

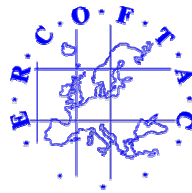
**WORKSHOP TOULON**

# *Journées Neptune*

## **ERCOFTAC SPRING FESTIVAL**

**Turbulence and Internal Waves in Mediterranean Sea**  
**TURBINTERMED 2013**

**April 9-10 2013**



Provence-Alpes-Côte d'Azur



UNIVERSITAT POLITÈCNICA DE CATALUNYA



**ORGANISERS :****Mediterranean Institute of Oceanography AUM – USTV – CNRS -IRD***Anne Petrenko, Philippe Fraunié***ERCOFTAC :** *B.J. Geurts Univ Twente, NL***IRPHE :** *Fabien Anselmet***Ecole Centrale Lyon :** *Claude Cambon***Univesitat Politecnica de Catalunya :** *Jose Manuel Redondo***Czech Technical University Prague :** *Tomas Bodnar***e-mail : [fraunie@univ-tln.fr](mailto:fraunie@univ-tln.fr)****SCIENTIFIC COMMITTEE**

Fabien Anselmet	F	Prof.	IRPHE Marseille
Tomas Bodnar	CZ	Prof.	CTU Prague
Pascale Bouruet Aubertot	F	Prof.	LOCEAN Paris 6
Claude Cambon	F	CNRS	ECL Lyon
Yuli Chashechkin	Ru	Prof.	RAS Moscow
Harindra Fernando	USA	Prof	Univ Notre Dame
Bernard Geurts	NL	Prof.	Univ Twente
Philippe Fraunié	F	Prof.	MIO
Patrice Klein	F	Res.	Ifremer Brest
Anne Petrenko	F	A. Prof.	MIO
Jose Manuel Redondo	E	Prof.	UPC / Cambridge
François Schmitt	F	Res.	LOG Wimereux
Francesco Tampieri	I	Prof.	CNR Bologna
Hidekatsu Yamazaki	J	Prof	Univ Tokyo
Vladimir Zeitline	F	Prof	ENS Paris, IUF

## Programm

The **TURBINTERMED** international collaborative project is focusing on meso and sub-meso scale processes including vortices, filaments and coastal and internal waves in Mediterranean seas from theory, observation, laboratory experiments and modelling.

In particular, TURBINTERMED is organized in the framework of the Mediterranean Programme HYMEX - MISTRALS *Mediterranean Integrated Studies at Regional and Local Scales* initiated by the french CNRS – INSU Institut National des Sciences de l’Univers :<http://www.hymex.org/> prepared for years 2010 – 2015 and dealing with the water cycle budget in the Mediterranean basin (Evaporation / Rains- Coastal Discharge).

The scientific objective of the international collaborative research project is a better understanding, forecasting and management of the impact of climate change on coastal regions, including heavy rains, water quality, dense water formation and land-sea exchanges.

Progress are also expected in modelling, measurements and data assimilation using RV cruises, moorings, HF radars, aircrafts, gliders, drifted buoys, turbulence profilers and satellite images.

The European Research Community On Flow, Turbulence And Combustion <http://www.ercoftac.org/> *SPRING FESTIVAL.2013* will be organized in Toulon, on april 9-10 2013 jointly with the TURBINTERMED meeting.

The **ERCOFTAC** Spring festival consists in an ERCOFTAC Scientific Meeting scheduled on april 9 and 10 and a following Committee Meeting restricted to ERCOFTAC full members on april 11. Key scientists from ERCOFTAC pilot centres will be invited to present new results and two special sessions will be dedicated to the TURBINTERMED workshop and the “Fédération de recherche Mécanique Energétique 3515”

This ERCOFTAC – TURBINTERMED 2013 workshop will be organized in Toulon, thanks to the „**Journées Neptune**„, sponsored by the University and regional and local councils. Well known scientists in the field will be invited, when this 2 days workshop will be widely announced, but a limited number of participants will be fixed to 45 due to available facilities. PhD students are especially welcome with both oral and poster presentations.

**The Neptune days** are recognized by the USTV doctoral school as disciplinary lectures.

### Registration fees :

Participants to Scientific Workshop (april 9-10) + ERCOFTAC board meeting (april 11) : 200 € including : 3 nights accommodation + lunches + gala dinner.

Participants to Scientific WORKSHOP only april 9-10 : 150 € including : 2 nights accommodation + lunches + gala dinner.

Students : 100 € including 1 night accommodation + lunches + gala dinner.

## TURBINTERMED 2013

### Confirmed Participants

<b>NOM</b>	<b>Prénom</b>	<b>Institution</b>
<b>Armenio</b>	Vicenzo	Trieste univ (I)
<b>Baumert</b>	Helmut	IAMARIS (D)
<b>Bodnar</b>	Tomas	CTU Prague (Cz)
<b>Bouruet</b>		
<b>Aubertot</b>	Pascale	LOCEAN (F)
<b>Cambon</b>	Claude	ECL (F)
<b>Chashechkine</b>	Yuli	RAS Moscow (Ru)
<b>Doglioli</b>	Andrea	MOI (F)
<b>Fraunié</b>	Philippe	MOI (F)
<b>Kersalé</b>	Marion	MOI (F)
<b>Marmain</b>	Julien	MOI (F)
<b>Nencioli</b>	Francesco	MOI (F)
<b>Petrenko</b>	Anne	MOI (F)
<b>Pieri</b>	Alexandre	ECL (F)
<b>Redondo</b>	Josemanuel	Universitat Politecnica de Catalunya (E),
<b>Salhi</b>	Aziz	Université Tunis (Tu)
<b>Stepanyants</b>	Yuri	Univ South Queensland (Aus)
<b>Tampieri</b>	Francesco	Univ Bologna (I)
<b>Zeitline</b>	Vladimir	ENS Paris (F)
<b>Zervakis</b>	Vassilicos	Imperial College (UK) & Univ (Gr)

## **Preliminary program :**

The TURBINTERMED Workshop will be organized around given topics including keynote lectures in the morning and parallel round tables, poster sessions and discussions in the afternoon.

### **Tuesday April 9 Morning**

10:00 : Opening

#### **Session 1 : Theory**

10:30 *Once more about rotating shallow-water turbulence*  
Prof. **Vladimir Zeitline**, Ecole Normale Paris – Laboratoire Météorologie Dynamique

11:00 *Turbulence as vortex-dipole chaos solves the last enigma of classical physics*  
Dr. **Helmut Baumert**, IAMARIS, Hamburg

11:30 *Toroidal cascade in stably stratified turbulence*  
**Claude Cambon**, Ecole Centrale Lyon

#### **Session 2 : Marine Turbulence**

12:00 *Mixing and internal in lab experiments*  
Prof. **Chashechkine**, RAS Moscow

12:30 : lunch (buffet) and poster session

### **Tuesday April 9 Afternoon**

14:00 *Internal Waves theory*  
Prof. **Yuri Stepanyants**, University southern Queensland, Aus

14:30 *Turbulence measurements (SCAMP) in the Gulf of Lions, North Western Mediterranean.*  
**A. Petrenko, A. Doglioli, R. Rainaud, D. Malengros, F. Nencioli**, MIO, Marseille

15:00 *Geophysical turbulence : stability and distribution*  
Prof. **Aziz Salhi**, Université Tunis

15:30 *Marine turbulence and fractal dimension*  
Prof. **Jose Manuel Redondo**, Universitat Polimitecnica Catalunya, Barcelone

16:00 Coffee break and poster session

### **Session 3 : Marine Turbulence Measurement :**

16:30 Round table : Turbulence (A. Petrenko, Y. Cuypers)

### **Session 4 : Post doc and PhD students presentation**

18:00 *Advances in baroclinic instability around an equilibrium state*  
**Alexandre Piéri**, Ecole Centrale Lyon

18:20 *Physical characteristics and behavior of the coastal LATEX09 eddy from in situ data and numerical modeling.*  
**Marion Kersalé**, MIO, Marseille

18:40 Lyapunov Analysis in the COaSTal Environment" –  
LACOSTE, Marie Curie IEF Project  
**Francesco Nencioli**, MIO, Marseille

20:00 : Diner

### **Wednesday April 10 ERCOFTAC sessions (in progress)**

18:30 General discussion and closure.