



# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Ailin Ruiz de Zarate Fabregas*, Universidade Federal do Paraná, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Internal Wave Models*"

Rio de Janeiro, June 10, 2011.

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Alan Newell*, University of Arizona, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Wave Turbulence*"

Rio de Janeiro, June 10, 2011.

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Alvaro Coutinho*, Programa de Engenharia Civil, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Stabilized Finite Element Simulation of Gravity Currents*"

Rio de Janeiro, June 10, 2011.

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Anakewit Boonkasame*, University of Wisconsin - Madison, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*The stability of large-amplitude shallow interfacial non-Boussinesq flows*"

Rio de Janeiro, June 10, 2011.

André Nachbin  
Organizing Committee



An Activity of



support







# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Andre Nachbin*, Instituto de Matematica Pura e Aplicada, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Two and half problems*"

Rio de Janeiro, June 10, 2011.

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Carlos Frederico Mendonça Raupp*, USP - Instituto Astronômico e Geofísico, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Multi-Scale Interactions and the Diurnal Cycle in the Tropics*"

Rio de Janeiro, June 10, 2011.

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Chiang C. Mei*, Massachusetts Institute of Technology, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Long waves over a muddy seabed*"

Rio de Janeiro, June 10, 2011.

A handwritten signature in blue ink, which appears to read "André Nachbin".

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Cristina Vilma Turner*, Universidade Nacional de Cordoba - Famaf, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Shape Optimization for tumor location*"

Rio de Janeiro, June 10, 2011.

André Nachbin  
Organizing Committee



An Activity of



support







# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *David E. Amundsen*, Carleton University, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Resonantly Forced KdV Equations*"

Rio de Janeiro, June 10, 2011.

A handwritten signature in blue ink, appearing to read "André Nachbin".

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Esteban Gregorio Tabak*, New York University, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*An hydrostatic model for atmospheric convection*"

Rio de Janeiro, June 10, 2011.

A handwritten signature in blue ink, which appears to read "André Nachbin".

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Frederic Dias*, University College Dublin, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Wave energy*"

Rio de Janeiro, June 10, 2011.

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Huy Hoang Nguyen*, IMECC, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*2D incompressible ideal flows around a small obstacle*"

Rio de Janeiro, June 10, 2011.

André Nachbin  
Organizing Committee



An Activity of



support







# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *J. Nathan Kutz*, University of Washington, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Principal Component Analysis of Surface Water Waves*"

Rio de Janeiro, June 10, 2011.

A handwritten signature in blue ink, which appears to read "André Nachbin".

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *J.A.P.Aranha*, USP - Escola Politécnica, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Flow around a slender cylinder: The Ginzburg-Landau Equation*"

Rio de Janeiro, June 10, 2011.

A handwritten signature in blue ink, which appears to read "André Nachbin".

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *John W. M. Bush*, Massachusetts Institute of Technology, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Hydrodynamic quantum analogues*"

Rio de Janeiro, June 10, 2011.

A handwritten signature in blue ink, which appears to read "André Nachbin".

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Jon Wilkening*, University of California at Berkeley, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Bifurcation and resonance in standing water waves*"

Rio de Janeiro, June 10, 2011.

A handwritten signature in blue ink, which appears to read "André Nachbin".

André Nachbin  
Organizing Committee



An Activity of



support







# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Juan Carlos Muñoz Grajales*, Universidad del Valle, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Instability of solitary waves on the surface of a shallow channel*"

Rio de Janeiro, June 10, 2011.

A handwritten signature in blue ink, appearing to read "André Nachbin".

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Jun Zhang*, Courant Institute of Mathematical Sciences, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Hydrodynamical drafting in fluid flows*"

Rio de Janeiro, June 10, 2011.

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Michael Shelley*, New York University, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Active Fluids*"

Rio de Janeiro, June 10, 2011.

A handwritten signature in blue ink, appearing to read "André Nachbin".

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Oliver Buhler*, Courant Institute of Mathematical Sciences, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Internal waves and wave-induced mean flows in the ocean*"

Rio de Janeiro, June 10, 2011.

A handwritten signature in blue ink, appearing to read "André Nachbin".

André Nachbin  
Organizing Committee



An Activity of



support







# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Paul Milewski*, University of Wisconsin - Madison, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Fluid waves under elastic sheets: a zoology of solitary waves.*"

Rio de Janeiro, June 10, 2011.

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Ricardo André Lopes Barros*, Instituto de Matematica Pura e Aplicada, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Holmboe instability in non-Boussinesq fluids*"

Rio de Janeiro, June 10, 2011.

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Rodolfo Ruben Rosales*, Massachusetts Institute of Technology, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Self sustaining traffic shocks*"

Rio de Janeiro, June 10, 2011.

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Saulo Pomponet Oliveira*, Universidade Federal do Paraná, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Some issues on the numerical approximation of nonlocal operators*"

Rio de Janeiro, June 10, 2011.

A handwritten signature in blue ink, appearing to read "André Nachbin".

André Nachbin  
Organizing Committee



An Activity of



support







# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Wooyoung Choi*, New Jersey Institute of Technology, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Stability of finite amplitude capillary waves*"

Rio de Janeiro, June 10, 2011.

A handwritten signature in blue ink, appearing to read "André Nachbin".

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Yves Couder*, Paris VII - Université Denis Diderot, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Bouncing droplets coupled to surface waves: a wave particle duality of a kind*"

Rio de Janeiro, June 10, 2011.

André Nachbin  
Organizing Committee



An Activity of



support





# Waves in Fluids III

IMPA, Rio de Janeiro, Brazil June 5-11, 2011

We hereby certify that, *Zhan Wang*, University of Wisconsin - Madison, participated in the Waves in Fluids III, held at IMPA, Rio de Janeiro - RJ, from June 06 to 10, 2011 and presented the following work: "*Dynamics of Nonlinear Gravity-Capillary Waves*"

Rio de Janeiro, June 10, 2011.

André Nachbin  
Organizing Committee



An Activity of



support

