

Conference Schedule at a Glance

9 November 2021	
14:00-20:00	Registration
17:00-20:00	Welcome reception - Room 2
10 November 2021	
8:00-17:00	Registration
9:00-9:10	Opening ceremony
9:10-9:50	Plenary Lecture I (Room 1) Response and Initiatives for Carbon Neutral in the Japanese Foundry Industry Prof. Kazumichi Shimizu (Muran Insitute of Technology)
9:50-10:30	Plenary Lecture II (Room 1) Solidification sequence in ductile cast iron: time-resolved and in-situ X-ray imaging Prof. Hideyuki Yasuda (Kyoto University)
10:30-11:00	Coffee breake
	Room 1
	Room 2
	Category I (Alloying element, microstructure and mechanical properties) Session Chair ; Yoshiyuki NODA
	Category III (Tribology) Session Chair ; Ryosuke TASAKI
11:00-11:20	Influence of Manganese and Chromium on Microstructure and Mechanical Properties of Flake Graphite Cast Iron (Sadato Hiratsuka, Hiroshi Horie, Toshinori Kowata and Michihiro Ito)
	Characterization of Erosion of Ferrous Material in Molten Aluminum Alloys Based on Dissolution Behavior of Intermetallic Layer (Ikuzo Goto and Kengo Kurosawa)
11:20-11:40	Effect of chill structure on eddy current testing of ductile cast iron matrix via casting surface (Noritaka HORIKAWA, Taichi MASUKO, Jinichiro KIMURA)
	Effect of Erosion at Rotating Slurry Wear Test in Alkaline Solution (Hiroataka Kuchiiwa, Hideki Kawai, Yoshihiko Oishi, Kenta Kusumoto, Kazumichi Shimizu)
11:40-12:00	Fatigue strength of high silicon spheroidal graphite cast iron (Takafumi Funabiki, Kazumichi Shimizu, Hiroyuki Yasuda, Kenta Kusumoto)
	Effect of molybdenum addition on three body abrasive wear behavior of high chromium white cast irons (Riki Hendra Purba, Kazumichi Shimizu, Kenta Kusumoto)
12:00-12:20	Effect of Squeeze Conditions on Compacting Properties of Green Sand Test piece (Mikito Funahashi, Mitsuki Onoda, Takuya Yasue, Takachiho Kume and Yasuhiro Maeda)
	Effect of heat treatment on three-body abrasive wear characteristics of high-chromium based multi-component white cast irons (Takayuki Todaka, Kazumichi Shimizu, Kenta Kusumoto, Riki Hendra Purba)
12:20-12:40	Behavior of Water Spray Cooling and Air-Blow Cooling On Green Sand with High-Temperature (Akira Mizuno, Shingo Yoshida, Yuuka Ito, Yasuhiro Maeda, Takashi Hanai and Hiroyasu Makino)
	Effect of carbon and titanium addition on erosive wear characteristics of high chromium white cast iron (Yila gaqi, Kazumichi Shimizu, Kenta Kusumoto)
12:40-13:30	Lunch break
13:30-14:00	Poster session
	Room 1
	Room 2
	Category I (Alloying element, microstructure and mechanical properties) Session Chair ; Tohru NOBUKI
	Category II (Solidification, nucleation and heat treatment) Session Chair ; Hideyuki YASUDA
14:00-14:20	The Impact of Ca on Slag Formation and Structure during the MgFeSi-Treatment of Spheroidal Graphite Irons (Leander Michels, Cathrine Hartung, Eivind G. Hoel and Emmanuelle Ott)
	Discussion of some approaches to spheroidal growth of graphite in cast irons (Manuel J. Castro-Román, Jacques Lacaze)
14:20-14:40	Investigating the Lightweight Potential of High-Silicon Ductile Cast Iron (J. Nellessen, M. Riebisch, B. Pustal and A. Bührig-Polaczek)
	Lamellar Graphite versus Nodular Graphite Formation in Commercial Cast Irons (Iulian Riposan, Mihai Chisamera, Eduard Stefan, Stelian Stan)
14:40-15:00	Influence of Trace Elements Introduced by High-Alloyed Steel Scrap on the Microstructure and Mechanical Properties of Ferritic Ductile Iron (A. Kutz, M. Spreen, B. Pustal and A. Bührig-Polaczek)
	A study of the austempering time effect on the microstructure and microhardness of CGI (Panov A.G., Shaehova I.F., Gurtovoy D.A. and Ganiev M.M.)
15:00-15:20	Comparison in Thermal Fatigue Resistance of Two ICDP Cast Irons for Rollers with Different Content of Vanadium (Andrej Penko, David Bombač, Peter Fajfar, Milan Terčelj and Goran Kugler)
	Effect of bismuth on graphite growth in ductile cast iron (Babette Tonn, Felix Stieler, Daniel Funk, Gerhard Lilienkamp, Jacques Lacaze)

15:20-15:40	APPLICATION OF IMPROVED Si, Cr, Mo alloyed SPHEROIDAL GRAPHITE CAST IRON FOR A TRANSPORT OF MOLTEN Al-ALLOYS (Primož Mrvar, Mitja Petrič, Sebastjan Kastelic and Milan Terčelj)	Effect of the Magnesium Treatment on the Nucleation Potential of Ductile Iron (G. Alonso, D.M. Stefanescu, B. Bravo and R. Suarez)
15:40-16:00	Coffee break	
	Room 1	Room 2
	Category I (Alloying element, microstructure and mechanical properties) Session Chair ; Naoto SHIRAKI	Category IV (Simulation, design, and innovation) Session Chair ; Sadato HIRATSUKA
16:00-16:20	Correlation of Graphite Morphology and Mechanical Properties in Grey Cast Iron (M. Kaynak, A. Kansy, C. Bleicher, A. Bührig-Polaczek)	Depletion of Si in the early solidification structure of Gray Cast Iron (Björn Domeij and Attila Diószegi)
16:20-16:40	Influence of the Combined Addition of High Levels of Cerium and Bismuth on the Graphite Morphology in SSDI (Felix Stieler, Daniel Funk and Babette Tonn)	Development of the method to neutralize the structure heredity of industrial cast iron melts and castings (Panov A.G.)
16:40-17:00	Ultrafine Structured Austempered Ductile Iron (ADI) (A. Nofal, M. Soliman, M. Ahmed, H. Palkowski and A. Volochko)	Cast iron selection based on design requirements of thermomechanically loaded applications (Kalle Jalava, Ari Mourujärvi, Jarkko Laine and Juhani Orkas)
17:00-17:20	Study of the structure and microimpurities of spheroidizing cast iron modifiers influence on their special and consumer features (Panov A.G., Zakirov E.S.)	Discussion of some aspects of graphite growth in cast irons (Manuel J. Castro-Román and Jacques Lacaze)
18:00-19:30	Banquet (Houraiden ; 1-1 Miyanomori-cho, Murorann city, Hokkaido, 050-0073 Japan)	
11 November 2021		
	Room 1	Room 2
	Category IV (Simulation, design, and innovation) Session Chair ; Yasuhiro MAEDA	Category II (Solidification, nucleation and heat treatment) Session Chair ; Kazunori ASANO
09:00-09:20	Mathematical Model Based Flow Rate Control in Automatic Pouring Process using Cylindrical Nozzle Type Ladle (Kazunari WATANABE, Takahito YAMASHITA and Ryosuke TASAKI)	Direct Observation of Mold Filling and Solidification of Cast Iron by using X-ray Imaging (Akira Sugiyama, Hideyuki Yasuda, Kentaro Uesugi, Akihisa Takeuchii and Masato Yoshiya)
09:20-09:40	Real-time Vision Based Flow Rate Monitoring and Control System in Liquid Pouring Process (Ryosuke TASAKI, Takahito YAMASHITA, Harumo SASATAKE and Kazunari WATANABE)	Observation of Heterogeneous Nucleation of Graphite for Spheroidal Graphite Cast Iron (Hirofumi Miyahara, Gen Ito and Ichihito Narita)
09:40-10:00	Evaluation Method of Tilting-ladle-type Pouring Process based on Image Processing with General-Purpose Camera (Atsushi Ito and Ryunosuke Kakahara)	Time-resolved and in-situ observations of Solidification in Ductile Cast Iron (Kiattisaksri Chatcharit, Akira Sugiyama, Kohei Morishita, Taka Narumi and Hideyuki Yasuda)
10:00-10:20	Weight Control of Pouring Liquid using Articulated Robot Arm with Small Ladle (Atsushi Amemiya, Yoshiyuki Noda)	Development of High Entropy cast iron (HE cast iron) (T. Nagase, T. Kakeshita, K. Matsumura, K. Nakazawa, S. Furuya, N. Ozoe and K. Yoshino)
10:20-10:40	Development of motion teaching system using touch panel in sand molding robot with articulated robot arm (So Shimizu, Yoshiyuki Noda)	Development of Semi-Solid Die Casting Process in Spheroidal Graphite Irons (Haruki Itofuji, Masayuki Itamura)
10:40-11:00	Coffee break	
	Room 1	Room 2
	Category I (Alloying element, microstructure and mechanical properties) Session Chair ; Noritaka HORIKAWA	Category II (Solidification, nucleation and heat treatment) Session Chair ; Haruki ITOFUJI
11:00-11:20	Fatigue strength of high manganese flake graphite cast iron (Koji SATO, Kazumichi SHIMIZU, Ken SASAKI, Yila GAQI, Kenta KUSUMOTO, Hiroshi HORIE)	Study of fatigue limit prediction technique for cast steels (Takuya Yamanouchi, Makoto Shikano, Fumio Takahashi, Shinya Kudo and Tomoyuki Ochiai)

11:20-11:40	Impact Properties and Fracture Toughness of Heavy-section Spheroidal Graphite Cast Irons (Tohru NOBUKI, Minoru HATATE, Shohei YAMADA and Yutaka MIYAMOTO)	Shape transitions in faceted/non-faceted eutectics (S. Mohagheghi, S. Bottin-Rousseau, S. Akamatsu, M. Şerefoğlu and J. Lacaze)
11:40-12:00	Relationship between Fatigue Limit and Defect Size in Spheroidal Graphite Cast Iron with Different Graphite Spheroidization Ratios and Microstructures (Naoto Shiraki, Takuya Watanabe and Toshitake Kanno)	Small-size casting for studying chunky graphite formation (Jon Sertucha, Anna Regordosa, Urko de la Torre and Jacques Lacaze)
12:00-12:20	Effect of Strain Rate Sensitivity and Stress State on the Transition Behavior of Ductile Cast Iron in Toughness Testing (D. Franzen, N. Habibi, M. Könemann, S. Münstermann, A. Bührig-Polaczek)	An in-situ study of formation of compact graphite during solidification of cast iron using X-ray tomography and radiography (N. S. Tiedje, C. L. Xu, T. Andriollo, T. Wigger M. Azeem, J. H. Hattel and P. D. Lee)
12:20-12:40	Primary carboboride in hybrid (C/B)multi-component cast irons: morphology, hardness and elemental composition (Shimizu K., Chabak Yu.G., Golinskyi M.A., Kusumoto K., Efremenko B.V., Zurnadzhy V.I. and Efremenko V.G.)	
13:00-13:45	Bus departure time / Arrival time at HOTEL ROYAL ※Participants should gather at KIRAN. We will move by chartered bus.	
13:45-14:45	Lunch break (HOTEL ROYAL ; 33-3 Suenaga-cho, Date City, Hokkaido, 050-0021)	
14:45-15:45	Excursion I Date City Museum of History and Culture	
15:45-16:25	Bus departure time / Arrival time in Muroan ※We will move by chartered bus.	
18:30-20:30	Official banquet (Ristorante carina ; 2-26-1 Nakajima-cho, Muroan city, Hokkaido, 052-0074 Japan)	
12 November 2021		
9:00-10:00	Bus departure time / Arrival time at National Ainu Museum and Park-Upopoy ※Participants should gather at East Muroan Station. We will move by chartered bus.	
10:00-12:30	Excursion II National Ainu Museum and Park-Upopoy ※It's free time, so please go sightseeing by yourself.	
13:00-14:00	Lunch break	
14:00-15:00	Bus departure time / Arrival time at East Muroan Station. ※We will move by chartered bus.	