



## ASPECTS OF OPTIMAL TRANSPORT IN GEOMETRY AND CALCULUS OF VARIATIONS

March 31 – April 4, 2008

**ORGANIZING COMMITTEE:** Wilfrid Gangbo (Georgia Institute of Technology), Luigi Ambrosio (Scuola Normale Superiore), Yann Brenier (Université de Nice Sophia Antipolis), Jose Carillo (ICREA & Autonomous University of Barcelona), Craig Evans (UC Berkeley)

### Scientific Overview

This workshop will be devoted to the interplay between the theory of optimal transport, geometrical inequalities and nonlinear partial differential equations. Specific topics will include optimization and evolution problems arising in geometry, urban planning, mathematical biology, kinetic theory, and fluid flows. A major emphasis will be pinpointing new research directions and applications.

### Confirmed Speakers

Martial Agueh (Univ. of Victoria), Stefano Bianchini (SISSA/ISAS), Giuseppe Buttazzo (Università di Pisa), Luis Caffarelli (Univ. of Texas at Austin), Eric Carlen (Rutgers), Jose Carillo (ICREA & Autonomous University of Barcelona), M.C. Carvalho (Univ. of Lisbon), Panagiota Daskalopoulos (Columbia), Marco Di Francesco (Università di L'Aquila), Craig Evans (UC Berkeley), Shizan Fang (Université de Bourgogne (Dijon)), Klemens Fellner (Universität Wien), Wilfrid Gangbo (Georgia Institute of Technology), Nassif Ghoussoub (Univ. of British Columbia), Boris Khesin (Univ. of Toronto), Pierre-Louis Lions (Université de Paris IX (Paris-Dauphine)), Juan Luis Vazquez (Autonomous University of Madrid), Francesco Maggi (Università di Firenze), Robert J. McCann (Univ. of Toronto), Gerard Misiolek (Notre Dame), Guisepppe Savare (Università di Pavia), Ovidiou Savin (Columbia), Dejan Slepcev (Carnegie-Mellon), Karl Sturm (Rheinische Friedrich-Wilhelms-Universität Bonn), Giuseppe Toscani (Università di Pavia), Adrian Tudorascu (Georgia Tech), Xu-Jia Wang (Australian National University), Michael Westdickenberg (Georgia Tech)

### Long Program Schedule

- Tutorials, March 10 – 14, 2008
- **Workshop 1: Aspects of Optimal Transport in Geometry and Calculus of Variations, March 31 – April 4, 2008**
- Workshop 2: Numerics and Dynamics for Optimal Transport, April 14 – 18, 2008
- Workshop 3: Transport Systems in Geography, Geosciences, and Networks, May 5 – 9, 2008
- Workshop 4: Optimal Transport in the Human Body: Lungs and Blood, May 19 – 23, 2008
- Mini-Workshop: Entropies and Optimal Transport in Quantum Mechanics, June 5 – 6, 2008
- Culminating Workshop at Lake Arrowhead Conference Center, June 8 – 13, 2008

### Participation

Additional information about this workshop including links to register and to apply for funding, can be found on the webpage listed below. Encouraging the careers of women and minority mathematicians and scientists is an important component of IPAM's mission, and we welcome their applications.

[www.ipam.ucla.edu/programs/otws1](http://www.ipam.ucla.edu/programs/otws1)



UCLA

IPAM is an NSF funded institute

