



Kick Off Meeting, ProCoMedia

Universidad de Chile,

2-21 January 2012

F. Barra & A. Maurel

Program

Monday 2 - Introduction to various problem of wave propagation in several contexts

2pm - : Welcome / Introduction

F. Barra, A. Maurel, V. Pagneux : Wave systems in electromagnetism, elasticity, fluids, water waves.

Tuesday 3 - propagation in 1D, perturbed periodic point scatterers

10:00 pm- : Presentations of experiments

Nicolas Mujica : Resonant Ultrasound Spectroscopy

Olivier Richoux : Experiments with Helmholtz resonators.

2pm- : Point scatterers in wave guides: analytical methods.

Agnes Maurel : Coherent Potential Approximation

Vincent Pagneux : Dyson scheme

Felipe Barra: Exner - Sebbah regularization. Discussion about experiments.

Wednesday 4 - propagation 1D, perturbed periodic stacks (layers)

10:40 : Electromagnetisms, waves in left-handed materials

Agnès Maurel: Presentation of the paper of Asatryan et al.,

Abdel Ourir : Numerical methods and experiments for mixed-stacks.

2pm - : Water Wave experiments

Andrea Schmessane: Experiment in a water channel Discussion about experiments.

Thursday 5 - propagation 1D, perturbed periodic stacks (layers)

10:00 : Propagation of waves through dislocations, experiments and theory

F. Lund, A. Maurel, F. Barra, J.F. Mercier & V. Pagneux

2pm : Waves in fluids

Maria Luisa Cordero: micro-fluids.

Friday 6 - Finite size scatterers

10:00- :

Jean Francois Mercier: Melina code and Born method for inclusions in waveguide

Agnes Maurel : Paris experiments and Wood anomaly.

2pm-: FTP and experiments in Paris.

P. Petitjeans, A. Maurel & V. Pagneux: presentation and general discussion of the FTP experiments in Paris,

Week end

Free, excursion in Papudo.

Monday 9 - Boundary effects for perturbed periodic media

10:00- :

Agnes Maurel & Vincent Pagneux : Possible extension on the Dyson scheme (perturbed periodic media)

2pm- :

Olivier Richoux & P. Petitjeans: Perturbed periodic media in the experiments of water waves and 1D acoustic experiments

5pm-:

Visit of the laboratory of fluid mechanics in the «Departamento de Ingeniería Mecánica» (R. Hernandez)

Tuesday 10 - Saturday 14 - in Atacama,

Thursday 10 - Arrival in San Pedro de Atacama, free

Wednesday 11- 2pm- : Brainstorming on the schedule for the common projects

(Quiféquoi ?, Quien hace que ?) : notably : Electromagnetism, project with Ourir/ Maurel/ Pagneux/ Mercier in course, FTP Project

Thursday 12 - 10am- Students: discussion on the post-doc, also possible exchange of students. A. Merkel in DFI, post doc students in France: PMMH on water waves, Institut Langevin on EM. Discussions. Possible funding for a thesis (E. Monsalve).

Friday 13 - 10am- Open questions.

Monday 16 -

11h 30:

A. Maurel, J.F. Mercier, V. Pagneux, O. Richoux, A. Ourir,
F. Barra, F. Lund

Meeting in the french «Service de coopération scientifique et universitaire de l'Ambassade» with Pierre Pellat-Finet, attaché de coopération scientifique et universitaire, son adjointe Chloe Rolland, in the presence of Pascal DELISLE, Conseiller régional de coopération, Consejero regional de cooperacion - Côte Sud et Brésil

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2pm :

Open discussion : Guided wave : Low frequency regime (Born Approximation - Maurel/ Mercier), Non reflecting waveguide (Pagneux), numerical aspects (Magnus, iterative Born approximation)

Tuesday 17 -

10:00 - Open discussion : Guided wave : Application to inclusions in waveguide/ bent guides, new experiments (water waves// electromagnetism)?

2pm - Visit of the Universidad de Santiago, meeting with F. Melo

Wednesday 18 -

Open discussion : Effects of non linearities in the experiments Helmholtz resonators, Numerical predictions (J.F. Mercier), possible analytical predictions ?

Thursday 19 -

Discussion and analysis on the experiments of propagation through penetrable scatterers: possible results and perspectives.

Friday 20 -

Discussion on post doctoral works:

Electromagnetism : propagation through a succession of media with indices 1, -1

Water wave : Visit of A. Schmessa (Dec. 2012 in Paris) and open position in the PMMH: metamaterials configurations for water waves ?