### Registration

For on-line registration, go to the DYMAT Winter School website:

https://dymat-ws-2020.sciencesconf.org

#### **Publication**

- Six-page (max. length) contributions for oral lecture or poster presentations are invited.
- Template is available on the Website

# **Preliminary Schedule**

Sunday: Start of the WS						
	Monday	Tuesday	Wednesday	Thursday	Friday	
7:30			Breakfast			
8:15	Lecture 1	Lecture 2	Lecture 3	Lecture 4	Lecture 5	
9:45	Break	Break	Break	Break	Break	
10:15	Session 1	Session 3	Session 5	Session 7	Session 9	
12:30			Lunch			
13:30	Private time	Private time	Private time	Private time	End of the	
17:40	Session 2	Session 4	Session 6	Session 8	WS	
19:30	Dinner				_	
20:30						

#### **Contact**

Pr. Pascal FORQUIN (3SR)

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Laboratoire 3SR, 1270 rue de la Piscine 38400 Saint-Martin d'Hères, France Tel: +33 4 76 82 52 48, Fax: +33 4 76 82 70 00

### **Accommodation**

The venue provides both meals (including breakfasts, lunches and dinners on conference meal plan) and single rooms for each participant.

#### Venue

ADDRESS OF THE SCHOOL:

Les Houches School of Physics 149 Chemin de la Côte F-74310 Les Houches

https://houches-school-physics.com

### By plane

Geneva Airport is 1 hour drive from Les Houches.

Lyon-Saint-Exupery and Turin Airports are about 2 hour drive from Les Houches.

#### Shuttle service

The simplest way is to use a shuttle service (approximately 40 € up to the school, book at least three days in advance).

## Regular bus service

There is also a regular bus service between Geneva and Les Houches (only once or twice a day). One should then take a taxi for the last 5 km from the Les Houches village to the school.

### **Train**

One can also travel from Geneva to Les Houches by train (+ taxi from the train station to the School).

# By road

Les Houches are easily accessible from France (A41 highway), from Switzerland (Martigny and Col des Montets) and from Italy through the Mont Blanc Tunnel.



**DYMAT Winter School 2020** 

Experimental testing and modelling of materials at high strain-rates



February 9-14<sup>th</sup> 2020 Chamonix – Les Houches France



### Scope

The dynamic behavior of materials is present through a large number of applications such as impact loadings, blasting and detonation, modern production processing, brittle failure of solids and structures... In such cases the material behavior is no longer quasi-static and the dynamic behavior of the materials needs to be properly accounted for. Also, constitutive models used in numerical simulations require an identification of the material behavior on an appropriate range of loading-rate. Experimental testing methods are also developed to analyze the damage mechanisms and the deformation modes in view of improving the prediction capabilities of numerical tools.

This winter school aims at gathering PhD students as well as senior researchers studying experimentally, developing models and numerical approaches to improve the knowledge in the area of the material behavior under dynamic loading.

### Main winter school themes

#### Dynamic testing of materials

Hopkinson Pressure Bar, Impact test, Plate impact, Drop tower, Shock tube, High-speed jack...

#### Damage and failure at high strain-rates

Micro-plasticity, Tensile damage, Shear failure, Multiple fragmentation, Pore collapse, Crushing...

#### Modelling and numerical methods

Constitutive laws, Finite-element methods, Discreteelement methods, SPH, Linear/non-linear fracture mechanics...

#### **Applications**

Crashworthiness, Terminal ballistics, Blast, Natural risks, Machining, Industrial processes...

#### Winter school location

The conference will be hosted by the École de Physique des Houches, France. The conference center is located close to Chamonix in the French Alps. It provides a breathtaking view on the Mont Blanc and its surrounding peaks.



## Important dates

September 3<sup>rd</sup>, 2019 (extended deadline): Receipt of 2-page abstract

#### **ONLINE SUBMISSION**

**September 30, 2019:** Acceptance notification for oral or poster presentation

October 30, 2019: End of early registration

**November 30, 2019 (extended deadline):** Receipt of final 6-page full-length contribution

REGISTRATION FORM ON THE WEBSITE

#### Winter school fees

The WS fees include the accommodation, the proceedings, the welcome appetizers, the coffee breaks, the lunches and dinners.

(Including VAT)	Before October 30	After October 30
PhD student	400 euros	450 euros
DYMAT member	450 euros	500 euros
Non-DYMAT member	500 euros	550 euros

#### **Scientific Committee**

Pr. W. Chen, Purdue Univ., USA

Pr. D. Mohr, ETH Zurich, Switzerland

Pr. A. Rusinek, Lorraine Univ., France

Pr. V.P.W. Shim, Nat. Univ. of Singapore, Singapore

Dr. L. Lamberson, Colorado School of Mines, USA

#### & The DYMAT Governing Board:

Pr. N. Bahlouli, University of Strasbourg, France

Dr. E. Buzaud, CEA, Bordeaux, France

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**Pr. S. Hiermaier,** Fraunhofer Institute for High-Speed Dynamics, Ernst-Mach-Institut. Germany

Pr. M. Hokka, Tampere University of Technology, Finland

**Pr. L. Kruszka**, The Jaroslaw Dabrowski Military University of Technology. Poland

**Pr. M. Langseth,** Norwegian University of Science and Technology, Norway

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Pr. L. Peroni, Politecnico di Torino, Torino, Italy

Pr. P. Verleysen, Ghent University, Belgium

Dr. S. M. Walley, University of Cambridge, United Kingdom

# **Organizing Committee**

The ExperDYN team in 3SR Lab.

Pr. Pascal FORQUIN

Dr. Julien BAROTH, Dr. Dominique SALETTI, Dr. Florent VIEUX-CHAMPAGNE, Dr. Bratislav LUKIC, Dr. Ludovic ZINGG

Phd students: Maria BLASONE, Marielle DARGAUD, Yannick DUPLAN, David GEORGES









