

Geostrophic Turbulence and Active Tracer Transport in 2 Dimensions

Wednesday, 13 March 2013

8:50 am Welcoming Remarks

*9:00 – 9:45 "Introduction to some models and issues in geostrophic turbulence."
Isaac Held, NOAA/Princeton University

10:00 – 10:15 Coffee break

10:15 – 11:00 "Global Regularity for the 3D Viscous Primitive Equations of Oceanic and Atmospheric Dynamics, and Finite-Time Singularity for the Inviscid Case"
Edriss Titi, Weizmann Institute

11:00 – 11:45 "A new interpretation of dynamics of upper ocean using Surface Quasi-Geostrophy and its consequences."
Guillaume Lapeyre, École Normale Supérieure, France

12:00 – 1:15 Lunch on site at PCTS

1:15 – 2:00 "Turning, splash and breakdown of interface dynamics."
Diego Cordoba, ICMAT, Madrid

2:00 – 2:45 "A scenario for finite-time singularity in the quasigeostrophic model."
Richard Scott, St. Andrews, Scotland

3:00 – 3:15 Coffee break

3:15 – 4:00 "The vertical structure of geostrophic turbulence: statistical mechanics approach"
Antoine Venaille, CNRS, Laboratoire de physique de l'ENS-Lyon, France

4:00 – 4:45 "Global regularity for dispersive critical SQG equation."
Alex Kiselev, University of Wisconsin

Thursday, 14 March 2013

9:00 – 9:45 "Coupled systems of two-dimensional turbulence."
Rick Salmon, UC San Diego

10:00 – 10:15 Coffee break

10:15 – 11:00 "Absence of anomalous dissipation in 2D SQG."
Peter Constantin, Princeton University

11:00 – 11:45 "Statistics of quasi-geostrophic flows obtained directly from cumulant expansions."
Brad Marston, Brown University

12:00 – 1:15 Lunch on site at PCTS

1:15 – 2:00 "Invariant measures for 2d Euler's equation and some other Hamiltonian systems."
Vladimir Sverak, University of Minnesota

2:00 – 2:45 "Two-dimensional turbulence in three-dimensional flows."
Guido Boffetta, University Torino, Italy

3:00 – 4:00 Poster Session Presentations

4:00 pm Tea at lounge area outside Jadwin A-10
4:30 pm Physics Colloquium -- Room A-10 Jadwin Hall
"Two Dimensional Turbulence"
Bill Young, UC San Diego

Friday, 15 March 2013

9:00 – 9:45 "Macroturbulence on Jupiter as emerging from Cassini data."
Boris Galperin, University South Florida

10:00 – 10:15 Coffee break

10:15 – 11:00 "The two-dimensional Boussinesq equations with fractional dissipation."
Jiahong Wu, Oklahoma State

11:00 – 11:45 "Geostrophic eddies and their relevance to the world's oceans."
Geoffrey Vallis, Princeton University

*Talks appropriate for general audiences