

WFO-TECHNICAL FORUM and 59TH IFC Portoroz 2019

TUESDAY, 17.09.2019

15.30-18.30 Registration of participants at the Conference reception desk

18.00 Welcome party

WEDNESDAY, 18.09.2019

8.00-17.00 Foundry Tours

15.00-19.30 Registration of participants at the Conference reception desk

17.30 Bus transfer from Hotel Slovenija to Piran

18.00 Reception at the Georgios Cultural Centre garden – at the monastery church with a Welcome address by Mayor of Municipality of Piran, Mr. Đenio Zadković

THURSDAY, 19.09. 2019

9.00 -9.30 Opening Ceremony with Cultural Programme and Opening address by **MARK FENYES**, President, The World Foundry Organization and **MIRJAM JAN –BLAŽIČ**, President, Slovenian Foundrymen Society

PLENARY LECTURES, Hall: Cristofa Columbo

9.30-10.00 P. MURELL, *Cast Metals Federation, West Bromwich (UK)*: **Training and Pressional Development for the Future. Foundry industry – how can the WFO help?**

10.00-10.30 C. KUHLGATZ, *Hüttenes – Albertus Chemische Werke GmbH, Düsseldorf (D)*: **How suppliers and foundries can advance technology together!**

10.30-11.00 M. MANAPURAM, *North Eastern Regional Institute of Science and Technology, Nirjuli (IN)*: **A Forecast of Casting Casts Casters Castfuture**

11.00-11.45 **Break**

11.45-12.15 N. SOBCZAK^{1,2}, J. SOBCZAK^{3,4}, L. DRENCHEV⁴, R. PURGERT⁵, ¹*Institute of Precision Mechanics, Warsaw (PL)*, ²*Foundry Research Institute, Krakow (PL)*, ³*AGH University of Science and Technology, Krakow (PL)*, ⁴*Institute of Metal Science, Equipment and Technologies with Hydro aerodynamic Centre, Sofia (BG)*, ⁵*Energy industries of Ohio, Birmingham (USA)*: **High Temperature Phenomena in Metalcasting**

12.15-12.45 P. SCHUMACHER^{1,2}, J.H. LI¹, A. CZIEGLER², ¹*Montanuniversität Leoben, Leoben (A)*, ²*Austrian Foundry Research Institute, Leoben (A)*: **Aspects of extreme grain refinement during light metal casting**

12.45-13.15 A. KRIŽMAN¹, P. MRVAR², M. JAN-BLAŽIČ³, M. DEBELAK⁴, ¹*University of Maribor, Maribor (SI)*, ²*Univesity of Ljubljana, Ljubljana (SI)*, ³*Slovenian Foundrymen Society, Ljubljana (SI)*, ⁴*Chamber of Commerce and Industry of Slovenia, Ljubljana (SI)*: **The orientation of Slovenian foundries: technically demanding - thermal, mechanical and surface treated castings, as integral and complex parts for direct use in final products.**

13.15 -14.45 Lunch break in Hotel Riviera Restaurant

Section 1 : Cast Steel and Iron, Hall: Vasco da Gama

- 14.45-15-15 J. CAMPBELL, *University of Birmingham, Birmingham (UK)*: **Failures of Steels from Casting Defects**
- 15.15-15.45 F. IDEN¹, B. DUDZIK², I. BACANU¹, *¹Hüttenes Albertus Chemische Werke GmbH, Düsseldorf (D), ²Brembo Poland Sp.Z.o.o., Dąbrowa Górnicza (PL)*: **The application of the Cordis®**
- 15.45-16.15 X. JINGPEI¹, W. AIQIN¹, W. WENYAN¹, M. DOUQIN¹, Y. BIN¹, W. ZHENGHUI², *¹Henan University of Science and Technology, Luoyang (CN), ²Luoyang Luobei Heavy Industry Machinery Co., Ltd, Luoyang (CN)*: **The computer simulation of solidification and modification on the inclusions in large-scale rudder hornsteel casting**
- 16.15-16.30 **Break**
- 16.30–17.00 J. BAST, S. POLIAKOV, *Technische Universität Bergakademie Freiberg, Freiberg (D)*: **Developing of castable steel components by castdesigner-software**
- 17.00–17.30 Y. YIN, Y. ZHANG, J. ZHOU, X. JI, X. SHEN, *Huazhong University of Science and Technology (CN)*: **A shrinkage cavity model based on multi-force fields for cast steel gravity castings**
- 17.30–18.00 J. JEZIERSKI¹, J.J. SZAJNAR¹ R. DOJKA^{1,2}, *¹Silesian University of Technology, Department of Foundry Engineering, Gliwice (PL), ²Odlewnia RAFAMET Sp. z.o.o., Kuźnia Raciborska (PL)*: **Another attempt to gating system optimization for heavy castings**

Section 2 : Non ferrous alloys, Hall: Roald Amundsen

- 14.45-15-15 S. SAIKAWA, *University of Toyama, Toyama (JP)*: **Development of high strenght aluminium alloy for gravity casting**
- 15.15-15.45 F. ZUPANIČ, T. BONČINA, *University of Maribor, Maribor (SI)*: **Development of heat resistant aluminium alloys**
- 15.45-16.15 Z.Z. BRODARAC, F. KOZINA, T. RUPČIČ, D. MAŠINOVIĆ, *University of Zagreb, Zagreb (CRO)*: **Influence of the AlSi12 alloy inoculation on the microstructure and mechanical properties development**
- 16.15-16.30 **Break**
- 16.30–17.00 B. KALKUNTE¹, L. VALENTE², C. VISCARDI², V. KOLDA³, *¹Calcom ESI SA, Saint-Sulpice (CH), ²Ecotre Valente SRL, Brescia (IT) ³Mecas ESI SRO, Plzeň (CZ)*: **Virtual dimensional control to predict and measure the final shape of the casting part**
- 17.00–17.30 S. MÜLLER, T. SCHUCHARDT, S. VODDE, K. DILGER, *Technische Universität Braunschweig, Braunschweig (D)*: **In depth characterization of the local mechanical properties for the die casting alloy AlSi9Mn considering solidification rates**
- 17.30–18.00 J. PRISTAVEC¹, J. MEDVED², M. VONČINA², S. FALTER-NEVES³, *¹EXOTERM IT d.o.o., Kranj (SI), ²University of Ljubljani, Ljubljana (SI), ³MAGMA GmbH, Aachen (D)*: **Optimisation of Boundary Conditions for Solidification Simulations of AlSi10Mg Alloy**

Section 3 : Technologies for foundry industry, Hall: Robert Scott

- 14.45-15-15 M. LEWIS, C. WILDING, *Omega Sinto Foundry Machinery Ltd, Peterborough (UK)*: **Evolution through Innovation at Fonderia FAIL**
- 15.15-15.45 F. HÖHN, *Heinrich Wagner Sinto Maschinenfabrik GmbH, Bad Laasphe (D)*: **Seitsu process for complex moulds production with core sand reduction**
- 15.45-16.15 M. GOŠNJAK, N.R. BOBEK, *Weiler Abrasives d.o.o., Maribor (SI)*: **Improved productivity of grinding in foundries with a new generation of superabrasive tools**
- 16.15-16.30 **Break**
- 16.30–17.00 W. SOKOLOWSKI, *Oskar Frech GmbH+Co.KG, Schorndorf (D)*: **FRECH Competence Center Additive Tooling**
- 17.00–17.30 P.L. LARSEN, J. TROJAN, *DISA Industries A/S (DK)*: **Green sand moulding for everyone**
- 17.30–18.00 M. PETRIČ, R.C. KOROŠEC, M. VONČINA, P. MRVAR, S. KASTELIC, *University v Ljubljani, Ljubljana (SI)*: **Applications of 3D printed polymer patterns in casting technologies**

Section 4 : Development trends, Hall: Cristoforo Colombo

- 14.45-15-15 R. DEIKE, *Universität Duisburg-Essen, Duisburg (D)*: **Circular Economy-What the EU wants for the Future, the Foundry Industry is doing it today**
- 15.15-15.45 N. TALIJAN¹, V. ČOSOVIĆ², ¹*Academy of Engineering Sciences of Serbia, Belgrade*, ²*Institute of Chemistry, Technology and Metallurgy, University of Belgrade, Belgrade (RS)*: **The quality of silver based electrical contacts in light of conventional and novel alternative processing methods**
- 15.45-16.15 R. RUDOLF¹, T. RAVLAN², I. ANŽEL¹, P. MAJERIČ¹, J. MELE³, E. HUDRAP², ¹*University of Maribor*, ²*SIJ RavneSystems d.o.o. (SI)*, ³*CPPE d.o.o. (SI)*: **Development of an advanced steel tool for the most demanding applications in the industry**
- 16.15-16.30 **Break**
- 16.30–17.00 J. J. SOB CZAK, *AGH University of Science and Technology, Krakow (PL)*: **Advanced Engineering and Research of AeroGels for Environment and Life Sciences – a new European scientific –research initiative**
- 17.00–17.30 P. GROENING, *Hüttenes Albertus, Chemische Werke GmbH, Düsseldorf (D)*: **Sustainable Cold –Box Systems**
- 17.30–18.00 S. KUSSEROW, *Saveway GmbH & CO.KG, Ilmenau (D)*: **Monitoring Technologies for Melting and Holding Systems**

THURSDAY EVENING, 19.09.2019

- 19.30 **Foundrymen's night in Grand Hotel Bernardin (Obala 2)**

Section 1 : Cast Steel and Iron, Hall: Vasco da Gama

- 9.00-9.30 I. RIPOSAN, S. STAN, M. CISAMERA, A. M. COJACARU, L. NEJASCU, E. STEFAN, I. STAN, *Politechnica University of Bucharest, Bucharest (RO)*: **Connection of the shrinkage sensitiveness of iron castings with solidification expansion/contraction and cooling curves data**
- 9.30-10.00 M. GRANT, *DataProphet, Cape Town (SA)*: **Application of artificial intelligence to grey iron foundries: dimensionality study of castings**
- 10.00-10.30 J. KOVAČIČ¹, M. PETRIČ², M. TERČELJ², P. MRVAR², ¹*Livar d.d., Ivančna Gorica (SI)*, ²*University of Ljubljana, Ljubljana (SI)*: **Production and characterization of alloyed spheroidal graphite cast iron which have thermal fatigue resistance**
- 10.30-11.00 **Break**
- 11.00-11.30 D. FRANZEN, P. MARTIN, B. PUSTAL, A. BÜHRIG-POLACZEK, *Foundry Institute RWTH Aachen, Aachen (D)*: **Evaluation of static and dynamic mechanical properties under the influence of alloy design in ductile cast iron**
- 11.30-12.00 A. NOFAL¹, M. SOLIMAN², H. PALKOWSKI², ¹*Central metallurgical R&D Institute, Helwan (EG)*, ²*Clausthal University of Technology, Clausthal-Zellerfeld (D)*: **Dual- Matrix ADI by Thermomechanical Treatment of Ductile Iron**
- 12.00-12.30 B. BAUER, I. M. POKOPEC, M. ŠABAN, *University of Zagreb, Zagreb (CRO)*: **Influence of cooling rate on the properties of ductile cast iron with higher silicon content**
- 12.30-14.00 **Lunch break in Hotel Riviera Restaurant**
- 14.00-14.30 R. DOJKA^{1,2}, J. JEZERSKI², M. SZUCKI³, B. SIODMOK⁴, ¹*Odlewnia RAFAMET Sp. z o.o. (PL), Kuźnia Raciborska*, ²*Silesian University of Technology, Gliwice (PL)*, ³*AGH University of Science and Technology Kraków (PL)*, ⁴*Vesuvius Poland Sp. z o. o., Gliwice (PL)*: **The sprue shape influence on the gating system efficiency and the defects of the castings**
- 14.30-15.00 R. LUMLEY, *AWbell Pty. Ltd, Dandenong (AU)*: **An evaluation of mechanical properties and part quality in investment cast ductile irons**
- 15.00-15.30 M. VARGAS, *Hüttenes-Albertus France S.A.R.L, Point-Saint-Maxence (FR)*: **PENTEX-Improving Performances**
- 15.30-16.00 **Break**
- 16.00-16.30 C. BLEICHER, *Fraunhofer Institute for structural durability and system reliability LBF, Darmstadt (D)*: **Evaluating the cyclic material behaviour of material imperfections in thick - walled nodular cast iron with the help of non-destructive testing**
- 16.30-17.00 I. ANDREWS, *Capital Refractories Ltd., Derbyshire (UK)*: **MetCon G-A unique and new concept of concept filter for the cost effective and consistent flow modification and filtration of steel and heavy iron castings**
- 17.00-17.30 M. DROBNE, A. STERGAR, S. NOVAK, B. KOŠEC, U. KLANČNIK, *Valji d.o.o., Štore (SI)*: **Ultrasonic investigation of metallurgical bonding in complex castings**

Section 2 : Non ferrous alloys, Hall: Roald Amundsen

- 9.00-9.30 R. BÄHR, C. MICHAELIS, *Otto von Guericke Universität Magdeburg, Magdeburg (D)*: **Aluminium casting: Process, Application, Quality**
- 9.30-10.00 J. MEDVED¹, M. GODEC², I. PAULIN², S. KORES³, M. VONČINA¹, ¹*University of Ljubljana, Ljubljana (SI)* ²*Institut of Metals and Technology, Ljubljana (SI)*, ³*Talum d. d., Kidričevo (SI)*: **Chemical, mechanical and heat wear of tools in casting aluminium alloys**
- 10.00-10.30 L. HAFNER, G. VIDIC, B. TOLAR, *LTH Castings d.o.o., Škofja Loka (SI)*: **Process optimization by introduction of virtual engineering methodology**
- 10.30-11.00 **Break**
- 11.00-11.30 F. FEIKUS¹, B. STAUDER², ¹*Nemak Europe GmbH, Frankfurt (D)*, ²*Nemak Linz GmbH, Linz (A)*: **Development trends, challenges and chances with casting of electric mobility and structural components**
- 11.30-12.00 J. BOBST, *Fondarex SA, Saint-Légier-La Chiésaz (CH)*: **Integration of vacuum systems in HPDC processes**
- 12.00-12.30 M. PURG, *Talum d.d., Kidričevo (SI)*: **An effective business model for innovative development and sustainable growth of aluminium castings production at Talum d.d.**
- 12.30-14.00 **Lunch break in Hotel Riviera Restaurant**
- 14.00-14.30 D. MOLNAR, M. BUBENKO, I. BUDAVARI, *University of Miskolc, Miskolc (HU)*: **Development of an Aluminium tilt casting pouring method**
- 14.30-15.00 V. KOLDA, *Mecas ESI, Pilsen (CZ)*: **Benefits of big Data analysis for die casting**
- 15.00-15.30 P. MILANESE, M. TANGHETI, *IDRA Srl, Travagliato (IT)*: **IDRA thinks big: Growth and new strategies**
- 15.30-16.00 **Break**
- 16.00-16.30 J.LI, *University of Leoben, Leoben (A)*: **Determining casting defects in semi-solid Al and Mg casting parts by computed tomography**
- 16.30-17.00 J. TRČEK, T. HOHNJEC, *Hidria d.o.o., Ljubljana (SI)*: **First phase optimization of high pressure die casting**
- 17.00-17.30 A. GUSEL¹, J. PRISTAVEC², *Mariborska livarna Maribor d.d., Maribor (SI)*, ²*Exoterm –IT d.o.o., Kranj (SI)*: **Prediction and preventive correction of distortions of high-pressure die-cast aluminium parts for automotive industry**

Section 3 : Technologies for foundry industry, Hall: Robert Scott

- 9.00-9.30 M. BODENBURG, J.C. STURM, *Magma Gießereitechnologie GmbH, Aachen (D)*: **Improving competitiveness by integrating virtual optimization into casting component development**
- 9.30-10.00 P. BUNDSCHUH, S. MICHELIC, R. PIERER, *qoncept dx GmbH, Leoben (A)*: **Digital Transformation in Foundries: challenges and solutions**

- 10.00-10.30** D. HOLLAND, *Calderys Deutschland GmbH, Büro Austria, Wiener Neudorf (D)*: **Boron free SILICA MIX Solutions for high powered Coreles Induction Furnaces – more than just environmentally friendly**
- 10.30-11.00** **Break**
- 11.00-11.30** K. WEIß, *RWP GmbH, Roetgen (D)*: **Integrated function realized by modified casting technology**
- 11.30-12.00** S. RAMRATTAN¹, H. MAKINO², ¹*Western Michigan University, Kalamazoo (USA)*, ²*Sintokogio, Ltd., Nagoya (JP)*: **Non-standard dynamic testing for green sand control**
- 12.00-12.30** A. KLIMM, *Simpson technology (Deutschland) GmbH, Euskirchen (D)*: **New developments in high efficiency continuous mixing in green sand systems**
- 12.30-14.00** **Lunch break in Hotel Riviera Restaurant**
- 14.00-14.30** P. MAGALDI, A. PIRRO, *Magaldi Power S.p.a., Salerno (IT)*: **A customized snake-shape efficient and environmentally friendly Magaldi casting cooler-MCC at Kovis plant Štore**
- 14.30-15.00** D. TESIĆ, Z. TESIĆ, *TCT Tesic GmbH (D)*: **Investing in second hand foundry plants: how can you earn and save money with used foundry plants**
- 15.00-15.30** P. WAN, J. ZHOU, Y. LI, Y. YIN, X. PENG, X. JI, X. SHEN, *Huazong University of Science and Technology, Wuhan City (JP)*: **Study on thermal decomposition process of resin adhesives in foundry industry based on TG-DTA**
- 15.30-16.00** **Break**
- 16.00-16.30** J. TITZE, *Krämer + Grebe, Biedenkopf (D)*: **With sensors and actuators to autonomous foundry tools**
- 16.30-17.00** C. GAWERT, E. RIEDEL, R. BÄHR, S. SCHARF, *Otto von Guericke Universität Magdeburg, Magdeburg (D)*: **Potential of numerical supported ultrasonic treatment for the production of aluminium matrix composites**
- 17.00-17.30** B. ČEH, *FEAL-INŽENIRING d.o.o., Ptuj (SI)*: **HERA™ – Release agent with High Efficiency Release Agent, micro spray technology**

Section 4 : Development trends, Hall: Cristoforo Colombo

- 9.00-9.30** S. DUWE¹, B. TONN¹, M. LIEPE², R. BÄHR², M. SCHRUMPF³, ¹*Clausthal University of Technology, Clausthal (D)*, ²*Otto von Guericke University Magdeburg, Magdeburg (D)*, ³*Walzengießerei und Hartgußwerk Quedlinburg GmbH, Quedlinburg (D)*: **Development of wear-resistance ductile iron by simulation based process characterisation and methods of material testing**
- 9.30-10.00** T. MARUYAMA, *Kansai University, Osaka (JP)*: **Potential of ductile High-entropie alloys as casting materials**
- 10.00-10.30** E. POTATURINA, K. SEEGER, *Hüttenes – Albertus Chemische Werke GmbH, Düsseldorf (D)*: **Coatings for additive manufactured moulds**
- 10.30-11.00** **Break**
- 11.00-11.30** M. HOGG, *Mike Hogg Ltd., Cheshire (UK)*: **The future of energy & how to survive it -& thrive**

- 11.30-12.00 S. DOLAMIČ, *EHSiS, industrial solutions d.o.o. (SI)*: **Solutions for lighting in the heavy industry**
- 12.00-12.30 G. MÄURER, *Yxlon International GmbH, Hamburg (D)*: **Additive Manufacturing for the development of Formula 1 sports car components**
- 12.30-14.00 **Lunch break in Hotel Riviera Restaurant**
- 14.00-14.30 K. ASANO, *Kindai University, Osaka (JP)*: **Microstructure and properties of cast metal matrix composites**
- 14.30-15.00 M. AIGNER, M. BRANDNER, L. ELIZONDO, A. PAAR, T. TRICKL, *ESW-Eisenwerk Sulzau Werfen R & E, Weinberger AG, Werfen (D)*: **Set up of a model for heat treatment of rolls for hotstrip mills**
- 15.00-15.30 A. NARDELO, R. ROANA, F.lli Mazzon S.p.A, *Schio (IT)*: **Colour-changing coating**
- 15.30-16.00 **Break**
- 16.00-16.30 G. FEGYVERNEKI, M. BUBENKO, D. MOLNAR, *University of Miskolc, Miskolc (HU)*: **The effect of grain refinement on primary solidification**
- 16.30-17.00 M.FASSINA, *Italpresse Gauss, Capriano del Colle (IT)*: **Advantages of toggle free high pressure die casting machines in the modern industry**
- 17.00-17.30 A. SLÁDEK, M. BRUNA, R. PASTIRČAK, *University of Žilina, Žilina (SK)*: **New trends for technological preparation of investment casting production**

Section 5 : Students and young researchers, Hall: Hall Mystica, Hotel Riviera

- 9.00-9.15 R. OZAH, M. MANAPURAM, *North Eastern Regional Institute of Science and Technology, Nirjuli (IN)*: **Development of coceptual framework on industry 4.0 and its subsystems for automotive piston castings**
- 9.15-9.30 A. REMIŠOVÁ, A. SLÁDEK, M. BRUNA, *University of Žilina (SK)*: **The possibilities for reducing reoxydation in gating system**
- 9.30-9.45 I. MIHALIC POKOPEC¹, M. PETRIČ², P. MRVAR², B. BAUER¹, ¹University of Zagreb, Zagreb (CRO), ²University of Ljubljana, Ljubljana (SI): **Microstructure and mechanical properties of heavy section ductile iron castings**
- 9.45-10.00 T. OKUNO¹, K. SOMIYA¹, Y. TAKAGI¹, K. YANO¹, S. BABA², ¹ Mie University, Mie (JP), ²Flow Science Japan, Inc., Shizuoka (JP): **Optimum design of branch pattern considering product shape for die-casting design**
- 10.00-10.20 **Break**
- 10.20-10.35 J. ŠPORIN, P. MRVAR, Ž. VUKELIĆ, *University of Ljubljana, Ljubljana (SI)*: **Roller cone wear mechanism**
- 10.35-10.50 M. AHMED¹, A. NOFAL², R. BÄHR¹, A. VOLOCHKO³, ¹Otto von University of Magdeburg, Magdeburg (D) ²Central Metallurgical R&D Institute (CMRDI), Cairo (EG), ³The Physico Technical Institute, Minsk (BY): **New insights towards developing a new high strenght high ductility austempered ductile iron**
- 10.50-11.05 P. MARTIN, D. FRANZEN, B. PUSTAL, A. BÜHRIG-POLACZEK, *Foundry Institut RWTH Aachen, Aachen (D)*: **Modification of mechanical properties of high silicon ductile iron by influencing silicon microsegregation via aluminium and nickel**

- 11.05-11.20 S.K. SUBBARAYADU, M. MANAPURAM, *North Eastern Regional Institute of Science and Technology, Nirjuli (IN)*: **Research issues and solutions in an automobile foundry: a study**
- 11.20-11.40 **Break**
- 11.40-12.40 **Round table: Inclusion of young people into entrepreneurship**
- 12.40-14.00 **Lunch break in Hotel Riviera Restaurant**
- 14.00-14.15 R. MARKEŽIČ, N. MOLE, I. NAGLIČ, B. MARKOLI, R. ŠTURM, *University of Ljubljana, Ljubljana (SI)*: **Tool hardness change prediction during high pressure die casting process**
- 14.15-14.30 A. CZIEGLER, P. SCUMACHER, *Montanuniversität Leoben, Leoben (A)*: **Aspects of grain refinement of copper alloys**
- 14.30-14.45 A. JUG, I. ANŽEL, *University of Maribor, Maribor (SI)*: **The influence of solidification conditions on the microstructure of Ag-La alloy**
- 14.45-15.05 **Break**
- 15.05-15.20 G. GYARMATI, G.T. MENDE, M. TOKAR, *University of Miskolc, Miskolc (HU)*: **Liquid metal quality assessment with X-ray computed tomography**
- 15.20-15.35 F. KOZINA¹, Z. ZOVKO BRODARAC¹, M. PETRIČ², A. PENKO², *¹University of Zagreb, Zagreb (CRO), ²University of Ljubljana, Ljubljana (SI)*: **The influence of solution hardening on microstructure and mechanical properties of Al Mg_{2,2} Li_{2,1} alloy**
- 15.35-15.50 B. ZEKA, B. MARKOLI, B. LESKOVAR, M. PETRIČ, *University of Ljubljana, Ljubljana (SI)*: **Development of Al-cast alloy with Li additions**
- 15.50-16.10 **Break**
- 16.10-16.25 M. KURIŠ, D. BOLIBRUCHOVA, M. MATEJKA, *University of Žilina, Žilina (SK)*: **Effect of different additions of Zr on mechanical properties of aluminium alloy AlSi9Cu1Mg used for production of precision castings created by investment casting**
- 16.25-16.40 B. WU, J. ZHOU, X. JI, Y. YIN, X. SHEN, *Huazhong University of Science and Technology, Hubei (CN)*: **Automatic detection of casting defects in X-ray images with feature engineering and machine learning**
- 16.40-16.55 J. ARBEITER¹, M. VONČINA¹, D. VOLŠAK², J. MEDVED¹, *¹University of Ljubljana, Ljubljana (SI), ²Impol Aluminium Industry d. d., Slovenska Bistrica (SI)*: **Microstructural Evolution of As-cast and homogenized Al-Mn-Fe-Si Aluminium Alloy**

FRIDAY AFTERNOON, 20.09.2019, Hall: Cristoforo Colombo

- 18.00 **Closing Ceremony**

Poster presentations

1. K. TANAKA, S. SAIKAWA, *University of Toyama, Toyama (JP)*: **Modification of castability in high strength Al Alloy castings**
2. Y. ZHAO, S. SAIKAWA, *University of Toyama, Toyama (JP)*: **The behavior of solidification in Al-10%Si-Mg casting alloy**
3. A. OSUGI, S. SAIKAWA, *University of Toyama, Toyama (JP)*: **Influence of Sr content on hot tearing in Al-Mg-Si alloy**
4. M. IJIMA, S. SAIKAWA, *University of Toyama, Toyama (JP)*: **Effect of P content on age hardening behavior of Al-10%Si-0.3%Mg alloy**
5. A. NIIDA, Y. MAEDA, *Daido University, Nagoya (JP)*: **Observation of Air Entrapment during Mold Filling of Die Casting Using Water Model Experiment**
6. S. TANIGUCHI, Y. MAEDA, *Daido University, Nagoya (JP)*: **Inlet Condition for Mold Filling Simulation in Gravity Casting of Aluminum Alloy**
7. M. VONČINA¹, P. CVAHTE², A. KRAČUN², T. BALAŠKO¹, J. MEDVED¹, ¹*University of Ljubljana, Ljubljana (SI)*, ²*Impol Group, Slovenska Bistrica (SI)*: **Analysis of chemical composition homogeneity through the intersection of the slice of the drug from group 6xxx**
8. M. DOJKA, A. STUDNICKI, *Silesian University of Technology, Gliwice (PL)*: **Surface-active inoculation – New potential for high chromium cast iron**
9. J. ANŽIČ, D. METLJAK, *PSM d.o.o., Ljubljana (SI)*: **Mechanical marking in casting**
10. U.A. ESER, M. RAGIP MUHAFFEL, *Ferro Döküm Sanayi ve Dış Ticaret A.Ş., Kocaeli (TR)*: **Grain Refinement of A256 Alloy with Boron**