35	Registration Opening Remarks Welcome Remarks	08:00	Development of Scalable Discontinuous Galerkin Solvers for Time- and Frequency-Domain Electromagnetics and Nanophotonics, Stephane Lanteri, INRIA, France
	Session 1: Multiphysics Modeling		
08:45	Inverse Scattering for Biomedical and Subsurface Sensing and Imaging, Qing Huo Liu, Duke University, Durham, NC, USA	08:45	Domain Decomposition Methods for Large Multi-Scale Scattering Problems, Xin-Qing Sheng, Beijing Institute Technology, Beijing, China
09:30	Numerical Methods for Computing Electromagnetic Properties from Nano-particles to Meta-atoms, Wei Cai, Beijing Computational Science Research Center /University of North Carolina, Charlotte, NC, USA	09:30	Big Data: Concept, Methods and Applications, Wenhua Yu, Jiangsu Normal University, Xuzhou, China/2COMU, Washington, DC, USA
10:15	Coffee/Tea Break	10:15	Coffee/Tea Break
10:30	Matrix-free Time-Domain Methods for Solving PDEs in Multiphysics, Dan Jiao, Purdue University, West Lafayette, IN, USA	10:30	Fast MoM-PO Hybrid Tools for Solving Electrically Large and Complex Onboard Antenna Problems, Chao-Fu Wang, Temasek Laboratories, National University of Singapore, Singapore
11:15	Computational Multiwaves and Multiphysics: Opportunities, Challenges, and Applications, Wen-Yan Yin, Zhejiang University, Hangzhou, China	11:15	Toward High-Performance Electromagnetic Simulations of E3 Problems on Supercomputers, Hai-Jing Zhou, Institute of Applied Physics and Computational Mathematics, Beijing, China
12:00	Lunch	12:00	Lunch
	Session 2: Computational Electromagnetics		Session 4: Multiscale and Multiphysics Challenges
13:00	My 35-Year Involvement with Computational Electromagnetics: a Researcher, a User, and a Proponent, Hao Ling, University of Texas, Austin, TX, USA	13:00	Multiscale and Multiphysics Analysis of Materials at Nanoscale, Narayana Aluru, University of Illinois, Urbana, IL, USA
13:45	Electromagnetics on Subdivision Surfaces: A Novel Computational Paradigm, Balasubramanian Shanker, Michigan State University, East Lansing, MI, USA	13:45	Coupling Maxwell's Equations and Schrodinger's Equation for Nanowave Applications, Er Ping Li, Zhejiang University, Hangzhou, China
14:30	Fast Physical Optics Algorithms for High Frequency Scattering, Amir Boag, Tel-Aviv University, Israel	14:30	Metamaterials: From Effective Medium to Field Programmable, Tie Jun Cui, Southeast University, Nanjing, China
15:15	Coffee/Tea Break	15:15	Coffee/Tea Break
15:30	Progress in Butterfly-based Fast Direct Integral Equation Solvers, Eric Michielssen, University of Michigan, Ann Arbor, MI, USA	15:30	Simulation of Electromagnetic Scattering by Hypersonic Object with Plasma Sheath in Near Space, Ming-Yao Xia, Beijing University, Beijing, China
16:15	Integral Equation Based Domain Decomposition Solution of Electromagnetic Scattering by Multiscale Objects, Jun Hu, University of Electronic Science and Technology, Chengdu, China	16:15	Multiphysics Modeling in Computational Electromagnetics: Technical Challenges and Potential Solutions, Jian-Ming Jin, Zhejiang University/ University of Illinois, Urbana, IL, USA
18:30	Banquet Dinner	18:30	Workshop adjourns