

Laura Beatriz Lurati

CONTACT INFORMATION	Institute for Mathematics and its Applications University of Minnesota 400 Lind Hall 207 Church St. SE Minneapolis, MN 55455	Office: 612.626.8996 lurati@ima.umn.edu http://www.ima.umn.edu/~lurati/
CITIZENSHIP	U.S. Citizen	
EDUCATION	Brown University , Providence, Rhode Island, 2001 - 2006. <ul style="list-style-type: none">• Ph.D. Applied Mathematics, 2006.• M.S. Applied Mathematics, 2003. Louisiana State University ,Baton Rouge, LA, 1997 - 2001. <ul style="list-style-type: none">• B.S. Mathematics <i>Magna Cum Laude</i>, 2001.	
EXPERIENCE	Industrial Postdoctoral Fellow , Institute for Mathematics and its Applications-University of Minnesota; Mathematics and Computing Technology-Boeing Phantom Works, 2006-2008. <ul style="list-style-type: none">• Designed and implemented research project in conjunction with Optimization and Geometry group at Boeing.• Developed an algorithm for incorporating uncertainty into direct search optimization method.• Produced code and numerical tests to demonstrate application of method to design optimization.• Presented research results at various seminars, group meetings, and at 2008 AIAA conference. Research Assistant , Division of Applied Mathematics, Brown University, 2003-2006. <ul style="list-style-type: none">• Worked with research group to develop and test numerical methods later incorporated into proprietary software at AFOSR.• Co-authored and published 3 papers in professional journals.• Presented research at national conference and seminars.	
SKILLS	<ul style="list-style-type: none">• Proficient in C, Matlab in Unix/Linux environment. Experience with C++, Python, and other languages and development tools.• Effective public speaker and writer.• Able to present complex material clearly and concisely, tailored to a range of audiences.	
RESEARCH INTERESTS	Stochastic modeling, design optimization under uncertainty, scientific computing, numerical analysis, spectral methods for partial differential equations, and computational electromagnetics.	

PUBLICATIONS

C. Chauviere, J. S. Hesthaven, and L. Lurati, *Computational Modeling of Uncertainty in Time-Domain Electromagnetics*, SIAM J. Sci. Comp., Vol. 28 (2006), pp. 751-775.

J. S. Hesthaven, S. M. Kaber, and L. Lurati, *Padé-Legendre Interpolants for Gibbs Reconstruction* J. Sci. Comp., Vol 28 (2006), pp 337-359.

L. B. Lurati *Padé-Gegenbauer Suppression of Runge Phenomenon in the Diagonal Limit of Gegenbauer Approximations* J. Comp. Physics., Vol 222 (2007), pp 1-8.

L. B. Lurati *Robust Airfoil Design Under Uncertain Operation Conditions Using Stochastic Collocation* 46th AIAA Aerospace Sciences Meeting and Exhibit, (2008) AIAA-2008-0135.

A. J. Booker, L. B. Lurati *Design under Uncertainty: Stochastic Collocation Methods for Robust and Reliability-based Design* -in preparation.

PRESENTATIONS

Robust Airfoil Design Under Uncertain Operating Conditions, Boeing Mathematics and Computing Technology Seminars, August 14, 2007.

Modeling Uncertainty in Time-Domain Electromagnetics, Boeing Mathematics and Computing Technology Seminars, September 20, 2006.

Padé Post-Processing of Spectral Data in 1D and 2D, Boeing Mathematics and Computing Technology Seminars, September 14, 2006.

Modeling Uncertainty in Time-Domain Electromagnetics. CEM-TD 2005, Georgia Tech, Atlanta, GA. September 13, 2005.

Group Seminar, Division of Applied Mathematics, Brown University, Providence, RI, October 2004.

North Carolina State University, Industrial Mathematics Modeling Workshop for Graduate Students, July 30 2002, Workshop: July 22-31, 2002.

AWARDS

- Bernard E. Bruce Award, 2006
- Stella Dafermos Award for excellence in graduate studies, 2006
- Brown University Dissertation Fellowship, Spring 2006
- Mary L. S. Downes Dissertation Fellowship, Spring 2006
- Teaching Fellowship, Fall 2005
- NSF VIGRE Fellowship, Fall 2003-Summer 2004, Spring 2005
- Irene Diamond Fellowship, Fall 2001-Spring 2002

REFERENCES

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