



# LyonSE&N – ElyT Workshop 2020

IARI



## Program

*Lyon Saint Etienne & Nippon Scientific Network*

*Engineering sciences Lyon Tohoku*

**LyonSE&N – ELYT Workshop 2020**

DOMAINE LOU CAPITELLE, Vogüé – FRANCE

February 17<sup>th</sup> to 19<sup>th</sup>, 2020



## Program of LyonSEN – ELyT Workshop 2020

DOMAINE LOU CAPITELLE, Vogüé – FRANCE  
 February 17<sup>th</sup> to 19<sup>th</sup>, 2020

<b>Monday, February 17<sup>th</sup></b>			
<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Project</b>
11:30	Arrival of the chartered bus		
12:30	Lunch		
13:45	Welcome address	J. Fontaine, T. Uchimoto, D. Fabrègue	
14h00	ELyT School 2019 and 2020	V. Fridrici, A. Fave, T. Uchimoto L. Joly-Pottuz	
14:10	The LyonSEN Program	JY Cavaille, G. Sebald	
14:20	ELyTMax International Research Laboratory	G. Sebald	
14:30	The IARI Program	C. Moyret-Lalle	
14:45	New joint professor positions	L. Joly-Pottuz	
15:00 #1	Research of efficient Ce <sup>3+</sup> -doped garnet crystals for fast scintillators. Role of Ce <sup>4+</sup> and XANES characterization	G. Boulon, K. Lebbou, A. Yoshikawa	INTELUM
15:20 #2	Robust Shape optimization under mechanical stability criteria	F. Gillot S. Besset K. Shimoyama P. Mohanasundaram	MuORode
15:40 #3	Preparation of high-strength Co–Cr–Mo alloy rods via multi-pass hot-caliber rolling	K. Yamanaka, A. Chiba, D. Hartmann, D. Fabrègue	DECCOBABA
16:00	Coffee break		

<b>Monday, February 17<sup>th</sup></b>			
<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Project</b>
16:00	Coffee break		
16:30 #4	Piping system, risk management based on wall thinning monitoring and prediction	T. Takagi, P. Guy	PYRAMID
16:50 #5	Upscaling of a thermomagnetic generator based on magnetic shape memory alloys	L. Seigner, J. Joseph, M. Lallart, H. Miki, M. Kohl	MISTRAL
17:10 #6	Signal evaluation of electromagnetic pulse-induced acoustic testing for adhesive bonding	H. Sun, H. Kosukegawa, T. Takagi, T. Uchimoto, M. Hashimoto, N. Takeshita, Y. Ohara, P. Guy, M. Lallart	New Project ELYT Global
17:30 #7	Experimental results for corrosion detection using guided waves in the framework of the pyramid project.	P. Guy, A. Shaw	PYRAMID
17:50 #8	Welding mechanism of friction stir welding	Y. Sato	
18:10 #9	Advancement of acoustic emission inspection using system invariant analysis technology	T. Soma, T. Takagi, T. Uchimoto, S. Cai	
18:30 #10	Interaction between Rubber and Ice Studied Using Low-Temperature Surface Forces Apparatus	K. Kurihara D. Mazuyer	ELiceTrib
19:30	Dinner		

<b>Tuesday, February 18<sup>th</sup></b>			
<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Project</b>
7:30	Breakfast (last order at 8:30)		
9:00 #11	Reduced oxygen availability triggers aerotactic migration of Dictyostelium	JP. Rieu, K. Funamoto	MicroCell
9:20 #12	Tspan8 and EMT-TFS in melanoma progression	I. Masse	IARI
9:40 #13	Specific Recruitment of Brain Immune Cell of Microglia Following Brain Injury Utilizing Embryonic Medaka Model	T. Yasuda	IARI
10:00 #14	EMT regulates DNA repair pathways controlling genome instability	A. Tissier	IARI
10:20	Coffee break		
10:50 #15	Anaphase Promoting Complex key subunits identified as prognostic factors in colorectal and breast cancers	C. Moyret-Lalle	IARI
11:10 #16	Experimental flow investigations for medical device improvement and safety evaluation	S. Tupin, H. Ota, M. Ito, K. Takase, M. Ohta	
11:30 #17	Telomere as the starting point of anticancer drug discovery	H. Seimiya	IARI
11:50 #18	Tribological characterization of acrylic composite materials for bone biomodel: the effects of alumina cement on drilling haptics	Y. Muramoto, V. Fridrici, M. Ohta, P. Kapsa, G. Bouvard	BONEDRILL
12h30	Lunch		
14:00	<b>POSTER SESSION</b>		
16:00	Coffee break		

<b>Tuesday, February 18<sup>th</sup></b>			
<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Project</b>
16:00	Coffee break		
16:30 #19	Optimizing surface finish to Prevent SCC initiation in energy industries	H. Abe, N. Mary, T. Miyazaki, Y. Watanabe, B. Ter-Ovanessian, B. Normand, K. Jaffre	OPSCC
16:50 #20	Printed electronic for electromagnetic nondestructive testing	B. Ducharne, T. Uchimoto, G. Sebald, T. Takagi	
17:10 #21	Evaluation of Phase Transformation by Eddy Current Testing in Hydrogen Embrittlement Testing of Austenitic Stainless Steel	S. Takeda, T. Uchimoto, E. Tokuda, T. Takagi, T. Iijima, H. Enoki, D. Fabrègue	BeNT0
17:30 #22	In situ tensile test of Ti-6Al-4V alloys produced by electron beam additive manufacturing with different powders	H. Numata, J. Adrien, K. Yamanaka, E. Maire, A. Chiba, D. Fabrègue	New project ELyT
17:50 #23	Degradation in the reversible hydrogen storage capacity of V-based bcc alloys. What is its origin and how to improve it?	H. Kim, K. Sakaki, H. Ogawa, Y. Nakamura, J. Nakamura, E. Akiba, A. Machida, T. Watanuki, T. Proffen	
18:10 #24	Evolution of the temperature of a polymeric particle during cold-spray	CA. Bernard, H. Takana, G. Diguët, K. Ravi, O. Lame, K. Ogawa, JY. Cavallé	PolymColdSpray
18:30 #25	Polymer-Metal Adhesion Delamination Control by EB-Irradiation	T. Uchida, Y. Nishi, M. Kanda, MC. Faudree, K. Yuse, D. Guyomar, M. Salvia, JY. Cavallé	Ex-POMADE ELyT lab project
19:30	Dinner		

<b>Wednesday 19th</b>			
<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Project</b>
7:30	Breakfast (last order at 8:30)		
9:00 #26	Effect of High-pressure Gaseous hydrogen on Mechanical Properties of Austenitic Stainless Steels	T. Iijima, H. Enoki, J. Yamabe, B. An	
9:20 #27	Simulations and Experiments Exploring the Role of OH-Termination in the Lubricity and Stability of Diamond-like Carbon	M. Kubo, Y. Wang, M.I. De Barros J.M. Martin	SuperLub
9:40 #28	Simulation of Carbon electro-diffusion in Iron with phase change	T. Tokumasu, P. Chantrenne	CARBOEDIFF SIM
10:00 #29	A full-field model to investigate precipitate coarsening in two-phased materials	PA. Geslin, M. Perez	
10:20	Coffee break		
10:50 #30	Coarse-Grained Molecular Dynamics Study of Polymer Self-assembly in Dispersions for Polymer Electrolyte Fuel Cells	T. Mabuchi T. Tokumasu	
11:10 #31	Tentative elucidation of physical mechanisms of soft polymer electrostriction	K. Yuse, G. Diguët, L. Seveyrat, V. Perrin, G. Coativy JY. Cavallé	
11:30 #32	Materials for High field magnets	X. Chaud, F. Debray F. Lecouturier	
11:50 #33	Magneto Rheological Elastomers and the effect of the particles filling factor	G. Diguët, G. Sebald, M. Nakano, M. Lallart, JY. Cavallé	MARECO
12:10 #34	Influence of ammonia addition on stabilization of methane jet diffusion flames.	D. Escudie, M. Glizzi, M. Kunhi, H. Kobayashi, S. Colson	
12:30	Lunch		
13:50 #35	Evolution of microstructure and mechanical properties with thermomechanical treatments of new Ti-Mo-Zr-Sn beta titanium alloys for biomedical applications	M. Laurençon, A. Chiba, D. Fabrègue	
14:10 #36	A database of structured meshes for computational fluid dynamics in large cerebral arterial networks.	M. Decroocq, C. Frindel, M. Ohta, G. Lavoué	
14:30	Concluding remarks		
<b>15:00</b>	<b>Bus departure</b>		

**Poster Session**

<b>Number</b>	<b>Title</b>	<b>Presenter</b>	<b>Project</b>
P1	Angiography-based velocimetry for blood flow	Y. Kohata, H. Anzai, M. Ohta, M. Decroocq, C. Frindel, S. Rit	
P2	Application of the modal decomposition technique to a subsonic jet numerical database	S. Morita, A. Yakeno, C. Bogey, S. Obayashi	
P3	Fully Partitioned Fluid-structure Interaction Analysis for Aircraft Wings	I. Shoji, Y. Abe, T. Okabe	
P4	Visualization of transient heat transfer in the vicinity of solid-gas interface	Y. Kanda, A. Komiya	
P5	Mechanical behavior of hydrated PFSA membranes at nanoscale: from elasticity to rupture.	W. Goncalves, T. Mabuchi T. Tokumasu	
P6	Investigation of Intravascular endoscope efficacy in visualization through both numerical and experimental approaches	Y. Li, K. Mitisuka, S. Tupin, T. Nakayama, M. Ohta	
P7	Nanoscale characterization on the electrostrictive behavior of amorphous poly(tetramethylene oxide) elastomer	A. Suzuki, M. Miyano, R. Miura, G. Diguët, JY. Cavaille, G. Sebald	TEMPURA
P8	Prediction of thermal and mechanical properties of Silica Aerogel using atomic scale simulations	T. Tokumasu P. Chantrenne	SILICAGELSIM
P9	High Frequency Eddy Current Testing for Fiber Waviness, Misorientation, Hardening Degree in Carbon Fiber Reinforced Plastic	H. Kosukegawa M. Hashimoto T. Uchimoto T. Takagi	
P10	Microstructure study of Fe-based BMG reinforced with Al <sub>2</sub> O <sub>3</sub> obtained by Spark Plasma Sintering	L. Zarazua-Villalobos, N. Mary K. Ogawa H. Kato	New Project ELyT
P11	Magnetic control for high chromium steel creep	G. Sebald, T. Uchimoto, B. Ducharne, T. Takagi	