

Publications from DOE ASCR-supported Research

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This is a list of publications and talks resulting from DOE ASCR-supported research.

Journal Articles and Book Chapters (not updated any more. look into the next items for the list)

- Kwan-Liu Ma, Greg Schussman and Brett Wilson, [Visualization for Computational Accelerator Physics \(In Book\) Visualization Handbook](#), October 2004, pp 901--918, ISBN 012387582X
- Lie-Quan Lee et al, [Achievements in ISICs/SAPP collaborations for electromagnetic modeling of accelerators](#), J. Phys.: Conf. Ser. 16 (2005) 205-209
- Chao Yang, Weiguo Gao, Zhaojun Bai, Xiaoye Li, Lie-Quan Lee, Parry Husbands, and Esmond Ng, [An Algebraic Sub-structuring for Large-scale Eigenvalue Calculation](#), SIAM Journal On Scientific Computing, 27, 873 (2005)
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- Lie-Quan Lee et al, [Enabling technologies for petascale electromagnetic accelerator simulation](#), 2007 J. Phys.: Conf. Ser. 78 012040 (5pp)
- X.S. Li, J. Demmel, L. Grigori, M. Gu, J. Xia, S. Jardin, C. Sovinec, L-Q. Lee, [Enhancing Scalability of Sparse Direct Methods](#), 2007 J. Phys.: Conf. Ser. 78 012041 (5pp)
- Volkan Akcelik, Kwok Ko, Lie-Quan Lee, Zenghai Li, Cho-Kuen Ng, Liling Xiao, [Shape determination for deformed electromagnetic cavities](#), Journal of Computational Physics, 227 (3), Pages 1722-1738, 2008

Ph.D. Thesis

- Greg L. Schussman, [Interactive and Perceptually Enhanced Visualization of Large, Complex Line-Based Datasets](#), PhD thesis, University of California Davis, December 2003.
- Yong Sun, [The filter algorithm for solving large-scale eigenproblems from accelerator simulations](#), PhD thesis, Stanford University, September 2003.

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- Xiao-Juan Luo, Mark S. Shephard, Lie-Quan Lee, Lixin Ge, and Cho Ng, Moving Curved Mesh Adaptation for Higher Order Finite Element Simulations, Journal of Engineering with Computers, 2010, DOI: 10.1007/s00366-010-0179-5
- Arno Candel, Zenghai Li, Andreas Kabel, Liequan Lee, Cho Ng, Vineet Rawat, Greg Schussman and Kwok Ko, Modeling the Compact Linear Collider Two-Beam Accelerator Design with ACE3P, to be in the 25th International Linear Accelerator Conference, LINAC10, Tsukuba, Japan, September 12-17 2010
- Cho Ng, Joel England, Lie-Quan Lee, Bob Noble, Vineet Rawat, James Spencer, Propagation and Radiation of a Photonic Bandgap Accelerating Mode, Advanced Accelerator Concepts Workshop, Annapolis, Maryland, June 13-19, 2010
- Cho Ng, et al, Advances in Parallel Electromagnetics Codes for the Accelerator Community, Advanced Accelerator Concepts Workshop, Annapolis, Maryland, June 13-19, 2010
- Arno Candel, Zenghai Li, Andreas Kabel, Liequan Lee, Cho Ng, Vineet Rawat, Greg Schussman and Kwok Ko, Numerical Simulation of Wakefield Damping and Power Transfer in the CLIC Two-Beam Accelerator, Advanced Accelerator Concepts Workshop, Annapolis, Maryland, June 13-19, 2010
- K. Bane, L. Lee, C. Ng, G. Stupakov, L. Wang, L. Xiao, PEP-X IMPEDANCE AND INSTABILITY CALCULATIONS, Tech. Report., SLAC-PUB-14151, 2010
- K. Bane, L. Lee, C. Ng, G. Stupakov, L. Wang, L. Xiao, PEP-X impedance and instability calculations, The 1st International Particle Accelerator Conference, IPAC'10, Kyoto, Japan, May 23-28, 2010
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- Lie-Quan Lee, Arno Candel, Arno, Cho Ng, and Kwok Ko, A moving window technique in parallel finite element time domain electromagnetic simulation, SLAC-PUB-14099, 2010

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- Lie-Quan Lee, Arno Candel, Andreas Kabel, and Zenghai Li, A Projection Method for Discretized Electromagnetic Fields on Unstructured Meshes, SIAM Conference on Computational Science and Engineering 2009, Miami, Florida, March 2-6, 2009
- Lixin Ge, Lie-Quan Lee, Arno Candel, Cho-Kuen Ng, Kwok Ko, Xiaojuan Luo, and Mark S. Shephard, Moving Window Algorithm for Parallel Short-Range Wakefield Computations in Particle Accelerators on Unstructured Grids, SIAM Conference on Computational Science and Engineering 2009, Miami, Florida, March 2-6, 2009
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- A.C. Kabel, D.S. Yershov, Using Commodity Graphic Processing Units (GPUs) for High-Speed Storage Ring Simulations, PAC09
- V. Akcelik, K. Ko, L. Lee, Z. Li, C.-K. Ng, G. Cheng, R.A. Rimmer, H. Wang, Thermal Analysis of SCRF Cavity Couplers Using Parallel Multi-Physics Tools TEM3P, PAC09
- Liling Xiao, Volkan Akcelik, Arno Candel, Lixin Ge, Andreas Kabel, Kwok Ko, Lie-Quan Lee, Zenghai Li, Cho Ng, Greg Schussman, PARALLEL FINITE ELEMENT MODELING TOOLS FOR ERL DESIGN AND ANALYSIS, ERL09, 45th ICFA Beam Dynamics Workshop, June 8-12, 2009
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- Z. Li, V. Akcelik, L-Q. Lee, C. Ng, K. Ko, [Analysis of the Cause of High External Q Modes in the JLab High Gradient Prototype Cryomodule Renaissance](#), SLAC-PUB-13266, Jun 27, 2008

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- Lie-Quan Lee, W. Gao, C. Yang, E. Ng, B. Liao, and Z. Bai, Solving Nonlinear Eigenproblems for International Linear Collider, SIAM Conference on Computational Science & Engineering, Costa Mesa, California, February 18-23, 2007
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