

Li Wang

Education

PhD, Mechanical Engineering, University of Wyoming, 2009
MS, Mechanical Engineering, Hebei University of Technology, China, 2003
BS, Mechanical Engineering, Hebei University of Technology, China, 2000

Employment

Research Assistant Professor, SimCenter: National Center for Computational Engineering, University of Tennessee at Chattanooga, October 2009 to Present
Post-Doctoral Research Associate, SimCenter: National Center for Computational Engineering, University of Tennessee at Chattanooga, July 2009 to September 2009
Visiting Researcher, The National Center for Atmospheric Research (NCAR), June 2008 to August 2008
Research Assistant, Computational Fluid Dynamics Lab, University of Wyoming, January 2004 to May 2009
Research Assistant, Thermo-Fluids Research Lab, Hebei University of Technology, China, September 2000 to April 2003

Academic Achievement

Journal Reviewer for Advances in Water Resources, 2007-2008.
P. Kouris Scholarship for Outstanding Doctoral Candidates, University of Wyoming, 2006.
Outstanding Graduate Student of the Hebei Province, China, 2000.
Excellent Thesis Award, Hebei University of Technology, China, 2000.
First-place Academic Achievement Fellowship, Hebei University of Technology, China, 1996-2000.

Academic Specialties

High-order Accurate Discontinuous Galerkin Methods
Discrete Adjoint Methods
Sensitivity Calculation and Design Optimizations
Error Estimation and Mesh Adaptations

Publications

1. Li Wang, Dimitri J. Mavriplis and Kyle W. Anderson, "Unsteady Discrete Adjoint Formulation for High-order Discontinuous Galerkin Discretizations in Time-dependent Flow Problems", to appear AIAA paper 2010-367, 2010.
2. Li Wang and Kyle W. Anderson, "Adjoint-based Shape Optimizations for the Maxwell Equations using Implicit Discontinuous Galerkin Methods", in preparation for AIAA Journal, 2009.
3. Li Wang, "Techniques for High-order Adaptive Discontinuous Galerkin Discretizations in Fluid Dynamics", PhD dissertation, Department of Mechanical Engineering, University of Wyoming, 2009.
4. Li Wang and Dimitri J. Mavriplis, "Adjoint-based h - p Adaptive Discontinuous Galerkin Methods for the 2D Compressible Euler Equations", Journal of Computational Physics, Vol 228, Issue 20, 7643-7661, 2009.

5. Li Wang, Amik St-Cyr and Dimitri J. Mavriplis, “High-order Limiting for Conservation Laws Based on Total Variation Denoising”, in preparation for SIAM Journal, 2009.
6. Li Wang and Dimitri J. Mavriplis, “Adjoint-based h - p Adaptive Discontinuous Galerkin Methods for the Compressible Euler Equations”, AIAA paper 2009-0952, 2009.
7. Dimitri J. Mavriplis, Cristian Nastase, Li Wang, Khosro Shahbazi and Nicholas Burgess, “Progress in High-order Discontinuous Galerkin Methods for Aerospace Applications”, AIAA paper 2009-0601, 2009.
8. Li Wang and D. J. Mavriplis, “Implicit Solution of the Unsteady Euler Equations for High-order Accurate Discontinuous Galerkin Discretizations”, Journal of Computational Physics, Vol 225, Issue 2, 1994-2015, 2007.
9. Li Wang and D. J. Mavriplis, “Implicit Solution of the Unsteady Euler Equations for High-order Accurate Discontinuous Galerkin Discretizations”, AIAA paper 2006-0109, 2006.
10. Li Wang, Yiqin Yu and Peng Li, “Efficient Low-pollution Submerged Combustion and the Application to Burners”, Energy Conservation (in Chinese), Issue 10, 2002.
11. Peng Li, Li Wang and Yiqin Yu, “Application of Evaporative Cooling Techniques in Transformers”, Transformer (in Chinese), Vol. 39, No. 10, 2002.
12. Peng Li, Li Wang, Yiqin Yu and Huiling Cao, “The Analysis of an Evaporative Cooling Method in Electrical Equipments”, Journal of Hebei University of Technology (in Chinese), Vol. 31, No. 4, 2002.

Presentations (selected)

1. Li Wang, Dimitri J. Mavriplis and K. W. Anderson, “Unsteady Discrete Adjoint Formulation for High-order Discontinuous Galerkin Discretizations in Time-dependent Flow Problems”, to be presented at the 48th AIAA Aerospace Science Meeting, Orlando, FL, January 2010.
2. Li Wang, “Techniques for High-order Adaptive Discontinuous Galerkin Discretizations in Fluid Dynamics”, presented at the 2nd NCAR-Wyoming Workshop, Boulder, CO, May 2009.
3. Li Wang, Amik St-Cyr and Dimitri J. Mavriplis, “High-order Limiting for Conservation Laws Based on Total Variation Denoising”, presented at the SIAM Conference on Computational Science and Engineering (CSE09), Miami, FL, March 2009.
4. Li Wang and Dimitri J. Mavriplis, “Adjoint-based h - p Adaptive Discontinuous Galerkin Methods for the Compressible Euler Equations”, presented at the 47th AIAA Aerospace Science Meeting, Orlando, FL, January 2009.
5. Li Wang and Dimitri J. Mavriplis, “Goal-oriented hp -adaptive Discontinuous Galerkin Methods for the Compressible Euler Equations on Unstructured Meshes”, presentation at the 10th Copper Mountain Conference on Iterative Methods, Copper Mountain, CO, April 2008.
6. Li Wang and Dimitri J. Mavriplis, “Target-based hp -adaptive Discontinuous Galerkin Methods for the Compressible Euler Equations”, presentation at the 1st NCAR-Wyoming Workshop, Steamboat Springs, CO, November 2007.
7. Li Wang and Dimitri J. Mavriplis, “Implicit Solution of the Unsteady Euler Equations for High-order Accurate Discontinuous Galerkin Discretizations”, presentation at the 44th AIAA Aerospace Sciences Meeting and Exhibit, Reno, NV, January 2006.
8. Li Wang and Dimitri J. Mavriplis, “Implicit Solution of High-order Accurate Discretizations of the Unsteady Wave Equations Using Spectral Multigrid”, presentation at the 12th Copper Mountain Conference on Multigrid Methods, Copper Mountain, CO, April 2005.