

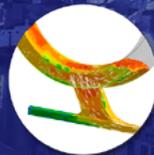
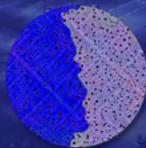
• SPCI-XIII •
2024



INTERNATIONAL SYMPOSIUM ON THE SCIENCE
AND PROCESSING OF CAST IRON, Krakow, Poland, June 23-26

• **SPCI-XIII** • **2024** •

SYMPOSIUM PROGRAMME





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June 23, 2024 (Sunday)

'WIEŻA' CENTER OF ENERGY AGH UNIVERSITY (CZARNOWIEJSKA 36, 3RD FLOOR)

17:00	21:00	WELCOME RECEPTION FOR SYMPOSIUM PARTICIPANTS START OF REGISTRATION
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June 24, 2024 (Monday)

'STUDIO' CLUB, AGH UNIVERSITY OF KRAKOW CAMPUS (BUDRYKA 4, KRAKOW)

8:00	10:00	CONTINUATION OF REGISTRATION OF SYMPOSIUM PARTICIPANTS
9:00	9:30	OPENING CEREMONY OF THE SYMPOSIUM
9:30	11:15	• PLENARY SESSION <u>Chairman: Attila Diószegi, Marcin Górny</u>
9:30	10:00	Babette Tonn <i>Cast Iron – Current and future challenges</i>
10:00	10:30	Hideyuki Yasuda <i>2D/3D observations of solidification in cast iron</i>
10:30	11:15	Doru M. Stefanescu <i>Graphite In Cast Iron – From Carbon Atom To Graphite Spheroids</i>
11:15	11:40	COFFEE BREAK



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11:40	13:00	• SESSION 1 NUCLEATION, GROWTH, SOLID STATE TRANSFORMATIONS <u>Chairman: Iulian Riposan, Kalle Jalava</u>
11:40	12:00	Rahul Nellisery Rajan, Janin Eiken <i>Calphad-coupled 3-D phase-field simulations of spheroidal graphite cast irons and evaluation of homogenized elastic mechanical properties</i>
12:00	12:20	Marcos G. Lopez, Juan M. Massone, Roberto E. Boeri <i>Columnar-to-equiaxed transition in cast irons: an experimental and numerical</i>
12:20	12:40	Rodolfo González-Martínez, Jon Sertucha, Jacques Lacaze <i>Effect of phosphorus on intermediate temperature embrittlement of high silicon</i>
12:40	13:00	Björn Domeij, Attila Diószegi <i>Computer-aided eutectic cell detection on polished sections of lamellar and compacted graphite irons</i>
13:00	14:00	LUNCH

14:00	15:00	• SESSION 2 PROPERTIES AND PROCESSING OF CAST IRON <u>Chairman: Babette Tonn, Jacques Lacaze</u>
14:00	14:20	Peter Skoglund, Fredrik Wilberfors, Jessica Elfsberg, Mathias König <i>Mechanical properties of silicon alloyed ferritic compacted graphite iron</i>
14:20	14:40	Bogdan Cygan, Marcin Górný <i>Spheroidal graphite cast iron having exceptional strength and ductility manufactured in Teksid Iron Poland</i>
14:40	15:00	Lun Fu, Hong Xiao, Jakob Olofsson, Manuel Schiralli, Maurizio Vedani, Marcin Górný, Riccardo Donnini, Dario Ripamonti, Giuliano Angella <i>Tensile properties of thin-walled Austempered Ductile Irons</i>

16:00	23:00	EXCURSION - WIELICZKA SALT MINE WITH DINNER DEPARTURE OF THE BUS FROM THE PARKING LOT AT REYMONTA 19
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June 25, 2024 (Tuesday)

'STUDIO' CLUB, AGH UNIVERSITY OF KRAKOW CAMPUS (BUDRYKA 4, KRAKOW)

		• SESSION 3
9:00	11:00	ALLOYING AND MICROALLOYING IN CAST IRON Chairman: <u>Giuliano Angella, Torbjørn Skaland</u>
9:00	9:20	Iulian Riposan, Denisa Elena Anca, Stelian Stan, Iuliana Stan, Mihai Chisamera <i>Structure Characteristics of Si/Si-Mo Ductile Cast Irons Solidified on a Metallic Chill</i>
9:20	9:40	Andrzej Szczęsny, Dariusz Kopyciński, Andriy Burbelko <i>Application of the ProCAST program for the analysis of the number of primary grains in hypoeutectic chromium cast iron</i>
9:40	10:00	Onur Özaydin, Laura Kreinest, Johannes Schüssler, Edgar Willenborg, Andreas Bührig-Polaczek <i>Examination of the Effect of Chemical Composition on Laser Polished Cast Irons with Spheroidal Graphite</i>
10:00	10:20	Artur Zaczyński, Adam Nowak, Maciej Królikowski, Jarosław Jaroszek, Marek Sokolnicki, Andriy Burbelko <i>Influence of vanadium micro-addition on the austempering of ADI</i>
10:20	10:40	Andriy Burbelko, Tomasz Wiktor, Sebastian Sobula, Artur Zaczyński, Adam Nowak, Maciej Królikowski, Jarosław Jaroszek, Marek Sokolnicki <i>Application of the Avrami equation to the dilatometric analysis of ADI austempering kinetics</i>
10:40	11:00	Kateryna Sirenko, Valerii Mazur <i>Improvement of systems of control and regulation of the chemical composition of gray iron in the process of its melting and casting</i>
11:00	11:30	COFFEE BREAK



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11:30	12:50	<p>• SESSION 4</p> <p>METALLURGICAL QUALITY, INOCULATION, THERMAL ANALYSIS OF CAST IRON</p> <p><u>Chairman: Doru M. Stefanescu, Andriy Burbelko</u></p>
11:30	11:50	<p>Maciej Królikowski, Adam Nowak, Artur Zaczyński, Andriy Burbelko, Marek Sokolnicki</p> <p><i>Controlling of the melting and post-furnace processing of ductile cast iron dedicated to a casting with a specific thermal modulus</i></p>
11:50	12:10	<p>Attila Diószegi</p> <p><i>Thermal analyses of cast iron and sand mold domains at production of casting</i></p>
12:10	12:30	<p>Ramon Suárez, Gorka Alonso, Doru M. Stefanescu, Aitor Loizaga</p> <p><i>Improvement of the Metallurgical Quality of Ductile Iron in Heating Pouring Units through Appropriate Inoculation</i></p>
12:30	12:50	<p>Cláudia Guedes, Björn Domeij, Vasilios Fourlakidis, Attila Diószegi</p> <p><i>A Case Study on the Casting Skin Phenomena in Compacted Graphite Iron</i></p>
12:50	14:00	LUNCH



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14:00	16:00	SESSION 5 SAND AND MOLDING MATERIALS <u>Chairman: Katarzyna Major-Gabryś, Ramon Suarez</u>
14:00	14:20	Rafał Dańko, Angelika Kmita, Józef Dańko, Mariusz Holtzer, Dariusz Drożyński, Daniel Gruszka <i>Iron foundries goes green – molding materials aspects</i>
14:20	14:40	Gianluca Fratta, Ivan Stefani, Angelika Kmita, Stefano Saetta, Sara Tapola <i>Use of cores with inorganic binder to produce nodular iron casting with thin thickness</i>
14:40	15:00	Rafał Dańko, Angelika Kmita, Józef Dańko, Mariusz Holtzer, Dariusz Drożyński, Daniel Gruszka, Mateusz Skrzyński, Maciej Królikowski <i>The influence of new inorganic foundry binders on the gas formation, permeability and strength properties of flaskless molds</i>
15:00	15:20	Angelika Kmita, Rafał Dańko, Mariusz Holtzer, Józef Dańko, Dariusz Drożyński, Mateusz Skrzyński, Agnieszka Rocznik, Daniel Gruszka, Jarosław Jakubski, Sara Tapola <i>Assessment of the harmfulness of molding sands bonded by new inorganic binders with reduced environmental impact</i>
15:20	15:40	Daniel Gruszka, Mateusz Skrzyński, Rafał Dańko, Angelika Kmita <i>The concept of an experimental station for casting a ductile iron wedge into a 3D printed sand mould with cooling channels</i>
15:40	16:00	André K. Ramos, Attila Diószegi, Björn Domeij <i>Study on the influence of process parameters on compacted graphite iron microstructure formation</i>
17:00	19:00	KRAKOW CITY TOUR MEETING OF PARTICIPANTS AT A0, THE MAIN BUILDING OF AGH (MICKIEWICZA 30, GROUND FLOOR)
20:00	24:00	GALA DINNER 'STUDIO' CLUB, AGH UNIVERSITY OF KRAKOW CAMPUS (BUDRYKA 4, KRAKOW)

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June 26, 2024 (Wednesday)

'STUDIO' CLUB, AGH UNIVERSITY OF KRAKOW CAMPUS (BUDRYKA 4, KRAKOW)

9:00	11:00	<p>• SESSION 6</p> <p>DEFECTS, CHARACTERIZATION, THERMAL AND PHYSICAL PROPERTIES</p> <p>Chairman: <u>Dawid Myszka, Riccardo Donnini</u></p>
9:00	9:20	<p>Felix Mori, Viktor Udachin, Hanka Becker, Babette Tonn, Wegewitz Lienhard</p> <p><i>Advanced surface treatment to optimise preparation for SEM-EBSD investigations of the graphite phase of spheroidal cast iron</i></p>
9:20	9:40	<p>Carlos de Souza, Marina Furbino Martins</p> <p><i>Thermal Conductivity of High Strength Compacted Graphite Irons</i></p>
9:40	10:00	<p>Marcos G. Lopez, Lucian Diaconu, Björn Domeij, Moukrane Dehmas, Attila Diószegi, Jacques Lacaze</p> <p><i>Density of ferritic silicon cast irons</i></p>
10:00	10:20	<p>Adrian Świątkowski, Dariusz Kopyciński</p> <p><i>Assessment of the shape of the unidirectional crystallisation front of grey cast iron dedicated to large-size castings</i></p>
10:20	10:40	<p>Ricardo Queirós, Björn Domeij, Attila Diószegi</p> <p><i>Assessing Pore Formation due to Nitrogen Partitioning in a Hypoeutectic Cast Iron</i></p>
10:40	11:00	<p>Betto David Joseph, Björn Pustal, Andreas Bührig-Polaczek, Thomas Weirich</p> <p><i>Thermodynamic Analysis and Impact of Water Quenching on Microstructure and Mechanical Properties of High Silicon Ductile Iron</i></p>
11:00	11:50	ORGANIZING COMMITTEE MEETING
11:00	11:50	COFFEE BREAK
11:50	12:50	ROUND TABLE SESSION
13:00	13:15	CLOSING CEREMONY OF THE SYMPOSIUM
13:15	14:30	LUNCH



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