# SUMMER SCHOOL

# Thermal Measurements and Inverse Techniques: multiphysical phenomena characterization

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Station Biologique de ROSCOFF

June 12-17, 2011

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First Name:
Organization:
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## **Registration Fees:**

<ul> <li>○ PhD Student (double bedroom)</li> <li>○ CNRS employees*</li> <li>○ Academics (young)</li> <li>○ Academics (senior)</li> </ul>	650 €
	800 €
	700 €
	800 €
o Other	1200 €

\* A specific request to CNRS for fee exemption is under way

If you are considering attending the school, you are requested, without commitment on your part, to return the registration form included in this announcement to the school secretary (by fax, letter or email)

**Contact:** Philippe LE MASSON Tel: (33) 2 97 87 45 52; Fax: (33) 2 97 88 05 00;

philippe.le-masson@univ-ubs.fr

### Final Registration Procedure

Registration will be finalized only upon receipt of payment, by check, purchase order or bank transfer to:

Société Française de Thermique (SFT)

Bank Account details (RIB): 30003 04040 00037262983 33

Bank identifier Code: SOGEFRPP

International Bank Account Number (IBAN): FR76

30003 04040 00037262983 33

Deadline for registration: December, 10<sup>th</sup> 2010

For material and efficiency considerations, the number of participants is limited to 80. After final registration, participants will be asked to complete the workshop and travel schedules. All the forms, travel details, registration and workshop selection can be downloaded from the school web-site.

## Venue, accommodation & access

#### \* Venue

The school will be held in the "Station Biologique de Roscoff" (http://www.sb-roscoff.fr/Accueil/) in Roscoff, a small city in the north coast of Brittany.

#### \* Accommodation

Double and single room accommodation as well as meals are provided within the Gulf Stream Hotel. More bedrooms will be available at the close-from-course center "Hôtel de France", "Hôtel Armen le Triton", "Hôtel aux Tamaris" and "Hôtel Ibis Le Corsaire".

#### \* Access

- $\rightarrow By\ train:$  Morlaix railway "TGV" station located at 25 km from Roscoff;
- $\rightarrow By~car:$  by Rennes, then follow Brest and take the Roscoff destination by Morlaix;
- $ightarrow By\ plane$ : International Brest Guipavas airport . Taxi shuttes are planned between Morlaix railway station and the "Station Biologique de Roscoff" for both arrival and departure.

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Société Française

de Thermique

SUMMER SCHOOL

Thermal Measurements and Inverse Techniques: multiphysical phenomena characterization

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ROSCOFF

- June 12-17, 2011 -

Station Biologique de Roscoff

\*\* France \*\*

**Scope** – Techniques for solving inverse problems as well as their applications are currently rapidly developing in all the different domains of physical sciences and particularly in Heat Transfer. Applied mathematicians, statisticians and signal processing specialists generally develop these techniques. Experimentalists desiring to go beyond traditional data processing techniques for estimating the parameters of a model with the maximum accuracy feel often ill-prepared in front of inverse techniques. In order to avoid biases at different levels of this kind of involved task, it seems compulsory that specialists of measurement inversion techniques, modelling techniques and experimental techniques share a wide common culture and language. These exchanges are necessary to take into account the difficulties associated to all these fields. It is in this state of mind that this school is proposed. The METTI Group (Thermal Measurements and Inverse Techniques), which is a division of the French Heat Transfer Society (SFT), has already ran four similar schools, in the Alps (Aussois) in 1995 and 2005, in the Pyrenees (Bolquère-Odeillo) in 1999 and in Rio de Janeiro (2009). For this fifth edition the school is again open to participants from the European Community with the possible support of the Eurotherm Committee.

**Attendance** — About 80 attendees and instructors (PhD Students, academics, R&D engineers) from different countries.

**Language** – English.

## Scientific comitee

D. Maillet, LEMTA, Nancy (coordinator); P. LE MASSON, LIMATB, Lorient; Y. FAVENNEC, LTN, Nantes; C. LE NILIOT, IUSTI, Marseille; Y. JARNY, LTN, Nantes; D. Petit, PPRIME, Poitiers; J.-L. Battaglia and J.-C. Batsale, TREFLE, Bordeaux; O. Fudym, CEE, Toulouse; N. Laraqi, LEEE, Paris 10; J.-J. Serra, DGA, Odeillo



# Program

#### Lectures

Lectures will be given from 9:00 to 12:30 every morning from Monday to Friday on the following courses: Inverse problems, parametric estimation, nonlinear estimation, optimization, regularization, sensors, function estimation, signal processing, model reduction, etc.

## **Workshops**

Workshops will be held in the "Station Biologique de Roscoff" between 17:00 and 20:30 from Monday to Thursday. They will include an experimental and/or a numerical part. The detailed abstracts of the different workshops will be presented soon on the web site of the school. Each participant will be asked to choose at least 6 workshops.

#### **Documents**

Two course books will be distributed at the arrival of the participants.

#### **Posters**

PhD students and young academics will be invited to prepare a poster that will be presented in the coffee room.



## Organization of the school

Scientific coordination: Denis Maillet, LEMTA UMR CNRS, Nancy, France – Tel.: (33) 3 83 59 56 06 – Denis.Maillet@ensem.inpl-nancy.fr

Logistics: Philippe LE MASSON, LIMATB, Lorient, France – Tel. : (33) 2 97 87 45 52 – philippe.le-masson@univ-ubs.fr & Yann FAVENNEC, LTN, Nantes, France – Tel. : (33) 2 40 68 31 38 – yann.favennec@univ-nantes.fr



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