EMERSON CENTER LECTURESHIP AWARD SYMPOSIUM
Scientific Computing and Fast Algorithms

Cherry L. Emerson Center for Scientific Computation, Co-sponsored by the Computational & Life Sciences Strategic Initiatives, Emory University

Dr. Cherry L. Emerson

Monday, March 31, 2008
Room 207, White Hall, Emory University

AWARD WINNER & KEYNOTE SPEAKER:

Leslie Greengard
Professor of Mathematics, Department of Mathematics; Director, Courant Institute of Mathematical Sciences, New York University

Presentation Title: Physics, Simulation, and Design
Many problems in scientific computing require the solution of the partial differential equations of classical physics in complex geometry. During the last two decades, fast algorithms for such problems have been developed which bring large-scale simulation within practical reach. We will review the analytic and computational foundations of those algorithms and illustrate their use in solving selected problems in electromagnetics, acoustics, and biophysics.

INVITED SPEAKERS:

Allen Tannenbaum
School of Electrical and Computer Engineering Georgia Tech., Atlanta

David Bader
School of Computational Science and Engineering. Georgia Tech, Atlanta

Joel Bowman
Department of Chemistry Emory University, Atlanta

Bastiaan Braams
Department of Chemistry Emory University, Atlanta

Eldad Haber
Dept. of Mathematics and Computer Science Emory University, Atlanta

SCHEDULE OF EVENTS:

Time	Event
9:00 - 9:20	**OPENING CEREMONY & AWARD PRESENTATION**
9:20 - 10:20	**Leslie Greengard** (New York University): *Physics, Simulation, and Design*
10:20 – 11:20	**Allen Tannenbaum** (Georgia Tech.): *Stochastic and PDE Methods in Medical Imaging*
11:20 – 1:00	POSTER PRESENTATIONS
1:00 – 2:00	LUNCH
2:00 –3:00	**David Bader** (Georgia Tech): *Petascale Phylogenetic Reconstruction of Evolutionary Histories*
3:00 – 4:00	**Joel Bowman and Bastiaan Braams** (Emory University): *Computational Mathematics Meets Computational Chemistry*
4:00 – 4:20	COFFEE BREAK
4:20 – 5:20	**Eldad Haber** (Emory University): *Numerical Methods for Constrained Image Registration*
5:20 –	CLOSING
6:00 – 8:30	DINNER (by invitation)

REGISTRATION AND CONTACT INFORMATION:
Email: clec@euch4e.chem.emory.edu
http://www.emerson.emory.edu/conferences/index.html
Abstracts of invited talks are available on the website.
Registration is free, but you must register to attend.

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The Emerson Center Lectureship Award was established in the fall of 2003 to recognize distinguished achievements by scientists in computational sciences and to facilitate collaboration among different disciplines of computational sciences. On the board of the current Emerson Center Lectureship Award Selection Committee are Kurt Warncke (Physics, chair), Scott Devine (BioChemistry), James Kindt (Chemistry), Jamal Musaev (Emerson Center), James Nagy (Math & Computer Science) and Astrid Prinz (Biology) of Emory University.