

Advanced Autumn School
**Thermal Measurements
&
Inverse Techniques**
- 7th Edition -

Sept 29th – Oct. 04th, 2019
*Ile de Porquerolles
Hyères, France*



Registration Fees[†] (double/single room) :

PhD student, Post-PhD _____ 450 €/500€
Academic, CNRS employee _____ 840 €/920€
Other _____ 1200€/1280 €

[†]The price includes accommodation, meals, proceedings, etc.

If you are considering attending the school, you are requested to follow the registration procedure explained on the web site, from Nov. 2018 onwards.

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<http://iusti.cnrs.fr/metti7>



After final registration, participants will be asked to complete the travel schedule and tutorial registration form. All the forms, travel details, registration and tutorial selection can be downloaded from the school web-site.

• **Venue**

The school will be held in the 'IGESA centre' on the beautiful island Porquerolles, near Hyères (15min of boat from La Tour Fondue, at the end of Giens peninsula) in the south-east of France (Provence Alpes Côte d'Azur region).

• **Accommodation**

Double and single room accommodations as well as meals are provided within the IGESA centre.

• **Access** : to reach the Tour Fondue (boat departure)

By plane: <http://www.toulon-hyeres.aeroport.fr/>
then bus N°63 to *Arromanches* and N°67 to *La Tour Fondue*.

By train: several daily connections (from Paris, Marseille, etc.) to Hyères station then Bus N° 67 to *La Tour Fondue*.

By bus: From Hyères : Bus N° 67 to *La Tour Fondue*.
<https://www.reseaumistral.com/>

By road: From Hyères follow *Presqu'île de Giens, Tour Fondue*, 12km via the villages of *La Capte, La Bergerie*. Several car parks at *La Tour Fondue*.

First announcement



International Center for Heat and Mass Transfer

Metti⁷

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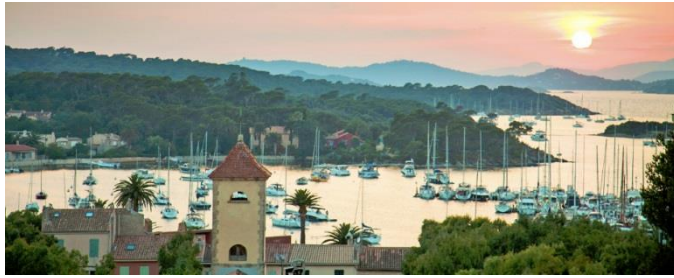
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Scope – Finding ‘causes’ from measured ‘consequences’ using a mathematical model linking the two is an inverse problem. This is met in different areas of physical sciences, especially in Heat Transfer. Techniques for solving inverse problems as well as their applications may seem quite obscure for newcomers to the field. 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 run or co-organized six similar schools, in the Alps (Aussois, 1995 and 2005), in the Pyrenees (Bolquère-Odeillo, 1999), in Brasil (Rio de Janeiro, 2009), in Bretagne (Roscoff, 2011^a) and in Pays Basque (Biarritz, 2015^b). For this seventh edition the school is again open to participants from the European Community with the support of the Eurotherm Committee.

Attendance – About 80 to 100 attendees and instructors (PhD Students, academics, R&D engineers) from different countries.

Metti committee – J. C. Batsale, J. L. Battaglia, J. G. Bauzin, Y. Favennec, J. L. Gardarein, B. Garnier, J. Gaspar, N. Horny, J. C. Krapez, F. Lanzetta, N. Laraqi, P. Le Masson, C. Le Niliot, D. Maillet, H. Orlande, L. Pérez, H. Pron, O. Quemener, B. Rémy, F. Rigollet, S. Rouchier, P. Salagnac, Y. Rouizi



Program

Lectures

Lectures will be given from 9:00 to 12:00 every morning from Monday to Friday on the following courses: generalities on inverse problems, linear and nonlinear estimation, contact and non-contact thermal sensors, measurement noise, large scale optimization, regularization, function estimation, signal processing, model reduction or identification, etc.

Tutorials

Tutorials will be held in the “IGESA Centre” between 17:00 and 20:00 from Monday to Thursday. They will include an experimental and/or a numerical part. The detailed abstracts of the tutorials will be presented on the school website. Each participant will be able to attend between 6 and 8 tutorials according to the schedule.

Documents

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

Posters

PhD students and young academics are invited to present their studies through a poster in order to have a support for further interaction and discussion with more experienced 'inverters'.

^a 2011 : www.sft.asso.fr/document.php?pagendx=12299

^b 2015 : www.sft.asso.fr/metti-6.html

Organization of the school

Scientific coordination:

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