An ECCOMAS Thematic Conference

This workshop is one of the Thematic Conferences of the European Community in Computational Methods in Applied Sciences (ECCOMAS). For further information on ECCOMAS, visit: **www.eccomas.org**

It is also an IACM Special Interest Conference. More information about IACM in: **www.iacm.info**

Registration fees

The registration fees for attendees (including proceedings, lunches, coffee breaks, reception and banquet) with early registration applicable if received before **June 1st, 2019** are:

	Early	Late
Delegates	460 €	560 €
Students	260 €	360 €

ECCOMAS members will have a 5% reduction on the fee.

Correspondance and registration

All queries concerning the scientific program should be sent by email to:

Pierre Ladevèze, **pierre.ladeveze@ens-paris-saclay.fr**
(with subject: MORTECH 2019)

For registration, contact the workshop secretariat:

Lydia Matijevic, **mortech2019@sciencesconf.org**
LMT, 61 avenue du Président Wilson, 94235 Cachan, France
phone: (33) 1 47 40 24 02

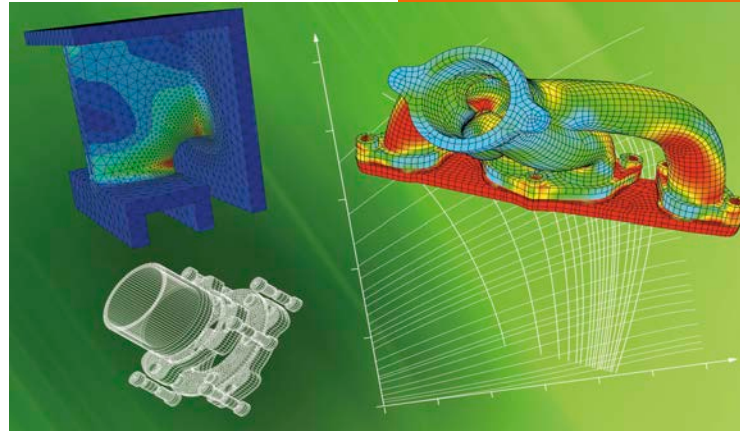or go to the website of the workshop:

mortech2019.sciencesconf.org

Location and accomodation

The conference will take place at the FIAP Jean Monnet Conference Center, in the heart of Paris. The nearest RER station is Denfert-Rochereau, on line B, that serves the Roissy-Charles de Gaulle and Orly international airports. Line 6 of the Metro is also very close with its Saint-Jacques station.

FIAP Jean Monnet
30 rue Cabanis
75014 PARIS

http://french.fiapparis-network.fr/welcome.html

RER B — ROISSY Ch. de Gaulle
Paris
FIAP Jean Monnet
Denfert-Rochereau station
ORLY

The Conference Center proposes various facilities for accommodation. But, Paris also offers many hotels at various rates. All hotel reservations are to be made by the participants themselves.
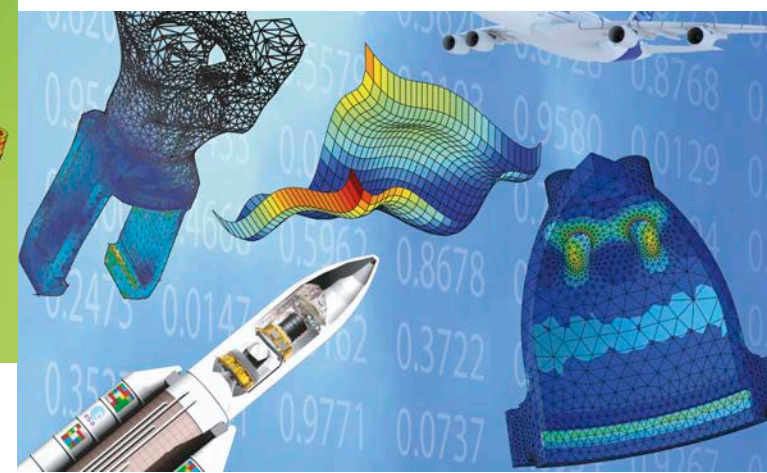
Supporting organizations

ECCOMAS iacm
cnrs université PARIS-SACLAY CSMA

ECCOMAS Thematic Conference

5th International Workshop

Reduced Basis, POD and PGD Model Reduction Techniques

France - November 20-22, 2019

An IACM Special Interest Conference

MORTech 2019 | mortech2019.sciencesconf.org

LMT PIMM

co-organized by
LMT (ENS Paris-Saclay)
PIMM (ENSAM ParisTech)

MORTech 2019 | Reduced Basis, POD and PGD Model Reduction Techniques

Scope

After Cachan (2011, 2015), Blois (2013) and Sevilla (2017), a new workshop is organized, devoted to recent advances in model reduction techniques and their potential impact in computational and prediction sciences, especially (but not only) in mechanical engineering. Practical focus will be on recent developments in Reduced Basis (RB) approaches, Proper Orthogonal Decomposition (POD) and Proper Generalized Decomposition (PGD) methods for the numerical solution of models involving partial differential equations. Other model reduction methods are welcome in order to foster cross-fertilization of ideas and their synergy.

Mechanics, like other domains, keeps on supplying numerous engineering problems which, despite the impressive progress of computational simulation techniques, remain intractable today. RB, PGD and other model reduction methods are leading to a new generation of high-performance computational tools which provide solutions to engineering problems which are inaccessible to standard codes based on classical and well-established numerical techniques. Today, this is a real breakthrough with many applications.

The workshop is intended to be a meeting ground for the various contributors, including mechanicians, applied mathematicians and other researchers and engineers involved in testing and computation. The Workshop should provide answers to such questions as:

- What are the maturity and the benefits of RB and POD/PGD methods?
- What are also their limitations?
- Which engineering challenges, especially in mechanics, could be addressed in the near future?
- What are the new key scientific issues?

Main topics

- Convergence, verification and adaptive approaches
- ROM for large number of parameters and nonlinear problems
- Uncertainty quantification and propagation
- Multiscale and multiphysics problems
- Quasi-real-time simulation: control,optimization, design, …
- Data-based and data-driven ROM
- Non-invasive approaches
- Engineering applications

Co-chairmen

P. Ladevèze	LMT, ENS Paris-Saclay
D. Néron	LMT, ENS Paris-Saclay
F. Chinesta	PIMM, ENSAM Paris

Local organizing and scientific committee

P.-A. Boucard (ENS Paris-Saclay), L. Chamoin (ENS Paris-Saclay), F. Chinesta (ENSAM Paris), C. Farhat (Stanford Univ.), P.-A. Guidault (ENS Paris-Saclay), P. Ladevèze (ENS Paris-Saclay), D. Large (NAFEMS), Y. Maday (Sorbonne Univ.), D. Néron (ENS Paris-Saclay).

Advisory scientific committee

S. Andrieux	ONERA
A. Cohen	Sorbonne Université
J.-L. Duval	ESI
F. Feyel	SAFRAN
A. Huerta	Universitat Politècnica de Catalunya
T. Hughes	University of Texas at Austin
H. Matthies	Technical University of Braunschweig
A. Patera	Massachusetts Institute of Technology
T. Oden	University of Texas at Austin
E. Onate	Universitat Politècnica de Catalunya
A. Quarteroni	EPFL
G. Yagawa	University of Tokyo

Speakers and attendees

The program includes invited talks from specialists coming from industry and academia aiming at defining the state-of-the-art and new needs and opportunities. Some time slots will be devoted to discussions. Spontaneous submissions for presentation or posters are also welcome.

Abstract submission

Spontaneous submissions must be done as soon as possible by contacting **pierre.ladeveze@ens-paris-saclay.fr** directly.

The final abstracts will be submitted using the website of the conference. The deadline is fixed at June 1st, 2019.