DYMAT-WS-2020 Program – Les Houches School of Physics, February 9th-14th

Sunday, February 9th, 15:00 Opening of Les Houches School, 18:00 Opening of the WS desk, 19:30 Dinner

Monday, February 10th

Time	TITLE	SPEAKER	INSTITUTIONS
8:20	**Monday morning – Welcome** **Pascal FORQUIN**, Univ. Grenoble Alpes, Laboratoire sols, solides, structures - risques (France)		
Monday morning – Lecture 1			
8:30	Lecture 1: Experimental methods and measurement technics at high strain-rates	Fagerholt Egil	Dep. of Structural Engineering, Norwegian University of Science and Technology (Norway)
10:00	**Coffee break**		
Monday morning, session 1 – Dynamic testing of materials			
10:20	Compressive response of a very low density polyurethane foam using Split Hopkinson Pressure Bars and high speed imaging	Hanus Jean-Luc	Laboratoire de Mécanique Gabriel Lamé (France)
10:50	Experimental and Numerical Analysis of the Effects of Strain Rate and Adiabatic Heating on the Impact Response of Advanced Fiber-Reinforced Polymers	Pournoori Nazanin	Materials Science and Environmental Engineering, Faculty of Engineering and Natural Sciences, Tampere University (Finland)
11:20	Analyzing the Thermomechanical Behaviour of Materials with Digital Image Correlation and Infrared Imaging	Corréa Soares Guilherme	Tampere University (Finland)
11:50	Dynamic testing, Terminal Ballistics, Plate impact, numerical simulations	Castres Magali, Tartière Jérémie	ENSTA Bretagne (France), Airbus Operations SAS (France)
12:20	**End**		
12:30	**Lunch**		
13:30	**DYMAT GB**		
Monday afternoon, session 2 – Modelling and numerical methods			
17:20	Numerically-based evaluation of the dynamic behaviour of typical triply periodic minimal surface additively-manufactured structures	Carassus Hugo	Laboratoire d'automatique et de mÃ©canique industrielles et humaines (France)
17:50	Shear Characterization of Thin Sheet material using Rectangular Specimen on Torsion Hopkinson bar	Ramagiri Bhaskar	PhD Program (India)
18:20	Analysis of 3D Metallic Auxetic Structures at High Rates of Strain using Finite Element DIC	Trippel Antonina	Albert-Ludwig University of Freiburg, Department of Sustainable Systems Engineering (INATECH) (Germany)
18:50	**End**		
19:00	**Appetizer**		
19:30	**Dinner**		

Tuesday, February 11th

Time	TITLE	SPEAKER	INSTITUTIONS
Tuesday morning – Lecture 2			
8:30	Lecture 2: Impact and shock physics	Eakins Daniel	Dep. of Engineering Science, University of Oxford, Impact Laboratory (United Kingdom)
10:00	**Coffee break and Poster Session**		
Tuesday morning, session 3 – Dynamic testing of materials			
10:20	Mechanical Behaviours of Rocks under Mutil-axial Confinements at High Strain Rates	Wang Huachuan	Monash University (Australia)
10:50	Effects of specimen geometry, temperature, and strain history on the effective strain rate in ductile titanium alloys: Experiments and Modelling.	Gour Govind	Department of Engineering Science (United Kingdom)
11:20	High-speed sheet metal forming	Corallo Luca	Department of materials science and engineering [Gent] (Belgium)
11:50	Highways and byways in the history of high rate mechanical testing	Walley Stephen	Cavendish Laboratory (United Kingdom)
12:20	**End**		
12:30	**Lunch**		
Tuesday afternoon, session 4 –Modelling and numerical methods			
17:50	Numerical investigations on the impact behaviour of a 7.62x39 mm projectile	Seidl Marina	French-German Research Institute of Saint-Louis (France)
18:20	Modeling and Behavior of Reinforced Concrete Panels Subjected to Blast Load	Cankaya M. Alper	Department of Civil Engineering, İzmir Katip Çelebi University, Çiğli-İzmir (Turkey)
18:50	Comparison of Two Processing Techniques to Characterise the Dynamic Crack Velocity in Armour Ceramic Based on Digital Image Correlation	Duplan Yannick	Univ. Grenoble Alpes, Laboratoire sols, solides, structures - risques (France)
19:20	**End**		

DYMAT-WS-2020 Program – Les Houches School of Physics, February 9th-14th

19:30	**Dinner**
20:30	**Poster session**

Wednesday, February 12th

Time	TITLE	SPEAKER	INSTITUTIONS
Wednesday morning – Lecture 3			
8:30	Lecture 3: Plasticity and failure in ductile materials	Mohr Dirk	Dep. of Mechanical and Process Eng., ETH Zürich (Switzerland)
10:00	**Coffee break and Poster Session**		
Wednesday morning, session 3 – Damage and failure at high strain-rates			
10:20	High-speed imaging for ballistic impact damage assessment of composites	Ramakrishnan Karthik Ram	Department of Engineering Science (United Kingdom)
10:50	In-Situ Flash X-ray Tomography of Low-Strength Mortar Concrete Subjected to Low Velocity Impact	Paulson Shane	School of Aeronautics and Astronautics, Purdue University (United States)
11:20	Dynamic Stress Evaluation during Hypervelocity Impact using Nanosecond Mechanical Raman Spectroscopy	Tomar Vikas	Purdue University West Lafayette (United States)
11:50	Modelling of behavior of aluminum 7020-T651 under dynamic loadings	Teresa Fras	French-German Research Institute of Saint-Louis (ISL) (France)
12:20	**End**		
12:30	**Lunch (takeaway lunch for participants to the social event)**		
12:45	**Social event: Montenvers train, Departure at 12:45**		
Wednesday afternoon, session 4 – Applications			
17:50	Split Hopkinson bar testing at non-ambient temperatures	Walley Stephen	Cavendish Laboratory (United Kingdom)
18:20	The Brittle's CODEX chair	Forquin Pascal	Univ. Grenoble Alpes, Laboratoire sols, solides, structures - risques (France)
18:50	Crashworthiness assessment considering the dynamic damage and failure of a dual phase automotive steel	Chandran Sarath	MST-DyMa Lab, Department of Electromechanical Systems and Materials, Universiteit Gent [Ghent] (Belgium)
19:20	**End**		
19:30	**Dinner**		
19:30	**Poster session**		

Thursday, February 13th

Time	TITLE	SPEAKER	INSTITUTIONS
Thursday morning – Lecture 4			
8:30	Lecture 4: Discrete numerical methods for damage and fracture simulation in dynamic	Girardot Jérémie	Arts et Métiers Institute of Technology, I2M Bordeaux (France)
10:00	**Coffee break and Poster Session**		
Thursday morning, session 5 – Modelling and numerical methods			
10:20	Validation of a discrete element model for concrete structures under impact by simulation of reference tests	Daudeville Laurent	Univ. Grenoble Alpes, Laboratoire sols, solides, structures - risques [Grenoble] (France)
10:50	Optimization of geometrical parameters under dynamic compression of auxetic re-entrant honeycomb structure	Delcuse Laura	Laboratoire d'étude des microstructures et de mécanique des matériaux [Metz] (France)
11:20	Optimisation of the energy absorption capability of lattice structures	Riot Alexandre	Arts et Métiers ParisTech. I2M CNRS UMR 5295 (France)
11:50	Modeling the dynamic strength of tantalum	Kositski Roman, Mordehai Dan	Department of Mechanical Engineering [Haifa] (Israel)
12:20	**End**		
12:30	**Lunch**		
Thursday afternoon, session 6 – Damage and failure at high strain-rates			
17:50	Polycrystal plasticity approach of the sheet necking problem	Dequiedt Jean-Lin	CEA, DAM, DIF (France)
18:20	Effect of porosity on the failure mechanisms induced in SiC brittle materials upon dynamic impact	Dargaud Marielle	Univ. Grenoble Alpes, Laboratoire Sols, Solides, Structures - Risques (3SR) (France)
18:50	Spalling tests on polycrystalline ice	Georges David	Univ. Grenoble Alpes, Laboratoire Sols, Solides, Structures - Risques (3SR), Institut des Géosciences de l'Environnement (France)
19:20	**End**		
19:20	**Dinner**		

DYMAT-WS-2020 Program – Les Houches School of Physics, February 9th-14th

Friday, February 14th

Time	TITLE	SPEAKER	INSTITUTIONS
Friday morning – Lecture 5			
8:30	Lecture 5: Dynamic fragmentation in brittle solids: experimental approaches and modelling	P. Forquin, M. Blasone, M. Dargaud, D. Georges	Univ. Grenoble Alpes, Laboratoire sols, solides, structures - risques (France)
10:00	**Coffee break and Poster Session**		
Friday morning, session 7 – Dynamic testing of materials			
10:20	Drop weight impact resistance of advanced high strength steels (AHSSs)	Xia Peikang	IMDEA Materials Institute (Spain)
10:50	Cohesive shear strength of concrete-rock joints : a preliminary study in quasi-static and dynamic loadings	Dominique Saletti	Univ. Grenoble Alpes, Laboratoire sols, solides, structures - risques (France)
11:20	Numerical Design of Plate-Impact Testing method to Determine the Spall strength of an Ultra-High Performance Concretre	Maria Celeste Blasone	Univ. Grenoble Alpes, Laboratoire sols, solides, structures - risques (France)
11:50	A Split-Hopkinson Tension Bar Study on the Dynamic Strength of Basalt-Fibre Composites	Ganzenmueller Georg	Albert-Ludwig University of Freiburg, Department of Sustainable Systems Engineering (INATECH) (Germany)
12:20	**Conclusion**		
12:25	**End**		
12:30	**Lunch**		
13:30	**Departure**		