



ELyT workshop 2025

February 19th - 21st, 2025 - France

Program

Wednesday, February 19th

INSA Lyon (INL amphitheater)

8:30	9:00	Welcome coffee and registration
9:00	9:40	Opening of the workshop
9:40	10:20	Keynote 1
10:20	11:00	Keynote 2
11:00	11:20	Break
11:20	12:00	Keynote 3
12:00	12:30	JSPS presentation

12:30	13:50	Lunch and poster session
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13:50	14:00	Tribute to Georges Boulon
14:00	14:40	Keynote 4
14:40	15:20	Keynote 5
15:20	16:00	Keynote 6
16:00	17:00	Coffee break and poster session
17:00	18:25	Session 1

		Dinner (on your own)
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Thursday, February 20th

Annecy (Le Pré du Lac - Saint-Jorioz)

7:40		Bus departure from INSA Lyon to Annecy
		Bus trip to Annecy
10:40	12:15	Session 2

12:15	13:45	Lunch
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13:45	15:50	Session 3
15:50	16:35	Coffee break and free discussion
16:35	18:20	Session 4

		Dinner
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Friday, February 21st

Annecy (Le Pré du Lac - Saint-Jorioz)

9:00	9:40	Keynote 7
9:40	10:40	Session 5
10:40	11:10	Break
11:10	12:15	Session 6
12:15	12:30	Closure of the workshop

12:30	14:00	Lunch
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14:30	16:15	Social activity: PACCARD Museum (bell museum visit + workshops guided tour)
16:30	18:30	Bus trip to Lyon

		Dinner (on your own)
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Wednesday, February 19th
INSA Lyon (INL amphitheater)

8:30	9:00	Welcome coffee and registration
9:00	9:40	Opening of the workshop
9:40	10:20	Keynote: Fuel and Structural Materials analysis in Nuclear Power Plants Jonathan Quibel (ASNR)
10:20	11:00	Keynote: Electro-mechanical degradation in solid state batteries probed by multiple characterisation techniques Claire Villevieille (INP Grenoble)
11:00	11:20	Short break
11:20	12:00	Keynote: An R&D strategy dedicated to fostering a mechanical industry that is more autonomous, optimistic, and sustainable Fabien Lefebvre (CETIM)
12:00	12:30	JSPS presentation Toshiyuki Takagi
12:30	13:50	Lunch and poster session
13:50	14:00	Tribute to Georges Boulon, by Amina Bensalah-Ledoux (UCB Lyon 1)
14:00	14:40	Keynote: Principles and applications of ultrasonic transducers Guy Feuillard (INSA Centre Val de Loire)
14:40	15:20	Keynote: 3D local magnetoresistive probe for magnetic imaging diagnostics Aur�lie Solignac (CEA)
15:20	16:00	Keynote: Controlling friction in rubber materials through advanced strain measurement and tread design Takeshi Yamaguchi (TU)
16:00	17:00	Coffee break and poster session
17:00	17:25	Towards the Control of Protein Mass Transfer via Ultrasound and Macro-porous Membranes Atsuki Komiya (TU), Sophie Miralles (INSA Lyon) <i>et al.</i>
17:25	17:45	Monitoring Eukaryotic Cell Functions under Various Hypoxic Conditions with Microfluidic Based Oxygenators Jean-Paul Rieu <i>et al.</i> (UCBL)
17:45	18:05	Analysis of Guidewire Technique aiming for Reducing the Load on Vessels at the Internal Carotid Artery Bend Ayami Omiya <i>et al.</i> (TU)
18:05	18:25	EM Tracking of Catheter Louis Paquet <i>et al.</i> (INSA Lyon)

Thursday, February 20th

Annecy (Le Pré du Lac - Saint-Jorioz)

7:40		Bus departure from INSA Lyon to Annecy
		Bus trip to Annecy
10:40	11:05	Ion-doped polymer actuators : experiments and modeling Hidemasa Takana (TU), Joël Courbon (INSA Lyon) <i>et al.</i>
11:05	11:30	Application of Electromagnetic Non-Destructive Testing on Steel Bearing Components: SKF-ELyTMaX collaboration Bhaawan Gupta (SKF), Benjamin Ducharne (INSA Lyon) <i>et al.</i>
11:30	11:50	Incorporating TRIP/TWIP effects in duplex titanium alloys Kenta Yamanaka <i>et al.</i> (TU)
11:50	12:15	Electric Field Dependence of Parameters Related to the C Diffusivity in Steel and Improvement of Previous Analytical Model Ryuta Onozuka (TU), Takashi Tokumasu (TU) <i>et al.</i>
12:15	13:45	Lunch
13:45	14:05	Interfacial Thermal Resistance at Solid-Liquid Interfaces with Complex Morphologies: Evaluation and Interpretation via Molecular Dynamics Donatas Surblys <i>et al.</i> (TU)
14:05	14:25	Natural Rubber Foil-Based Elastocaloric Cooling using Bistable Actuation Carina Ludwig <i>et al.</i> (Karlsruhe Institute of Technology)
14:25	14:50	Heat transfer control for solid-state refrigeration using natural rubber Atsuki Komiya (TU), Gaël Sebald (ELyT MaX) <i>et al.</i>
14:50	15:10	Organic LEDs Based on Bis(8-hydroxyquinoline) Zinc Derivatives Alexandra Apostoluk <i>et al.</i> (INSA Lyon)
15:10	15:30	Nanoscaled ferroelectric binary oxide thin film supercapacitors for flexible and ultrafast pulsed power electronics Bertrand Vilquin <i>et al.</i> (Centrale Lyon)
15:30	15:50	Oxidation and deoxidization process of semiconductors and metals Kazuhiko Endo <i>et al.</i> (TU)
15:50	16:35	Coffee break and free discussion
16:35	17:00	Fe-Al arc welding: predicting the formation of the intermetallic compound layer by finite elements method simulation Benjamin Leflon (TU), Sylvain Dancette (INSA Lyon) <i>et al.</i>
17:00	17:20	Metallization on Oxide Ceramics by Low Pressure Cold Spray and Its Deposition Mechanism Analyses Kazuhiro Ogawa <i>et al.</i> (TU)
17:20	17:40	Insights into Solid Lubrication Processes of DLC Films thanks to Analytical Tribology Julien Fontaine <i>et al.</i> (Centrale Lyon)
17:40	18:00	Multiscale Analysis of the Rubber/Ice Tribological interface Anderson Dalavale Kaiser Pinto <i>et al.</i> (Centrale Lyon)
18:00	18:20	Mechano-Chemically-activated Tribofilm Growth at Nanoscale Maria-Isabel de Barros Bouchet <i>et al.</i> (Centrale Lyon)

Friday, February 21st

Annecy (Le Pré du Lac - Saint-Jorioz)

9:00	9:40	Introduction of Integrated Flow Science and recent activities of the Institute of Fluid Science, IFS, Tohoku University Kaoru Maruta (TU)
9:40	10:00	Multi-scale study on cavitating flow with liquid-vapor phase change Shin-ichi Tsuda <i>et al.</i> (Kyushu University)
10:00	10:20	Solid particle impact on CO ₂ absorption among phytoplankton blooms Serge Simoëns <i>et al.</i> (Centrale Lyon)
10:20	10:40	Robust Multi-objective optimization schemes : applications for shape design of mechanical parts Frédéric Gillot <i>et al.</i> (Centrale Lyon)
10:40	11:10	Break
11:10	11:30	EBI Induced Ductility of Brittle 3D-Printed Short Fiber Reinforced PA Helmut Uchida <i>et al.</i> (Tokai University)
11:30	11:50	Sensor-Less Structural Health Monitoring using Semi-Active Controlled Piezoelectric Transducer Yushin Hara <i>et al.</i> (TU)
11:50	12:15	Last progress in magnetic NDT in the framework of the BENTO project Yves Armand Tene Deffo (TU), Tetsuya Uchimoto (TU) <i>et al.</i>
12:15	12:30	Closure of the workshop
12:30	14:00	Lunch
14:30	16:15	Social activity: PACCARD Museum (click on the logo to go to the website) (bell museum visit + workshops guided tour) 
16:30	18:30	Bus trip to Lyon

Sessions	Chairpersons
Opening	T. Uchimoto, M. Lallart & V. Fridrici
Keynotes 1 & 2	M. Ohta & L. Joly-Pottuz
Keynote 3 & JSPS	T. Tokumasu & J.-Y. Cavaillé
Keynotes 4, 5 & 6	K. Ogawa & J. Fontaine
Session 1	A. Komiya & G. Sebald
Session 2	D. Surblys & F. Gillot
Session 3	S. Tsuda & D. Fabrègue
Session 4	T. Yamaguchi & V. Fridrici
Keynote 7 and session 5	K. Endo & M. Lallart
Session 6	T. Uchimoto & N. Mary