

## Geometric Flows: Theory and Computation

### Monday February 23, 2004

- 8:30–9:15 *Check-In/Light Breakfast (Hosted by IPAM)*
- 9:00–9:15 *Welcome and Opening Remarks*
- 9:15–10:15 **Gerhard Huisken** (MPI Albert Einstein Institute)  
*Tutorial on the mean curvature flow*
- 10:15–10:45 *Break*
- 10:45–11:45 **Carlo Sinestrari** (Universita' di Roma "Tor Vergata")  
*Mean curvature flow with surgeries*
- 11:45–1:45 *Lunch (on your own)*
- 1:45–2:45 **David Chopp** (Northwestern University)  
*Foliations of hyperbolic space and minimal surfaces with voids*
- 2:45–3:15 *Break*
- 3:15–4:15 **Xiaobing Feng** (University of Tennessee)  
*The Least Gradient Flow, the Total Variation flow, the Inverse Mean Curvature Flow, and Their Numerical Approximations*
- 4:15–4:30 *Break*
- 4:30–5:30 **Alberto Bartesaghi** (University of Minnesota)  
*Geometric flow for the 3D segmentation of cellular tomograms*
- 5:30–7:00 *Wine Reception (Hosted by IPAM)*

### Tuesday February 24, 2004

- 8:30–9:15 *Continental Breakfast*
- 9:15–10:15 **Bruce Kleiner** (University of Michigan)  
*The structure of singularities in mean curvature flow of mean convex sets in 3-dimensions.*
- 10:15–10:45 *Break*

*(Tuesday schedule continued on next page)*



*(Tuesday schedule continued from previous page)*

- 10:45–11:45 **Michael Holst** (University of California at San Diego)  
*Estimates and Numerical Techniques for the Constraints in General Relativity*
- 11:45–1:45 *Lunch (on your own)*
- 1:45–2:45 **Klaus Ecker** (Freie Universitat, Berlin)  
*Local mean value formulas for geometric flow equations*
- 2:45–3:15 *Break*
- 3:15–4:15 **Li-Tien Cheng** (University of California at San Diego)  
*Examples in Implicit Surface Representations for Geometrically Based Motions*
- 4:15–4:30 *Break*
- 4:30–5:30 *Discussion Session: Theory and Computation*

### Wednesday February 25, 2004

- 8:30–9:15 *Continental Breakfast*
- 9:15–10:15 **Lei Ni** (University of California at San Diego)  
*Entropy and monotonicity.*
- 10:15–10:45 *Break*
- 10:45–11:45 **Pengfei Guan** (McMaster University)  
*Fully nonlinear conformal flows and application*
- 11:45–1:45 *Lunch (on your own)*
- 1:45–2:45 **Richard Hamilton** (Columbia University)  
*Ricci flow on 3-manifolds I*
- 2:45–3:15 *Break*
- 3:15–4:15 **Richard Hamilton** (Columbia University)  
*Ricci flow on 3-manifolds II*
- 4:15–4:30 *Break*
- 4:30–5:30 **sigurd angenent** (University of Wisconsin)  
*Asymptotics of the neck pinch in Ricci flow*

## Thursday February 26, 2004

- 8:30–9:15 *Continental Breakfast*
- 9:15–10:15 **Huai-Dong Cao** (IPAM)  
*Tutorial on the Kaehler-Ricci flow*
- 10:15–10:45 *Break*
- 10:45–11:45 **Xi-Ping Zhu** (Zhongshan University)  
*The Kaehler-Ricci Flow and Geometry of Open Manifolds*
- 11:45–1:45 *Lunch (on your own)*
- 1:45–2:45 **Natasa Sesum** (Massachusetts Institute of Technology)  
*The limiting behaviour of the Ricci flow*
- 2:45–3:15 *Break*
- 3:15–4:15 *Open Problem Session I*
- 4:15–4:30 *Break*
- 4:30–5:30 *Open Problem Session II*
- 5:30–7:00 *Dinner (Hosted by IPAM)*

## Friday February 27, 2004

- 8:30–9:15 *Continental Breakfast*
- 9:15–10:15 **Ki-ahm Lee** (Seoul National University)  
*Gauss Curvature flows with flat side*
- 10:15–10:45 *Break*
- 10:45–11:45 **Peter Topping** (University of Warwick)  
*Diameter control under Ricci Flow*
- 11:45–1:45 *Lunch (on your own)*
- 1:45–2:45 **Hugh Bray** (Columbia University)  
*Geometric Flows in General Relativity*
- 2:45–3:15 *Break*
- 3:15–4:15 **Simon Brendle** (Princeton University)  
*The concentration-compactness principle and the Yamabe flow in conformal geometry*
- 4:15–4:30 *Conclusion*

