

The 14th Canada-Japan Workshop on Composites (CJWC14)

Day 1 11-Jun Wed. (All registrants, including Japanese participants, are welcome to join the tour)

Time	Industry Tour Schedule
9:40	Departure Point: Hiroshima Station (Shinkansen Exit)
10:00	Departure
11:00	Hiroshima University Digital Manufacturing Center
12:15	Lunch Break
14:00	DaikyoNishikawa Corporation
15:30	Kamotsuru Sake Brewery – Ichigogura
17:30	Workshop registration* (17:30~20:00)
18:00	Welcome reception at workshop venue “Restaurant marco paul (マルコポール)” at Hiroshima Prefecture Information Plaza, 1F (3-7-47, Sendamachi, Naka-ku Hiroshima-shi, 730-0052 Hiroshima)

** Registration will take place in front of the restaurant 'Marco Polo (マルコポーロ)', located on the 1st floor of the Hiroshima Prefecture Information Plaza*

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Day 2 12-Jun Thurs. (Hiroshima Prefectural Information Plaza, 3-7-47, Sendamachi, Naka-ku Hiroshima-shi, 730-0052 Hiroshima)

Time	Session	Paper No.	Title	Authors
8:45	Registration (2F Hiroshima Prefecture Information Plaza)			
9:00	Opening remarks by Co-chairs: Prof. Gen Sasaki, Prof. Asami Nakai, Prof. Louis Laberge Lebel, Prof. Kazuaki Katagiri (Room 1)			
9:10	Keynote lecture 1 (Room 1) Chair: : Prof. Asami Nakai (Gifu University/Japan)	Additive manufacturing of multifunctional composite Prof. Daniel Theriault (Polytechnique Montréal)		
9:30				
9:50	Session 1 (Room 1) Chair: Prof. Tatsuro Kosaka (Kochi University of Technology/Japan)	1	Radial braider design for customizable 3D composite braids	<u>C. Grandisson</u> <u>Arsenault</u> (Polytechnique Montreal), L. Laberge Lebel
10:10		2	Low thermal expansion tooling: A breakthrough in high-precision CF RTP compression molding	<u>H.T. Fujii</u> (Shinhokoku Material Corp.), H. Ohno, N. Sakaguchi, S. Matsumura, K. Ona, J. Go (GO-factory Co. Ltd.), U. Yoshioka
10:30		3	Pultrusion of kevlar/TPU wire for artificial muscle application	<u>P. St-Gelais</u> (Polytechnique Montreal), L. Laberge-Lebel
10:50	Coffee break (Room 2)			
11:10	Session 2 (Room 1) Chair: Prof. Daniel Theriault (Polytechnique Montréal/Japan)	4	Twisted Structure-Induced Suppression of Thermal Shrinkage for Improved Mechanical Properties of CF RTP	<u>S. Umeda</u> (Nagoya Univ.), K. Nokura (Gifu Univ.), A. Nakai
11:30		5	Fast multi-die pultrusion of pre-impregnated CF/PEKK tapes	<u>E. Hamon</u> (Polytechnique Montreal), L. Laberge Lebel
11:50		6	Continuous Molding of Thermoplastic Braided Pipes Using Combined Pultrusion and Open Molding Methods	<u>A. Nakai</u> (Gifu Univ.), Y. Yoshida
12:10		7	Development of Stamp-forming for Pultruded Glass Fibers/Polyamide 6 Beams	<u>B.Turcotte</u> (Polytechnique Montreal), S. Baril-Gosselin (National Research Council Canada), L. Laberge Lebel (Polytechnique Montreal)
12:30	Lunch break (1F Restaurant marco paul (マルコポール))			
12:50				
13:10	Poster session (Room 3) Chair: Prof. Akio Ohtani (Kyoto Institute of Technology/Japan)			
13:30				
13:50				
14:10	Session 3 (Room 1) Chair: Prof. Kazuaki Katagiri (Hiroshima University/Japan)	8	Advanced Organic-Inorganic Hybrid Composite Laminate with Nano-Reinforced Conductive Resin for Aircraft Lightning Strike Protection	Y. Zhou (The Univ. of Tokyo), Y. Martinez-Rubi (National Research Council Canada), <u>I. Yokozeki</u> (The Univ. of Tokyo), B. Ashrafi (National Research Council Canada), Y. Hirano (Japan Aerospace Exploration Agency)
14:30		9	Detection of Edge Delamination of CFRP Laminates by Rayleigh Scattering-Based Sensor-	<u>T. Kosaka</u> (Kochi Univ. of Tech.)
14:50		10	Optical fiber sensors protected by a CNT-Au composite coating for structural health monitoring at high temperatures	<u>C. Xu</u> (The Univ. of Tokyo), Y. Okabe
15:10		11	Improvement of accuracy in measuring degree of cure of resin using fresnel reflection-type optical fiber sensors	<u>T. Yamasaki</u> (Kochi Univ. of Tech.) , T. Kosaka
15:30		12	Embeddable fiber-optic shape sensor for tracking ply deformation during thermoplastic stamp forming	<u>S. Minakuchi</u> (The Univ. of Tokyo), K. Chikamori
15:50		13	Detection of water ingress in CFRP honeycomb sandwich panels using broadband ultrasonic guided waves	<u>W. Chen</u> (The Univ. of Tokyo), O. Saito, Y. Okabe
16:10	Coffee break (Room 2)			
16:30	Session 4 (Room 1) Chair: Prof. Louis Laberge Lebel (Polytechnique Montréal/Canada)	14	Homogenization of Thermoset Unidirectional GFRP During Curing Using a Viscoelastic RVE-Based Model	<u>R.Onishi</u> (Kochi Univ. of Tech.), T. Kosaka
16:50		15	A Solution for Recycling Fibreglass into Sustainable Materials	<u>L. Lessard</u> (McGill Univ.), Z. Yan, Z. Wang, S. Rezaee-Fakhr, B. Csinger (FibeCycle Materials Corp.), C. Patricio
17:10		16	Fabrication and Characterization of Composite Paper from Cellulose and Polyimide for Laser-Induced Graphene Synthesis	<u>S. Mizobuchi</u> (Doshisha Univ.), K. Obunai, K. Okubo
17:30		17	Advanced AI-Driven Multi-Scale Modeling and Optimization of Composite Properties and Manufacturing Parameters in Recycled Polymer Blends	<u>Qumayma Tajir</u> (Univ. of Sherbrooke), Said Elkoun
17:50		18	Enhancing Cellulose Nanofibril-Epoxy Resin Compatibility Using A Water-Based Surface Modification Strategy	<u>K. Oesef</u> (The University of British Columbia), E. D. Cranston, Y. Abdin
19:00	Banquet (Ryoutei Kurikawa, 3-chōme-2-3 SendamachiNaka Ward, Hiroshima, 730-0052)			
21:00	End of Day 2			

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Day 3 13-Jun Fri. (Hiroshima Prefectural Information Plaza, 3-7-47, Sendamachi, Naka-ku Hiroshima-shi, 730-0052 Hiroshima)

Time	Session	Paper No.	Title	Authors
8:45	Registration (2F Hiroshima Prefecture Information Plaza)			
9:00	Keynote lecture 2 (Room 1) Chair: Prof. Gen Sasaki (Hiroshima University/Japan)	A Sustainable Pathway to Carbon Fiber Composites: Materials Innovation from Bitumen-Derived Precursors Prof. Yasmine Abdin (The University of British Columbia)		
9:20				
9:40	Session 5 (Room 1) Chair: Dr. Naruki Ichihara, (Nihon University/Japan)	19	Development of a Fused Granulate Fabrication Infrastructure for High-Throughput Printing of Thermoplastic Composites	<u>L. C.-Jomphe</u> (Polytechnique Montréal), R. D. Farahani, A. Hatt (Safran Composites), J.-S. Carrier (Dyze Design), M. Lévesque (Polytechnique Montréal), D. Therriault
10:00		20	Effect of Surface Layer for Tensile Properties of 3D Printed CFRP	<u>K. Iizuka</u> (Aoyama Gakuin Univ.), S. Yoneyama
10:20		21	Repass Compaction 3D Printing of Polymer Matrix Composites	<u>S. Kuroda</u> (Nihon Univ.), M. Ueda, N. Ichihara
10:40	Coffee break (Room 2)			
11:00	Session 6 (Room 1) Chair: Dr. Masato Sakaguchi (Gifu University/Japan)	22	A Multinozzle for Large-Scale Additive Manufacturing of Thermoset Composite Microscaffolds for Aerospace Applications	<u>R. Plante</u> (Polytechnique Montréal), R. D. Farahani, S. Bodkhe, D. Therriault
11:20		23	Development of a Carbon Nanotube Composite Sensor for Strain and Temperature Monitoring of CFRP Laminates Using 3D Photocuring Printing	<u>Y. Song</u> (The University of Tokyo), Y. Liu, Y. Okabe
11:40		24	Co-Extrusion Additive Manufacturing of Complex Geometries using Continuous Carbon Fiber-Reinforced Thermoplastic Composites	<u>M. Verville</u> (Polytechnique Montréal), D. Therriault
12:00		25	Estimation of axial compressive strength on 3D-printed continuous carbon fiber reinforced thermoplastics	<u>N. Ichihara</u> (Nihon Univ.), M. Ueda
12:20		26	Effect of Variable Layer Profiles on Interlayer Strength in FDM 3D Printing	<u>K. Hara</u> (Gifu Univ.), A. Nakai
12:40	Lunch break (1F Restaurant marco paul (マルコポール))			
13:00				
13:20				
13:40	Session 7 (Room 1) Chair: Dr. Mohammad Fikry (Tokyo University of Science/Japan)	27	On Vibration Damping Modeling for Additively Manufactured Unidirectional CFRTP and Polyamide Hybrid Laminates	<u>K. Suzuki</u> (Chiba Inst. of Tech.)
14:00		28	Finite Element Modelling the Braid Deformations during Braid-Trusion of Thermoplastic Composite Tubes	M. Leduc (Polytechnique Montreal), <u>L. Laberge Lebel</u>
14:20		29	Introduction of Fibre Discontinuities and Mesh Interlayers in CFRP Laminates for Improving Pseudo-ductility	<u>H. Nakatani</u> (Osaka Metropolitan Univ.), S. Imura, S. Matsui
14:40		30	Evaluation of Pseudo-ductile Behavior of CFRP Laminates with Mesh Interlayers using Acoustic Emission Method	<u>S. Matsui</u> (Osaka Metropolitan Univ.), H. Nakatani
15:00		31	Effect of needle punching process on the mechanical properties and interlaminar properties of composite laminates	Y. Imamura (Kyoto Inst. of Tech.), <u>A. Ohtani</u>
15:20		32	Effect of Bending Properties of CFRTP Laminates on Clinching Strength with Self-piercing and Clinch Nut	<u>T. Kiyokawa</u> (Osaka Metropolitan Univ.), N. Nakatani, R. Nishimura (Shinjo Manufacturing Co.), D. Naka, Y. Hatanaka
15:40	Coffee break (Room 2)			
16:00	Session 8 (Room 1) Chair: Prof. Yasmine Abdin (The University of British Columbia/Canada)	33	Matrix densification of complex SiC/SiC Ceramic Matrix Composites (CMC) parts by slurry injection and filtration	<u>A. Saada</u> (Polytechnique Montreal), G. Marcil St-Onge, Sylvain Turenne, L. Laberge Lebel
16:20		34	Impact Response and Post-Impact Residual Strength of Randomly Oriented Discontinuous Long Carbon Fiber Reinforced Plastic	<u>M. Fikry</u> (Tokyo Univ. of Sci.), J. Mack (The Univ. of Akron), F. Mirza, A. Frankowski, R. Tada (Futaba Corp.), M. Miyagawa, H. Eguchi, Y. Naito, K. Tan (The Univ. of Akron), S. Ogihara (Tokyo Univ. of Sci.)
16:40		35	Comparison of Molecular Orientation and Mechanical Properties of TCP/PLA Composites Drawn by Tensile Drawing and Hot Forging	<u>M. Sakaquchi</u> (Gifu Univ.), R. Arakawa (Salesian Polytechnic), K. Saiki
17:00	Keynote lecture 3 (Room 1) Chair: Prof. Hayato Nakatani (Osaka Metropolitan University/Japan)	Advanced Composite Manufacturing and Automation Challenges of KADO Corp Mr. Yasunari Kuratani (KADO Corporation)		
17:20				
17:40	Award ceremony and concluding remarks by Co-chairs: Prof. Gen Sasaki, Prof. Asami Nakai, Prof. Louis Laberge Lebel, Prof. Kazuaki Katagiri (Room 1)			
18:00	End of Day 3			

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Poster Presentation (Day 2, 13:10~14:10, Room 3)

Paper no.	Title	Authors
P1	Strength Recovery of CFRP laminates with Mesh Interlayers by Resin Pre-coating Technique	<u>N. Kumashiro</u> (Osaka Metropolitan Univ.), H. Nakatani
P2	Effect of Thin Film Structure on Flammability of Fiber Reinforced Plastics	<u>F. Tsuboi</u> (Gifu Univ.), Y. Ishihara, A. Nakai, M. Okoshi, A. Yuki (DaikyoNishikawa Corp.), H. Shigeta, H. Nakamura, S. Yasuda (Mazda Motor Corp.), J. Ogawa, Y. Yamada, M. Shigetsu (Hiroshima Univ.)
P3	Damage Repair by Resin Re-impregnation to Thread Surface of CFRP Bolts Fabricated by Machining	<u>H. Ida</u> (Osaka Metropolitan Univ.), H. Nakatani, H. So (SJJ Co., Ltd.), T. Kusuhaara, K. Ishizaki (BigFireworks Co., Ltd.)
P4	A Study on Easy Dismantlable Adhesives with CNT for GFRP Joints Based on Microwave Irradiation	<u>T. Sugimoto</u> (Osaka Univ.), T. Murayama, S. Nishimura, D. Tanabe (Kobe City College of Tech.), K. Mukoyama (Osaka Univ.), T. Kurashiki
P5	Mechanical Properties and Secondary Processability of Wood/GFRTP Laminates	<u>T. Nishioka</u> (Kyoto Inst. of Tech.), A. Ohtani
P6	Bonding strength between CFRP and metal with micro-protrusions formed by additive manufacturing	<u>Y. Okikawa</u> (Hiroshima Univ.), K. Narasaki, T. Tanaka (Osaka Research Inst. of Industrial Sci. and Tech.), K. Katagiri (Hiroshima Univ.), K. Sasaki (Hokkaido Univ.)
P7	Effect of mold pass length on formability and mechanical properties of pultruded CFRTTP pipes	<u>R. Oishi</u> (Gifu Univ.), A. Nakai
P8	Effect of Temperature and Adhesive on Hot-Press Bending of Metal/CFRTTP laminates	<u>F. Kasahara</u> (Kochi Univ. of Tech.), T. Kosaka
P9	Molding and Mechanical Properties of Hybrid Braided CFRTTP Pipes	<u>K. Aoike</u> (Gifu Univ.), R. Oishi, A. Nakai
P10	Effect of cooling process on crystal formation of matrix resin and interfacial properties of c-FRTTP	<u>S. Takimoto</u> (Kyoto Inst. of Tech.), A. Ohtani
P11	Study on Forming conditions for V-shape Hot-Press Molding of Metal/CFRTTP laminates	<u>M. Naito</u> (Kochi Univ. of Tech.), T. Kosaka
P12	Effect of Resin Modification on Mechanical Properties of Recycled CFRTTP	<u>M. Ikeda</u> (Gifu Univ.), T. Sawada, A. Nakai, M. Oishi (Satoh Machinery Works Co., Ltd.)
P13	Multiscale Analysis and Design Map for a Hydrogen Storage Vessel made of Fiber-Reinforced Composites	<u>S. Inoue</u> (Osaka Univ.), T. Kurashiki, K. Mukoyama, K. Hanaki, H. Ishimaru
P14	Effect of Rubber Particles on Fracture Propagation Behavior and Gas Permeability of CFRP Laminates for hydrogen pressure vessels	<u>T. Okamoto</u> (Kyoto Inst. of Tech.), A. Ohtani
P15	Flow evaluation at flow-front merging area by tracking resin and fiber flow paths based on the MPS method	<u>N. Inoue</u> (Osaka Univ.), M. Yonekura, F. Miyasaka, K. Mukoyama, T. Kurashiki, M. Seto (Kanazawa Inst. of Tech.), M. Yamabe
P16	Effect of Curing Process on Residual Stress in CFRP Laminates	<u>K. Owaki</u> (Kochi Univ. of Tech.), T. Kosaka
P17	Evaluation of Wettability between Al and AlN for Fabrication of Al-AlN Interpenetrating Phase Composites	<u>K. Umekawa</u> (Hiroshima Univ.), K. Sugio, G. Sasaki