MGA Workshop V: Math Analysis and Multiscale Geometric Analysis

Monday November 15, 2004

8:30–9:15 *Check-In/Light Breakfast (Hosted by IPAM)*

9:15–9:30 *Welcome and Opening Remarks*

9:30–10:30 **Michael Christ** (University of California at Berkeley)
On multilinear oscillatory integral operators

10:30–11:00 *Break*

11:00–12:00 **Jim Colliander** (University of Toronto)
Concentration properties of rough NLS blowup solutions

12:00–2:00 *Lunch (on your own)*

2:00–3:00 **Terence Tao** (UCLA)
Geometric renormalization of wave maps

3:00–3:30 *Break*

3:30–4:30 **Christoph Thiele** (UCLA)
Topics in Multiscale Analysis

4:30–4:45 *Break*

4:45–5:45 **Hart Smith** (University of Washington)
L^p bounds for spectral clusters on planar domains

5:45–7:15 *Wine/Cheese Reception (Hosted by IPAM)*

Tuesday November 16, 2004

8:30–9:30 *Continental Breakfast*

9:30–10:30 **Tatiana Toro** (University of Washington)
A generalization of Reifenberg's theorem in R^3

10:30–11:00 *Break*

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11:00–12:00 **Guy David** (University of Paris Sud)
About J. Taylor's regularity result, and minimal sets in R^3

12:00–2:00 *Lunch (on your own)*

2:00–3:00 **Assaf Naor** (Microsoft Research)
The Lipschitz extension problem

3:00–3:30 *Break*

3:30–4:30 **Pertti Mattila** (University of Helsinki)
Lipschitz parametrizations and Menger curvature in metric spaces

4:30–4:45 *Break*

4:45–5:45 **Herve Pajot** (Université de Grenoble)
The geometric traveling salesman theorem in the Heisenberg group

Wednesday November 17, 2004

8:30–9:30 *Continental Breakfast*

9:30–10:30 **Ingrid Daubechies** (Princeton University)
Independent Component Analysis for functional Magnetic resonance imaging, why it works even though it can't possibly work.

10:30–11:00 *Break*

11:00–12:00 **Emmanuel Candes** (California Institute of Technology)
How many measurements do we need to reconstruct a digital object to within fixed accuracy?

12:00–2:00 *Lunch (on your own)*

2:00–3:00 **Tony Carbery** (University of Edinburgh)
A new perspective on the Brascamp-Lieb inequality and applications to Kakeya. (Joint work with J. Bennett and T. Tao.)

3:00–3:30 *Break*

3:30–4:30 **Nets Katz** (Indiana University)
An example in two dimensional fluid flow

4:30–4:45 *Break*

4:45–5:45 **Steven Hofmann** (University of Missouri)
Carleson measures and elliptic operators

5:45–7:15 *Dinner (Hosted by IPAM)*

Thursday November 18, 2004

8:30–9:30 *Continental Breakfast*

9:30–10:30 **Mauro Maggioni** (Yale University)
Diffusion Wavelets and Applications

10:30–11:00 *Break*

11:00–12:00 **Jean-Luc Starck** (CEA Saclay, France)
Cosmology and Multiscale Geometric Analysis

12:00–2:00 *Lunch (on your own)*

2:00–3:00 **Michael Lacey** (Georgia Institute of Technology)
Hilbert Transform on smooth families of lines

3:00–3:30 *Break*

3:30–4:30 **Camil Muscalu** (Cornell University)
On a trilogy of paraproducts

Friday November 19, 2004

8:30–9:30 *Continental Breakfast*

9:30–10:30 **John Garnett** (UCLA)
Analytic Capacity, Bilipschitz Maps, Cauchy Integrals, and Menger Curvature - a survey.

10:30–11:00 *Break*

11:00–12:00 **Stephane Jaffard** (University of Paris)
Interactions between function spaces, multifractal analysis and geometry

12:00–2:00 *Lunch (on your own)*

2:00–3:00 **Peter Jones** (Yale University)
Random Homeomorphisms in Analysis

3:00–3:30 *Break*

3:30–4:30 **Raanan Schul** (Yale University)
Subsets of Rectifiable curves in Hilbert Space and the Analyst's TSP

4:30–4:45 *Break*

4:45–5:45 **Alexander Volberg** (CCR-Jussieu France)
Weakly quasiregular maps, martingale transforms, and french beds