IIW 2023 PROGRAMME OVERVIEW

15 July 2023, Saturday

Time	Lotus 4E	Level 4 Foyer
12pm – 5pm	**Board of Directors Meeting**	
4pm – 6pm		**Pre-Event Registration**

16 July 2023, Sunday

Time	Orchid Main	Orchid Junior 4311 & 4312	Orchid Junior 4211 & 4212	Melati Junior 4011 & 4111	Pre-Event Function Foyer
8.30 – 10.30am		**CXIII** Fatigue Behaviour of Welded Components and Structures			
9am – 10.30am	**General Assembly**				
10.30am – 11am		**COFFEE/TEA BREAK**			
11am – 12.30pm		**CXIII**			
12.30pm – 1.30pm	**LUNCH**				
1pm -1.30pm			**WG – RA Meeting**		
1.30m – 3pm		**CXIII**			
3pm – 3.30pm	**COFFEE/TEA BREAK**				
3.30pm – 5.30pm		**CXIII**		**Ice Breaker Session**	
6pm – 7.30pm	**Opening Ceremony**				
7.30pm – 10pm					**Welcome Reception**

17 July 2023, Monday

Time	Orchid Main 4201AB	Orchid Main 4202 & 4203	Orchid Main 4204	Orchid Main 4205	Orchid Main 4206	Orchid Main 4301AB	Orchid Main 4302	Orchid Main 4303	Orchid Main 4304	Orchid Main 4305 & 4306	Melati Junior 4010AB	Melati Junior 4011 & 4111
8am – 6pm		**Registration Open at Level 4 Foyer**										
8.30am – 6pm		**Exhibition Open at Melati Main Ballroom**										
8.30am – 10.30am		**C-XII** Arc Welding Processes and Production Systems	**C-V** Non-Destructive Control and Quality Assurance of Welded Products	**C-IV** Power Beam Processes	**C-VII** Microjoining & Nanojoining	**IAB A Meeting**		**C-IX** Behaviour of Metals Subjected to Welding		**C-XIII** Fatigue Behaviour of Welded Components and Structures	**C-VIII** Health, Safety and Environment	**C-III** Resistance Welding, Solid State Welding and Allied Joining Processes
10.30am – 11am	**COFFEE/TEA BREAK**											
11am – 12.30pm		**C-XII**	**C-V**	**C-IV**	**C-VII**	**IAB A Meeting**		**C-IX**		**C-XIII**	**C-VII**	**C-III**
12.30pm – 2pm	**LUNCH**											
2pm – 3pm	**C-XI** Pressure Vessels, Boilers and Pipelines	**C-XII**	**C-X** Structural Performance of Welded Joints-Fracture Avoidance	**C-II** Arc Welding and Filler Metals		**IAB A Meeting**	**C-I** Additive Manufacturing , Thermal Cutting and Allied Processes		**C-XVII** Brazing, Soldering and Diffusion Bonding	**C-XIII**	**C-VI** Terminology	**C-III**
3pm – 3.30pm	**COFFEE/TEA BREAK**											
3.30pm – 6pm	**C-XI**	**C-XII**	**C-X**	**C-II**		**IAB A Meeting**	**C-I**		**C-XVII**	**C-XIII**	**C-VI**	**C-III**
7pm – 10pm	**SINGAPORE NITE AT GARDENS BY THE BAY**											

18 July 2023, Tuesday

Time	Lotus 4B	Lotus Junior 4E	Orchid Main 4201AB	Orchid Main 4202 & 4203	Orchid Main 4204	Orchid Main 4205	Orchid Main 4206	Orchid Main 4301AB	Orchid Main 4302	Orchid Main 4303	Orchid Main 4304	Orchid Main 4305 & 4306	Melati Junior 4110	Melati Junior 4010AB	Melati Junior 4011 & 4111
8am – 6pm			**Registration Open at Level 4 Foyer**												
8.30am – 6pm			**Exhibition Open at Melati Main Ballroom**												
8.30am – 10.30am			**IAB B Meeting**	**C-I** Additive Manufacturing, Thermal Cutting and Allied Processes **C-IV** Power Beam Processing **C-XII** Arc Welding Processes and Production Systems		**C-V** Non-Destructive Control and Quality Assurance of Welded Products	**C-XIV** Education and Training	**C-XIII** Fatigue Behaviour of Welded Components and Structures	**C-IX** Behaviour of Metals Subjected to Welding			**C-VII** Microjoining & Nanojoining **C-XVII** Brazing, Soldering and Diffusion Bonding	**C-VIII** Health, Safety and Environment	**C-XV** Design, Analysis and Fabrication of Welded Structures	**C-III** Resistance Welding, Solid State Welding and Allied Joining Processes
10.30am – 11am			**COFFEE/TEA BREAK**												
11am – 12.30pm			**IAB B Meeting**	**C-I / C-IV / C-XII**		**C-V**	**C-XIV**	**C-XIII**	**C-IX**			**C-VII C-XVII**	**C-VIII**	**C-XV**	**C-III**
12.30pm – 2pm	**AA Organiser Meeting**	**LUNCH**													
		Japanese Group										**German Group**		**Indian Group**	
2pm – 3pm			**IAB B Meeting**	**C-I / C-IV / C-XII**		**C-II** Arc Welding and Filler Metals		**C-X** Structural Performance of Welded Joints-Fracture Avoidance **C-XIII** Fatigue Behaviour of Welded Components and Structures **C-XV** Design, Analysis and Fabrication of Welded Structures	**C-XVI** Polymer Joining and Adhesive Technology	**C-XI** Pressure Vessels, Boilers and Pipelines				**C-VI** Terminology	**C-III**
3pm – 3.30pm			**COFFEE/TEA BREAK**												
3.30pm – 6pm			**IAB B Meeting**	**C-I / C-IV / C-XII**		**C-II**		**C-X / C-XIII / C-XV**	**C-XVI**	**C-XI**				**C-VI**	**C-III**
6.30pm – 8pm												**Young Professional Event**			
6.30pm – 10pm		**BOARD OF DIRECTIORS' DINNER**													

19 July 2023, Wednesday

Time	Lotus Junior 4E	Orchid Main 4201AB	Orchid Main 4202 & 4203	Orchid Main 4204	Orchid Main 4205	Orchid Main 4206	Orchid Main 4301AB	Orchid Main 4302	Orchid Main 4303	Orchid Main 4304	Orchid Main 4305 & 4306	Melati Junior 4010AB	Melati Junior 4011 & 4111
8am – 6pm	**Registration Open at Level 4 Foyer**												
8.30am – 6pm	**Exhibition Open at Melati Main Ballroom**												
8.30am – 10.30am		**C-XIV** Education and Training	**C-XII** Arc Welding Processes and Production Systems	**C-V** Non-Destructive Control and Quality Assurance of Welded Products	**C-IV** Power Beam Processing	**C-VII** Microjoining & Nanojoining		**IAB MM**	**C-IX** Behaviour of Metals Subjected to Welding		**C-XIII** Fatigue Behaviour of Welded Components and Structures	**C-XV** Design, Analysis and Fabrication of Welded Structures	**C-III** Resistance Welding, Solid State Welding and Allied Joining Processes
10.30am – 11am	**COFFEE/TEA BREAK**												
11am – 12.30pm	**IAB BD**	**C-XIV**	**C-XII**	**C-V**	**C-IV**	**C-VII**			**C-IX**		**C-XIII**	**C-XV**	**C-III**
12.30pm – 2pm	**LUNCH**												
	IIW/EWF						**Korean Chinese Japanese BOD Meeting** 12pm-1pm	**USA Group**					
2pm – 3pm		**C-XI** Pressure Vessels, Boilers and Pipelines	**C-XII** Arc Welding Processes and Production Systems	**C-X** Structural Performance of Welded Joints-Fracture Avoidance	**C-II** Arc Welding and Filler Metals	**C-VIII** Health, Safety and Environment	**C-XVII** Quality Management in Welding and Allied Processes	**C-I** Additive Manufacturing, Thermal Cutting and Allied Processes		**C-XVII** Brazing, Soldering and Diffusion Bonding	**C-XIII**	**C-VI** Terminology	**C-III**
3pm – 3.30pm		**COFFEE/TEA BREAK**											
3.30pm – 6pm		**C-XI**	**C-XII**	**C-X**	**C-II**	**C-VIII**	**C-XVII**	**C-I**		**C-XVII**	**C-XIII**	**C-VI**	**C-III**
7.30pm – 11pm		**GALA BANQUET AT LEVEL 5 SANDS GRAND BALLROOM**											

20 July 2023, Thursday

Time	Lotus 4E	Orchid Main 4201AB	Orchid Main 4202	Orchid Main 4203	Orchid Main 4301AB	Orchid Main 4302	Orchid Main 4303	Orchid Main 4204	Orchid Main 4205	Orchid Main 4304	Orchid Main 4305	Orchid Main 4206	Orchid Main 4306
8am – 6pm	**Registration Open at Level 4 Foyer**												
8.30am – 6pm	**Exhibition Open at Melati Main Ballroom**												
8.30am – 10.30am								**IIW International Conference Plenary Session**				**C-XIII** Fatigue Behaviour of Welded Components and Structures	
10.30am – 11am	**WG-Stand Meeting**	**COFFEE/TEA BREAK**											
11am – 12.30pm		**IIW International Conference**	**IIW International Conference**	**IIW International Conference**	**IIW International Conference**	**IIW International Conference**	**IIW International Conference**					**C-XIII**	
12.30pm – 2pm	**LUNCH**												
2pm – 3pm	**Editorial Board**	**IIW International Conference**	**IIW International Conference**	**IIW International Conference**	**IIW International Conference**	**IIW International Conference**	**IIW International Conference**						
3pm – 3.30pm		**COFFEE/TEA BREAK**											
3.30pm – 4pm		**IIW International Conference**	**IIW International Conference**	**IIW International Conference**	**IIW International Conference**	**IIW International Conference**	**IIW International Conference**						
4pm – 6pm	**WG-TCOM**											**Administrative Meeting**	

21 July 2023, Friday

Time	Lotus 4E	Orchid Main 4201AB	Orchid Main 4202	Orchid Main 4203	Orchid Main 4301AB	Orchid Main 4302	Orchid Main 4303
8am – 4pm	Registration Open at Level 4 Foyer						
9.am – 3pm	Exhibition Open at Melati Main Ballroom						
9am – 10.30am	TMB	IIW International Conference	IIW International Conference	IIW International Conference	IIW International Conference	IIW International Conference	IIW International Conference
10.30am – 11am		COFFEE/TEA BREAK					
11am – 12.30pm	Board Meeting	IIW International Conference	IIW International Conference	IIW International Conference	IIW International Conference	IIW International Conference	IIW International Conference
12.30pm – 2pm		INTERNATIONAL CONFERENCE LUNCH RECEPTION					
2pm – 3pm		IIW International Conference	IIW International Conference	IIW International Conference	IIW International Conference	IIW International Conference	IIW International Conference
3pm – 3.30pm		COFFEE/TEA BREAK					
3.30pm – 4.45pm		IIW International Conference	IIW International Conference	IIW International Conference	IIW International Conference	IIW International Conference	IIW International Conference
4.45pm – 5pm							

DETAILED PROGRAMME FOR INTERNATIONAL CONFERENCE

DAY 1

International Conference Day 1 - 20th July 2023, Thursday

Time	Programme
08:45-09:00	***Orchid Main Ballroom 4204-5 & 4304-5***
	Opening Address
09:00-09:50	*Session Chair: Prof Wei Zhou* **The Portevin Lecture** Advances in metal 3D printing **Prof Paulo Bartolo**
09:50-10:30	**Plenary Keynote** An overview of the state-of-the-art development of welding and joining technology **Dr Tomoyuki Ueyama**
10:30-11:00	**Tea Beak @ Melati Room**

Session 1

(11) Advanced Arc Welding or other welding processes	(3) Friction Stir Welding	(14) Design, Analysis and Fabrication of Welded Structure	(6) Additive Manufacturing - Wire Arc Additive Manufacturing	(8) Additive Manufacturing - Power Bed 3D Printing (9) Laser Welding	IWM SYMPOSIUM
Orchid Main Ballroom 4202	***Orchid Main Ballroom 4302***	***Orchid Main Ballroom 4201AB***	***Orchid Main Ballroom 4301AB***	***Orchid Main Ballroom 4303***	***Orchid Main Ballroom 4203***
Session Chair: Mr BT Ong *Session Co- chair: Mr Reddy*	*Session Chair: Professor Ke Chen* *Session Co-chair: Mr William Chong/Mr Yusoof*	*Session Chair: Mr Simon Wong* *Session Co-chair: Mr Samuel Lye*	*Session Chair: Mr Benoit Verquin* *Session Co-chair: Ms Aishwarya*	*Session Chair: Dr John Pang* *Session Co-chair: Mr Hooi Yu Koh*	*Session Chair: Stephan Egerland* *Session Co-chair: Wei Zhou*
1100 HRS to 1115 HRS Effect of Process Parameters on Weld Bead Shape and Fatigue Behavior of GMAW Lap Joint in JSH270 And JSH590 Steel Sheets OR-11-0046 **Bijoy Rajak** **Tata Steel**	**1100 HRS to 1115 HRS** Evolution of microstructure, texture and mechanical properties of special friction stir welded T-joints for an Î± titanium alloy OR-03-0148 **Dr Yu Su** **Northwestern Polytechnical University**	**1100 HRS TO 1115 HRS** Hardness Prediction System for Entire Multi-pass Weld Including Both Weld Metal and Heat Affected Zone of Low-alloy Steel OR-14-0022 **Lina Yu** **Graduate School of Engineering, Osaka University**	**1100 HRS TO 1115 HRS** In-situ Micro-forging Assisted Wire Arc Additive Manufacturing of Aluminum Alloy: Formability and microstructure OR-06-0119 **Zhifei Xu** **Beijing Universtity of Technology**	**1100 HRS TO 1115 HRS** Understanding the role of track interaction on the defect generation in electron beam powder bed fusion OR-08-0185 **Dr Chaochao Wu** **Fuzhou University**	**1100 HRS TO 1110 HRS** Opening Addresses: **YuMing Zhang** **University of Kentucky** **Stephan Egerland** **Fronius**
1115 HRS TO 1130 HRS Influence of the current source on microstructure and degradation of the copper-steel interface during resistance spot welding OR-11-0069 **Dr Sylvain Dancette** **CNRS**	**1115 HRS TO 1130 HRS** Microstructure analysis of T2 copper friction stir additive manufacturing OR-03-0088 **HuiZhao Li** **Beijing Institute of Petrochemical Technology**	**1115 HRS TO 1130 HRS** Adaptive Threshold Optimization based Incremental Learning Strategy for Online Monitoring of Pipeline Weld Crack Leakage OR-14-0043 **Dr Jing Huang** **Xi'an Jiaotong University**	**1115 HRS TO 1130 HRS** Microstructure and deposition morphology of Ti6Al4V under wire pulsed arc additive manufacture OR-06-0169 **Yu Zhenyu** **The Hong Kong Polytechnic University**	**1115 HRS TO 1130 HRS** On critical shifts of the process window due to heat accumulation in laser powder bed fusion of metals OR-08-0034 **Dr Gunther Mohr** **Bundesanstalt für Materialforschung und –prüfung (BAM)**	**1110 HRS TO 1150 HRS** **Keynote (40mins)** Hybrid Intelligence Problems in Intelligentized Welding Manufacturing Systems **Shanben Chen** **Shanghai Jiao Tong University**
1130 HRS TO 1145 HRS The System Of Modular Welding Machines With Full Digital Control For Advance Welding OR-11-0082 **Dr Andrey Vladimirov** **Power Source Technology Manufacturing Ltd**	**1130 HRS TO 1150 HRS** **Invited (20 mins)** Development of novel double-side friction stir Z shape butt-lap welding process for dissimilar joining of medium-thick Ti/Al dissimilar plates OR-03-0165 **Lei Shi** **Institute of Materials Joining, Shandong University**	**1130 HRS TO 1145 HRS** Reusable seismic frame design for the circular design concept OR-14-0132 **Karoly Jarmai** **University of Miskolc**	**1130 HRS TO 1145 HRS** Interfacial characteristic and mechanical properties of Inconel-copper functional bimetallic structures fabricated by Directed Energy Deposition-Arc OR-06-0176 **Kun Liu** **Beijing University of Technology**	**1130 HRS TO 1145 HRS** Formability improvement, cracking behavior and control of Y-modified Ti-43Al-4Nb-1Mo-0.1B alloys produced by selective laser melting OR-08-0074 **Dr Piao Gao** **Wuhan Textile University**	**1150 HRS TO 1210 HRS** **Invited (20mins)** Driving Towards Flexible and Automated Robotic Multi-Pass Arc Welding **Charalampos Loukas** **University of Strathclyde**
1145 HRS TO 1200 HRS Challenges and opportunities in the arc welding of offshore steels OR-11-0211 **Dr Marcell Gaspar** **University of Miskolc**	**1150 HRS TO 1205 HRS** Study on Microstructure and Mechanical Properties of Double-Sided and Synergistic Double-Sided FSW Joints OR-03-0228 **Dr Yangfan Zou** **Northwestern Polytechnical University**	**1145 HRS TO 1200 HRS** Characterization by SEM EDS for Welding API 5L X-65 Cladded UNS N08825 Material Due To The Effect of Welding Repair OR-14-0261 **Defi Pramesti** **Universitas Indonesia**	**1145 HRS TO 1200 HRS** A Novel Molten Metal Deposition Based Additive Manufacturing Technique for Aluminum Alloys OR-06-0187 **Dr Angshuman Kapil** **KU Leuven**	**1145 HRS TO 1200 HRS** Porosity reduction and strength enhancement of selective laser melted AlSi10Mg by laser melting deposition welding OR-09-0110 **Can Wang** **Beijing University of Technology**	**1210 HRS TO 1230 HRS** **Invited (20mins)** Augmented Virtuality Human-robot Interactive Welding: Principles and Applications **Wenhua Jiao** **University of Kentucky**
1200 HRS TO 1215 HRS Development, qualification and production analysis of Local Vacuum Power Beam welding in heavy fabrication for low carbon energy applications OR-11-0223 **Chris Punshon** **Cambridge Vacuum Engineering**	**1205 HRS T0 1220 HRS** Friction stir spot welding experiments of AA6061 aluminium alloy and carbon fibre reinforced polyetheretherketone composite OR-03-0331 **Hongjun Li** **Zhejiang Sci-Tech University**	**1200 HRS TO 1215 HRS** Weld Solidification Cracking Susceptibility in DC53 Cold Work Tool Steel (Part I: Trans -Varestraint Test Method) OR-14-0036 **Jakkapan Chara** **King Mongkut's University of Technology Thonburi**	**1200 HRS TO 1215 HRS** Forming Performance of wire arc additive manufactured Al-Zn-Mg-Cu alloy with different positive/negative electrode ratios of CMT advance process OR-06-0197 **Wang Yuwen** **Shandong University**	**1200 HRS TO 1215 HRS** Welding of thin sheets of S960MC steel by laser beam welding OR-09-0040 **Martin Frátrik** **University of Žilina**	
1215 HRS TO 1235 HRS **Invited (20mins)** Key information perception and on-line weld quality assessment under complex welding scenes OR-12-0260 **Prof Huabin Chen** **Shanghai Jiaotong University**		**1215 HRS TO 1230 HRS** Weld Solidification Cracking Susceptibility in DC53 Cold Work Tool Steel (Part II: Evaluation of Solidification Cracking Resistance Based on High Temperature SCTR Curve) OR-14-0037 **Rittichai Phaoniam** **Rajamangala University of Technology Krungthep**	**1215 HRS TO 1230 HRS** Process design for multi-material wire arc additive manufacturing OR-06-0199 **Mr Seyed Aref Banaee** **KU Leuven**	**1215 HRS TO 1230 HRS** Development of variable constraint and relaxation type hot-cracking test system OR-09-0102 **Yang Shaowei** **Hiroshima University**	

International Conference Day 1 - 20th July 2023, Thursday

12:30-13:30 — **Lunch Break**
Exhibition @ Melati Main Ballroom 4001A-3 & 4101A-3

13:30-15:00 — **Session 2**

(11) Advanced Arc Welding or other welding processes	(1) Brazing and Soldering (5) Cold Spray Technology	(13) Numerical Modeling of Welding Process	(6) Additive Manufacturing - Wire Arc Additive Manufacturing	(7) Additive Manufacturing - Laser directed Energy Deposition	Symposium on IWM
Orchid Main Ballroom 4202	***Orchid Main Ballroom 4302***	***Orchid Main Ballroom 4201AB***	***Orchid Main Ballroom 4301AB***	***Orchid Main Ballroom 4303***	***Orchid Main Ballroom 4203***
Session Chair: Mr BT Ong *Session Co- chair: Mr Reddy*	*Session Chair: Prof Shuo Yin* *Session Co-chair: Mr Yusoof/Mr William Chong*	*Session Chair: Prof Dean Deng* *Session Co-chair: Mr Simon Wong/Mr Samuel Lye*	*Session Chair: Mr Sze Thiam Siong* *Session Co-chair: Mr Subbiah Krishnan*	*Session Chair: Dr Guijun Bi* *Session Co-chair: Dr John Pang/Mr Hooi Yu Koh*	*Session Chair: Yonghua Shi* *Session Co-chair: Charalampos Loukas*
1330 HRS TO 1345 HRS Weld-forming Mechanism of Flux Bands Constricting Arc Welding High-strength Steel Sandwich Panels OR-11-0250 **Lei Wang** **Lanzhou University of Technology**	**1330 HRS TO 1345 HRS** Online welding deviation detection and burn-through identification of yolov5 sheet lap MIG welding based on passive vision OR-01-0107 **Jie Wang** **School of Mechanical Engineering** **Xi'an Jiaotong University**	**1330 HRS TO 1345 HRS** Micro-macro modeling of tensile behavior of hybrid welded joint of AlSi10Mg parts produced by additive manufacturing and casting **OR-13-0041** **Nammalvar Raja Rajan Aravindh** **Westphalian University of Applied Sciences, Institute of Mechanical Engineering**	**1330 HRS TO 1345 HRS** Probing Dimensional Consistency during Gas Metal Arc Directed Energy Deposition of Automotive Aluminium Alloys OR-06-0219 **Prashant Kumar Chaurasia** **Indian Institute of Technology Bombay**	**1330 HRS TO 1345 HRS** Bonding strengthening through oxidation inhibition by adding TiC particles in laser directed energy deposition of 316L stainless steel OR-07-0141 **Dr Li Zhang** **Swinburne University of Technology; Institute of Intelligent Manufacturing, GDAS**	**1330 HRS TO 1345 HRS** Fuzzy control of backside weld width in cold metal transfer welding of X65 pipeline at the vertical-up position **Zhijiang Wang** **Tianjin University**
1345 HRS TO 1400 HRS Weld HAZ in ultra-high strength steels OR-11-0282 **Dr Mohsen Amraei** **University of Turku**	**1345 HRS TO 1400 HRS** Study on Microstructure and interfacial properties of Skutterudite / Half-Heusler segmented thermoelectric material joining process OR-01-0253 **Yefeng Bao** **College of Mechanical and Electrical Engineering** **Hohai University**	**1345 HRS TO 1400 HRS** Study on the arc behavior of Double wire AC-TIG cross arc OR-13-0076 **JianZhou Xu** **Lanzhou University of Technology**	**1345 HRS TO 1400 HRS** Probing Build Geometry for Gas Metal Arc Directed Energy Deposition of Multiples Tracks and Layers using a Computational Model OR-06-0220 **Dr Sanghamitra Das** **Indian Institute of Technology Bombay**	**1345 HRS TO 1400 HRS** Heterostructure Effect at The Interface of Maraging Steel and Carbon Steel Deposited by Directed Energy Deposition OR-07-0194 **Dr Durim Eo** **Korea Institute of Industrial Technology (KITECH)**	**1345 HRS TO 1400 HRS** Robotizing Flexible Double-electrode GMAW Process through Machine Vision and Deep Learning **YuMing Zhang** **University of Kentucky**
1400 HRS TO 1415 HRS Effects of Filler Wires on the Hot Cracking Susceptibility and Mechanical Properties of 2195-T8 Al-Li Alloy TIG-welded joint OR-11-0303 **Sicong Zhang** **Tsinghua University**	**1400 HRS TO 1415 HRS** Diffusion bonding of 6063Al alloys using Zn interlayer in air: dynamic behaviors of interfacial elements and oxide layers OR-01-0237 **Pu Zhao** **Harbin Institute of Technology**	**1400 HRS TO 1415 HRS** Quantitative Interpretation of Electrode Displacement Signal in Resistance Spot Welding. OR-13-0091 **Dr Yu-Jun Xia** **Shanghai Jiao Tong University**	**1400 HRS TO 1415 HRS** Study of Decarburization in Low Carbon Steel Produced by Wire Arc Additive Manufacturing OR-06-0273 **Dr Aprilia Aprilia** **Nanyang Technological University**	**1400 HRS TO 1415 HRS** Recent Development of Metal AM Qualification OR-07-0310 **Ze Chen** **Nanyang Technological University**	**1400 HRS TO 1415 HRS** A machine vision-based system for weld bead profile extraction during multi-layer multi-pass welding process OR-12-0067 **Van Doi Truong** **Hanyang University, Korea**
	1415 HRS TO 1430 HRS Braze Filler Development for Ni-base Superalloys OR-01-0207 **Zhenzhen Yu** **Colorado School of Mines**	**1415 HRS TO 1435 HRS** **Invited (20 mins)** Mechanical characterization and constitutive modeling of materials during welding process and its application in welding numerical simulation OR-13-0244 **Dr Jijin Xu** **Shanghai Jiao Tong University**	**1415 HRS TO 1430 HRS** Evaluation of dissimilar steel interface fabricated using wire arc additive manufacturing OR-06-0279 **Wengang Zhai** **Nanyang Technological University**	**1415 HRS TO 1430 HRS** The Influence of Additive Manufacturing Process Parameters on Residual Stress Of 17-4 Ph Stainless Steel Parts OR-07-0010 **Gökhan Çelik** **Middle East Technical University**	**1415 HRS TO 1430 HRS** Weld Localization and Defect Identification Based on Deep Learning OR-12-0086 **Xiaoteng Zhu** **Beijing Institute of Petrochemical Technology**
1430 HRS TO 1445 HRS Microstructure and Mechanical Properties of Single-Sided Resistance Element Welding Joints of Al/Steel OR-11-0095 **EunBeen Gong** **Dong-Eui University**	**1430 HRS TO 1445 HRS** Effect of double aging heat treatment on microstructure and tribological behaviour of cold sprayed IN718 coating OR-05-0203 **Alwin B** **Indian Institute of Technology Madras**	**1435 HRS TO 1450 HRS** Simulation-supported Laser Hardening of Small-diameter Holes OR-13-0256 **Dr Anton Evdokimov** **Brandenburg University of Technology Cottbus-Senftenberg**	**1430 HRS TO 1445 HRS** Effect of Inter-Layer Cooling on Microstructure of Low-Carbon Steel Fabricated by Wire Arc Additive Manufacturing OR-06-0339 **Dr Shibo Liu** **A*STAR**	**1430 HRS TO 1445 HRS** Relieving anisotropy of mechanical properties by optimization of microstructure through ultrasonic vibration assisted laser direct deposition OR-07-0298 **Chun Yu** **Shanghai Jiao Tong University**	**1430 HRS TO 1445 HRS** A real-time modified analytical weld pool model to measure the penetration in GTAW based on 3D weld pool surface OR-12-0349 **Shaojie Wu** **Tianjin University**
1445 HRS TO 1500 HRS A Study on joining Characteristics of Complex Vibration Based Ultrasonic Metal Welding for Electric Vehicle Batteries OR-11-0140 **Park Seongbeom** **Dong-Eui University**	**1445 HRS TO 1500 HRS** Microstructure and mechanical properties of cold sprayed IN718 coating deposited on IN718 substrate OR-05-0205 **Aviral Bisht** **Indian Institute of Technology Madras**	**1450 HRS TO 1505 HRS** Influence of structural constraint on inherent deformation of LAHS steel fillet joint OR-13-0268 **Wei Liang** **College of Mechatronics & Automotive Engineering, Chongqing Jiao Tong University**	**1445 HRS TO 1500 HRS** Effect of Print Features on the Mechanical Properties of thin-walled high-strength WAAM-Components for Construction OR-06-0191 **Hendrik Jahns** **Institute of Steel Structures, TU Braunschweig**	**1445 HRS TO 1500 HRS** Development of a Portable Laser Metal Deposition System for On-SitDevelopment of a Portable Laser Metal Deposition System for On-Site Metal Repair Application OR-07-0002 **Prof John H. L. Pang** **Nanyang Technological University**	**1445 HRS TO 1500 HRS** Development of Machine Learning model for trajectory deviation detection in multi-pass TIG welding in a narrow gap. OR-12-0058 **Theo Boutin** **University of Montpellie, France**

International Conference Day 1 - 20th July 2023, Thursday

15:00-15:30 — **Tea Beak @ Melati Room**

Session 3

15:30-17:45

(10) Joining of Ceramics or Dissimilar Materials	(5) Cold Spray Technology	(16) Fatigue and Fracture of Welded Joints	(15) Non-Destructive Testing	(2) Mirco and Nano Joining (4) Linear Friction Welding	Symposium on IWM
Orchid Main Ballroom 4202	***Orchid Main Ballroom 4302***	***Orchid Main Ballroom 4201AB***	***Orchid Main Ballroom 4301AB***	***Orchid Main Ballroom 4303***	***Orchid Main Ballroom 4203***
Session Chair: Mr BT Ong *Session Co- chair: Mr Reddy*	*Session Chair: Prof Wenya Li* *Session Co-chair: Dr Chungjie Huang*	*Session Chair: Mr Simon Wong* *Session Co-chair: Mr Samuel Lye*	*Session Chair: Prof David Fan* *Session Co-chair: Mr Sze Thiam Siong/Mr Subbiah Krishnan*	*Session Chair: Dr John Pang* *Session Co-chair: Mr Hooi Yu Koh*	*Session Chair: Zhijiang Wang* *Session Co-chair: Wenhua Jiao*
1530 HRS TO 1545 HRS Study Effect of Using Block System (BS) on joint Dissimilar Weld ASTM 355 to ASTM 304L under controlled PWHT condition OR-10-0023 **Sabandi Ismadi** **University of Indonesia**	**1530 HRS TO 1550 HRS** **Invited (20mins)** Solid-state Cold Spraying Goes beyond a Coating Process with an In-depth Understanding of the Key Issues OR-05-0225 **Wenya Li** **Northwestern Polytechnical University**	**1530 HRS TO 1545 HRS** Effect of Residual Stress on Ratcheting of Rail Welds OR-16-0054 **Yifei Li** **Monash University**	**1530 HRS TO 1545 HRS** Improved UltraMARS System for Non-destructive Measurement of Residual Stresses OR-15-0215 **Kleiman Jacob** **Structural Integrity Technologies Inc**	**1530 HRS TO 1545 HRS** In-situ investigation on fracture mechanism of linear friction welded dissimilar Ti17($\hat{I}\pm+\hat{I}^2$)/Ti17($\hat{I}^2$) joint during tensile deformation OR-04-0061 **Dr Zhenguo Guo** **Northwestern Polytechnical University**	**1530 HRS TO 1550 HRS** **Invited (20 mins)** ISTM: a robust and semi-supervised seam tracking model using an interactive segmentation model **Yonghua Shi** **South China University of Technology**
1545 HRS TO 1600 HRS Interfacial Microstructure of Dissimilar Weld of Steel to Aluminum Containing Intermediate Metals and its Effect on Mechanical Properties OR-10-0064 **Kiyoaki Suzuki** **Tohoku University**	**1550 HRS TO 1610 HRS** **Invited (20mins)** Mechanical alloying of cold-sprayed Ni-Nb-Si composite coating by friction stir processing: Improvement in microstructure and resistance against molten silicates corrosion OR-05-0224 **Yaxin Xu** **Northwestern Polytechnical University**	**1545 HRS TO 1600 HRS** Fatigue Crack Growth Limit Curves for High Strength Structural Steels and their Welded Joints Based on Two-stage Relationship OR-16-0126 **Janos Lukacs** **University of Miskolc / Institute of Materials Science and Technology**	**1545 HRS TO 1600 HRS** Influence of a Hole Edged Crack on Eddy-Current Testing in Aircraft Component OR-15-0033 **Somchai Wonthaisong** **Rajamangala University of Technology Krungthep**	**1545 HRS TO 1600 HRS** Numerical simulation of inertial friction welding of 2219 Al alloy to 304 stainless steel based on friction coefficient model OR-04-0099 **Wang Hao** **Shandong University**	**1550 HRS TO 1605 HRS** Monitoring the forming dimensions of arc directional energy deposited components based on the geometric characteristics of molten pool **Shengfu Yu** **Huazhong University of Science and Technology**
1600 HRS TO 1615 HRS Injection molded direct joining of steel and polybutylene terephthalate via a hybrid surface treatment method OR-10-0137 **Weiyan Chen** **The University of Tokyo**	**1610 HRS TO 1630 HRS** **Invited (20 mins)** Cold spray refurbishment assisted by post friction stir processing OR-05-0083 **Dr Chunjie Huang** **Helmut Schmidt University/ University of the Federal Armed Forces Hamburg**	**1600 HRS TO 1615 HRS** Comparison of fatigue strength curves of different high strength steel categories OR-16-0130 **Judit Kovacs** **University of Miskolc**	**1600 HRS TO 1615 HRS** Optimization Network for Rough Labels in Small Welding Defects OR-15-0080 **Dr Baoxin Zhang** **Beijing Institute of Technology**	**1600 HRS TO 1615 HRS** Joining Rail with NO Heat Affected Zone, NO Fusion Line. Heat Penetration in Millimeters OR-04-0049 **Paul Cheng** **FuseRing Inc.**	**1605 HRS TO 1620 HRS** Synergetic effect of feedforward and feedback control for deposition height in WAAM based on visual sensing **Jun Xiong** **Southwest Jiao Tong University**
1615 HRS TO 1630 HRS Significance of Tool Geometry and Double Hook Formation in Al Steel Dissimilar Friction Stir Spot Joints OR-10-0196 **Pankaj Kaushik** **IIT Roorkee India**	**1630 HRS TO 1645 HRS** Development of Cold Sprayed Ti64-In718 Composite Coating for Aerospace Applications OR-05-0338 **Adrian Wei-Yee Tan** **Nanyang Technological University**	**1615 HRS TO 1630 HRS** Applicability Study for Ni steel for Liquefied Hydrogen Storage Tank Materials by Controlling Residual Austenite OR-16-0143 **Yu Hasegawa** **The University of Tokyo**	**1615 HRS TO 1630 HRS** Automatic Welding Defects Detection Based on Deep Learning OR-15-0085 **Xiaopeng Wang** **Beijing Institute of Technology**	**1615 HRS TO 1630 HRS** Elucidation of Bonding and Formation Mechanism of Cu-rich Layer during Inertia Friction Welding of 2219 Aluminum Alloy to 304 Stainless Steel OR-04-0100 **Dang Zongyu** **Shandong University**	**1620 HRS TO 1635 HRS** Predicting porosity in Wire-Arc Additive Manufacutring (WAAM) using Wavelet-Scattering Networks and sparse Principal Component Analysis OR-12-0042 **Joselito Yam II Alcaraz** **KU Leuven**
	1645 HRS TO 1700 HRS Improving Bond Strength of Cold Sprayed Coating by Rapid Induction Heating OR-05-0057 **Kaiqiang Wu** **Nanyang Technological University**	**1630 HRS TO 1645 HRS** Fracture mechanism of Al/steel laser-MIG welding-brazing joints during quasi-static and dynamic fatigue tests OR-16-0038 **Yunqi Liu** **Key Lab for Advanced Technologies of Materials of Ministry of Education, School of Materials Science and Engineering, Southwest Jiaotong University**	**1630 HRS TO 1645 HRS** Defect Detection of X-Ray Digitized Weld Images Based on Deep Learning OR-15-0106 **Jinhan Cui** **Beijing Institute of Technology**	**1630 HRS TO 1645 HRS** Microstructural Analysis of Nanoparticle Assisted Diffusion Bonding of ETP Copper OR-02-0039 **Dipin Kumar R** **Indian Institute of Technology Delhi**	**1635 HRS TO 1650 HRS** Welding Methodologies for Autonomous Robotic Arc Welding using Computer Vision and Machine Learning OR-12-0216 **Mahyar Asadi** **Novarc Technologies**
	1700 HRS TO 1715 HRS Isothermal Oxidation Behavior of Cold Sprayed and Heat-Treated Inconel 718 at 650 °C OR-05-0193 **Milan Shahana S** **Indian Institute of Technology Madras**	**1645 HRS TO 1700 HRS** Development of Korean Reduced Activation Ferritic/Martensitic Steel for Fusion Reactor and its Weldability OR-16-0055 **Dr Chang-Hoon Lee** **Korea Institute of Materials Science**	**1645 HRS TO 1700 HRS** Quantitative Ultrasonic Inspection of Defects in Wire Arc Additively Manufactured Parts with Surface Roughness OR-15-0178 **Dr Xingfang Cai** **Nanyang Technological University**	**1645 HRS TO 1700 HRS** Microstructure evolution of Liquid Forged AA 6061 after Friction Stir Welding (FSW) OR-04-0340 **Bing Yang Lee** **Singapore Institute of Manufacturing Technology**	**1650 HRS TO 1705 HRS** A Study on Development of Weld Penetration Estimation Method using Weld Pool Images and Deep Learning Approaches in Gas Tungsten Arc Welding OR-12-0308 **Daehyun Baek** **Korea Institute of Industrial Technology**
	1715 HRS TO 1730 HRS Co-deposition mechanism of cold sprayed metal matrix composites: numerical modeling and experiment OR-05-0233 **Prof Shuo Yin** **Trinity College Dublin**				**1705 HRS TO 1720 HRS** Video Enhancement for Visual Assessment of Welding **Mahyar Asadi** **University of British Columbia**
	1730 HRS TO 1745 HRS Effect of heat treatment on the phase transformation of the cold sprayed Ni-Al powder mixture coatings OR-05- 0198 **Sivaji Tadisetty** **IIT Madras**				

DETAILED PROGRAMME FOR INTERNATIONAL CONFERENCE

DAY 2

International Conference Day 2 - 21st July 2023, Friday

Time	Programme					
	Session 1					
	(11) Advanced Arc Welding or other welding processes	**(3) Friction Stir Welding**	**(13) Numerical Modeling of Welding Process**	**(6) Additive Manufacturing - Wire Arc Additive Manufacturing**	**(9) Laser Welding**	**Symposium on IWM**
	Orchid Main Ballroom 4202	***Orchid Main Ballroom 4302***	***Orchid Main Ballroom 4301AB***	***Orchid Main Ballroom 4201AB***	***Orchid Main Ballroom 4303***	***Orchid Main Ballroom 4203***
	Session Chair: Prof Cong Wang *Session Co- chair: Mr Reddy*	*Session Chair: Prof Yutaka S. Sato* *Session Co-chair: Mr Yusoof/Mr William Chong*	*Session Chair: Prof Fenggui Lu* *Session Co-chair: Mr Simon Wong/Mr Samuel Lye*	*Session Chair: Mr Sze Thiam Siong* *Session Co-chair: Mr Subbiah Krishnan*	*Session Chair: Dr John Pang* *Session Co-chair: Mr Hooi Yu Koh*	*Session Chair: Zengxi Pan* *Session Co-chair: Abhay Sharma*
09:00-10:30	**0900 HRS TO 0915 HRS** Slot Welding of 590 MPa Steel: Slot Geometry Optimization, Microstructure and Mechanical Performance Characterization OR-11-0156 **Md Sazzad Hossain Emon** **Dong-Eui University**	**0900 HRS TO 0915 HRS** Application of welding techniques to ultrafine-grained aluminium and Al-Mg-Si alloys OR-03-0322 **Dr Marta Lipinska** **Military University of Technology, Faculty of Mechanical Engineering**	**0900 HRS TO 0915 HRS** Influence of scan properties on flow dynamics and pore formation during laser scanning welding of 5083 aluminum alloy OR-13-0290 **Shuang Huang** **Shanghai Jiao Tong University**	**0900 HRS TO 0915 HRS** The Multi-Scale Modeling and Characterization Approach to Evaluate the Effects of Î´-phase on Additive Manufactured IN718 OR-06-0063 **Dr Naiyuan Xi** **Xi'an Jiaotong University**	**0900 HRS TO 0915 HRS** Dynamic Behavior and Eruption Pattern of Metal Vapor Plume in High-power Laser Welding of Stainless Steel OR-09-0062 **Dr Wang Cai** **Wuhan Textile University**	**0900 HRS TO 0920 HRS** **Invited (20 mins)** In-situ Detection of Weld Quality Using Laser Ultrasonics toward Intelligent Welding Manufacturing **Satoru Asai** **Osaka University**
	0915 HRS TO 0930 HRS Optimization of electrode geometry in aluminum resistance spot welding of dissimilar thickness combination OR-11-0175 **Tejaswin Krishna** **Dong-Eui University**	**0915 HRS TO 0935 HRS** **Invited (20mins)** Friction stir processing on Mg-based alloy - From the perspective of better corrosion resistance OR-03-0347 **Dr Mengran Zhou** **Tsinghua University**	**0915 HRS TO 0930 HRS** Effect of Welding Parameters on Interfacial Temperature and Normal Stress of Electroformed Ni/CuZr Alloy in Thrust Chamber OR-13-0302 **Yunjun Fei** **Department of Mechanical Engineering, Tsinghua University**	**0915 HRS TO 0930 HRS** Influence of the deposition conditions on industrialization and the fatigue life of parts built with Wire Arc Additive Manufacturing (WAAM) process OR-06-0171 **Mr David Plelan** **CETIM**	**0915 HRS TO 0930 HRS** Numerical and experimental study on adjustable-ring-mode laser welding of aluminium alloy OR-09-0124 **Jianmin Li** **Huazhong University of Science & Technology**	**0920 HRS TO 0935 HRS** Adaptive Threshold Optimization based Incremental Learning Strategy for Online Monitoring of Pipeline Weld Crack Leakage **Zhifen Zhang** **Xi'an Jiaotong University**
	0930 HRS TO 0945 HRS Microstructural evolution and high-temperature mechanical behaviour of magnetically impelled arc butt welded power plant steels of P91 and Super304H OR-11-0278 **Abhijith Sahadevan** **Indian Institute of Technology Madras**	**0935 HRS TO 0955 HRS** **Invited (20mins)** Comparison of Friction Stir Welding with different fusion welding processes in joining Aluminium EN AW-6063 T6 OR-03-0351 **Axel Meyer** **RIFTEC GmbH**	**0930 HRS TO 0945 HRS** Numerical analysis of the residual stress distribution of laser directed energy deposition on the steam turbine OR-13-0112 **Shuyu Huang** **Shanghai Jiao Tong University**	**0930 HRS TO 0945 HRS** Thermo-mechanical modelling of the Wire Arc Additive Manufacturing process (WAAM) OR-06-0213 **Dr Sami Hilal** **EDF Research and Development**	**0930 HRS TO 0945 HRS** Comparison of welding characteristics using various high-brightness laser systems for non-ferrous metals OR-09-0296 **Su Jin Lee** **Korea Institute of Machinery & Materials**	**0935 HRS TO 0950 HRS** Development of electron optical capabilities for manufacturing of complex components by Electron Beam Welding **Thomas Dutilleul** **University of Sheffield, UK**
	0945 HRS TO 1000 HRS Effect of Cooling Rate on Weld Joint Properties of Nitrogen Alloyed Steels OR-11-0073 **Dr Naveen Kumar** **Indian Institute of Technology Delhi**	**0955 HRS TO 1010 HRS** Semi-Stationary Shoulder Bobbin Tool: An Approach to Achieve High Speed and Quality Friction Stir Welding of Magnesium Alloy OR-03-0229 **Dr Li Gaohui** **School of Materials Science and Engineering, Shanghai Jiao Tong University**	**0945 HRS TO 1000 HRS** Multi-pass multi-layer molten pool-based model to predict hardness of Grade 91 steel welds OR-13-0056 **Aryan Aryan** **The Ohio State University**	**0945 HRS TO 1000 HRS** Heat treatment for property enhancement of wire arc additive manufactured stainless steel OR-06-0284 **Shivaraman** **National Institute of Technology Wrangal**	**0945 HRS TO 1000 HRS** Effect of beam oscillation on weld characteristics of laser welded 1400M steel OR-09-0212 **Dr Raghawendra Pratap Singh Sisodia** **Institute of Materials Science and Technology, University of Miskolc**	**0950 HRS TO 1005 HRS** Detection of reinforcement of multi-bead and multi-layer weld in additive manufacturing based on on-line visual information of weld pool **Jun Lu** **Nanjing University of Science and Technology**
	1000 HRS TO 1015 HRS Mechanism of Porosity Suppression in GMAW-GTAW hybrid welding process of AA5083 aluminum alloy OR-11-0078 **Dr Titinan Methong** **King Mongkut's University of Technology Thonburi**	**1010 HRS TO 1025 HRS** Numerical modeling for the effect of tool eccentricity on the periodic material flow behavior in friction stir welding OR-03-0350 **Dr Hao Su** **Shandong University**	**1000 HRS TO 1015 HRS** FE analysis of residual stress distribution in a P92/SUS304 dissimilar metal butt-welded joint OR-13-0269 **Dr Suo Li** **College of Materials Science and Engineering, Chongqing University**	**1000 HRS TO 1015 HRS** Fatigue Test Strategy for Wire Arc Additive Manufacturing (WAAM) Qualification and Defect Tolerance Analysis OR-06-0299 **Dr Ninian S. K. Ho** **National Technological University**	**1000 HRS TO 1015 HRS** The Study on influence of Oscillation Frequency and Defocused Beam on Joint Quality in Laser Welding of High Strength Steel OR-09-0111 **JiYoung Shin** **Department of Advanced Materials Engineering / Dong-eui University**	**1005 HRS TO 1020 HRS** Time shift Effects of Input Images in Weld Depth Estimation Model using CNN through Molten Pool Monitoring in GMAW **Kazufumi Nomura** **Osaka University**
	1015 HRS TO 1030 HRS Revolutionizing TVET Welding Teacher Training in Indonesia through Innovative Digital Resources OR-11-0218 **Hidayat W H Mercado** **Seabery Soluciones SL.**		**1015 HRS TO 1030 HRS** Prediction for ultrasonic frequency pulsed deep penetration welding of aluminum alloys considering thermal uncertainty OR-13-0293 **Zihao Jiang** **School of Mechanical Engineering and Automation, Beihang University**	**1015 HRS TO 1030 HRS** Evaluation of WAAM processes through metallurgy and mechanical properties in Mild Carbon Steel OR-06-0280 **Aishwarya** **CETIM-Matcor Technology & Service Pte Ltd**	**1015 HRS TO 1030 HRS** Experimental study on laser welding of medium-thick aluminum alloy with adjustable ring-mode OR-09-0122 **Lu Yang** **Huazhong University of Science & Technology**	**1020 HRS TO 1035 HRS** An algorithm for path distribution and scheduling for multi-robot cooperative wire and arc additive manufacturing of large-scale parts **Yongzhe Li** **Southeast University**

International Conference Day 2 - 21st July 2023, Friday

10:30-11:00 — **Tea Beak @ Melati Room**

11:00-12:30 — **Session 2**

(11) Advanced Arc Welding or other welding processes	(7) Additive Manufacturing - Laser directed Energy Deposition	(8) Additive Manufacturing - Power Bed 3D Printing	(6) Additive Manufacturing - Wire Arc Additive Manufacturing	(9) Laser Welding	Symposium on IWM
Orchid Main Ballroom 4202	***Orchid Main Ballroom 4302***	***Orchid Main Ballroom 4301AB***	***Orchid Main Ballroom 4201AB***	***Orchid Main Ballroom 4303***	***Orchid Main Ballroom 4203***
Session Chair: Dr Yongchao Yu *Session Co- chair: Mr Reddy*	*Session Chair: Mr Yusoof* *Session Co-chair: Mr William Chong*	*Session Chair: Mr Simon Wong* *Session Co-chair: Mr Samuel Lye*	*Session Chair: Mr Sze Thiam Siong* *Session Co-chair: Mr Subbiah Krishnan*	*Session Chair: Dr John Pang* *Session Co-chair: Mr Hooi Yu Koh*	*Session Chair: Kazufumi Nomura* *Session Co-chair: Shaojie Wu*
1100 HRS TO 1115 HRS Successful procurement and construction of small (3â€³and higher (24â€³size of welded Duplex Stainless steel line pipes for cross-country gas projects OR-11-0258 **Manivannan Pasupathi** **Petroleum Development Oman (PDO)**	**1100 HRS TO 1115 HRS** Reconnoitering Laser Directed Energy Deposition Based Additive Manufacturing of Copper-Stainless Steel Multi-Material Injection Mould for Improved Performance OR-07-0096 **Sunil Yadav** **Homi Bhabha National Institute (HBNI), RRCAT, Indore, MP-452013, India**	**1100 HRS TO 1115 HRS** Additive manufactured ultra-high strength low density austenitic stainless steel via synergistic strengthening of multi-nanopreicitation OR-08-0068 **Dr Xiaopei Wang** **Tsinghua University**	**1100 HRS TO 1115 HRS** Microstructure and Mechanical Properties of Cu Modified Ti-6Al-4V Deposits Fabricated by Wire and Arc Additive Manufacturing OR-06-0079 **Dr Zidong Lin** **Beijing Institute of Technology**	**1100 HRS TO 1115 HRS** Laser Welding of Aluminum with Multifocus Technology OR-09-0352 **Markus Lindemann** **Trumpf Pte Ltd**	**1100 HRS TO 1120 HRS** **Invited (20 mins)** Application of Deep Learning on Welding Anomaly Detection **Xinghua Yu** **Beijing Institute of Technology**
1115 HRS TO 1130 HRS Development of Surface composite by modification of microstructure and in-situ growth of hard particles in the matrix of ferrous and non-ferrous metallic materials by TIG arcing OR-11-0025 **Dr Ramkishor Anant** **Department of Materials and Metallurgical Engineering, Maulana Azad National Institute of Technology, Bhopal, INDIA**	**1115 HRS TO 1130 HRS** Energy-efficient 4D printing leveraging in-situ precipitation OR-07-0247 **Dr Chaolin Tan** **Singapore Institute of Manufacturing Technology, A*STAR**	**1115 HRS TO 1130 HRS** Development of Laser Beam Oscillation Scan Strategy for Laser Powder Bed Fusion Process OR-08-0007 **Prof Cheng Chung-wei** **National Yang Ming Chiao Tung University**	**1115 HRS TO 1130 HRS** Effect of Two-stage PWHT on Mechanical Properties and Microstructure of 410nimo Steel Fabricated by Wire and Arc Additive Manufacturing OR-06-0094 **Xuefeng Zhao** **School of Materials Science & Engineering, Beijing Institute of Technology**	**1115 HRS TO 1130 HRS** Quantifying Particulate Generation of Laser Coupling-in Window Protection Systems in Laser in Vacuum Welding OR-09-0104 **Max Nentwich** **Cambridge Vacuum Engineering**	**1120 HRS TO 1140 HRS** **Invited (20 mins)** Deep learning-based surface reconstruction model of wire-arc additively manufactured surface **Abhay Sharma** **KU Leuven**
1130 HRS TO 1145 HRS Comparison between bead geometry of CMT, pulse MIG and standard MIG in cryogenic condition OR-11-0052 **Dr Yashwant Koli** **Indian Institute of Technology Delhi**	**1130 HRS TO 1145 HRS** Effect of Nb on the microstructure and performance of laser-cladded Fe50-xMn30Co10Cr10Nbx high entropy alloy OR-07-0115 **Xianfen Li** **Heifei University of Technology**	**1130 HRS TO 1145 HRS** POWDER MOVEMENT DURING GREEN LASER POWDER BED FUSION OF COPPER OR-08-0048 **Prof Joerg Volpp** **Lulea University of Technology**	**1130 HRS TO 1145 HRS** Effect of Carbon Content on Microstructure and Properties of Fe-Mo-V Hardfacing Alloy OR-06-0307 **Wei Wei** **Zhengzhou Research Institute of Mechanical Engineering Co., Ltd.**	**1130 HRS TO 1145 HRS** A Study on Silk Fabric Joining by Laser-induced Polymerization of Photosensitive Resin OR-09-0021 **Yongling Wu** **Shandong University of Technology**	**1140 HRS TO 1155 HRS** Real-time Sensing and Control of GTAW Penetration Using Deep Learning and Model Predictive Control **Zhifei Xu** **Beijing University of Technology**
1145 HRS TO 1200 HRS Activated-TIG Weld Characteristics of Incoloy 800HT Joint for Advanced Ultra Supercritical (AUSC) Power Plant ApplicationsActivated-TIG Weld Characteristics of Incoloy 800HT Joint for Advanced Ultra Supercritical (AUSC) Power Plant Applications OR-11-0208 **Vishwa Bhanu** **Indian Institute of Technology Jodhpur**	**1145 HRS TO 1200 HRS** Coupling mechanism of splitting laser melting coaxial feeding wire OR-07-0235 **Dr Liu Qi** **AVIC Manufacturing Technology Institute**	**1145 HRS TO 1200 HRS** Influences of Process Parameters on the Microstructure and Mechanical Properties of CoCrFeNiCu Based High-Entropy Alloy in a Laser Powder Bed Fusion Process OR-08-0072 **Mr Vito Burgio** **Westphalian University of Applied Sciences**	**1145 HRS TO 1200 HRS** Fabrication process of semi-open impeller via wire arc additive manufacturing and post machining OR-06-0136 **Hwi Jun Son** **Changwon National University**	**1145 HRS TO 1200 HRS** Analysis of welding quality with the effect of welding Speed and oscillation frequency for the Laser Seam Stepper Process OR-09-0070 **YeoJin Jang** **Department of Advanced Materials Engineering, Dong-Eui University**	**1155 HRS TO 1210 HRS** Intelligent Prediction of the Keyhole/Penetration Status Based on Deep Learning Algorithms in Plasma Arc Welding **Chuanbao Jia** **Shandong University**
1200 HRS TO 1220 HRS **Invited (20mins)** An Overall Assessment of Welding Flux Geared Towards High Heat Input Applications OR-11-0355 **Prof Cong Wang** **Northeast University**		**1200 HRS TO 1215 HRS** Toward Qualification of Materials: Microstructure Control and Size Effect in the Selective Laser Melted Inconel 718 OR-08-0238 **Dr Wan Hongyuan** **AVIC Manufacturing Technology Institute**	**1200 HRS TO 1215 HRS** Robot control and monitoring systems for digital twin of WAAM process OR-06-0142 **Bo Wook Seo** **Dept. of Smart Manufacturing Engineering / Changwon National University**	**1200 HRS TO 1215 HRS** Mechanical properties and melted wire transfer behavior in the laser-filler welding with scandium-aluminum filler wire OR-09-0186 **Joonghyeon Shin** **Research Institute of advanced manufacturing & Materials Technology Advanced Joining & Additive Manufacturing R&D Department, Korea Institute of Industrial Technology**	**1210 HRS TO 1225 HRS** Empirical Case Study and Results for the Training of Welders using VWTS (Virtual Welding Training Systems) and the Traditional Welding Training Methodology OR-12-0155 **Antonio Fernandez Perez** **Seabery Augmented Training**
1215 HRS TO 1230 HRS Effect of multiple preheating methods on the formation and properties of electron beam welding on additively manufactured TiAl alloys OR-11-0242 **Mr Li Lihang** **AVIC Manufacturing Technology Institute**		**1215 HRS TO 1230 HRS** Layered structure in TiAl fabricated by electron beam melting (EBM): formation and effect on tensile properties OR-08-0240 **Dr Lin Bochao** **AVIC Manufacturing Technology Institute**	**1215 HRS TO 1230 HRS** A Study on the Slag Inclusion Mechanism in the Wire Arc Additive Manufacturing Process Using Flux-Cored Wire OR-06-0239 **Chang Jong Kim** **Changwon National University**		

International Conference Day 2 - 21st July 2023, Friday

12:30-14:00 — **International Conference Reception/Lunch**
Orchid Main Ballroom 4204-6 & 4304-6

14:00-15:00 — **Session 3**

(11) Advanced Arc Welding or other welding processes	(17) Corrosion of Welded Joints	(8) Additive Manufacturing - Power Bed 3D Printing	(6) Additive Manufacturing - Wire Arc Additive Manufacturing	(14) Design, Analysis and Fabrication of Welded Structure	Symposium on IWM
Orchid Main Ballroom 4202	***Orchid Main Ballroom 4302***	***Orchid Main Ballroom 4301AB***	***Orchid Main Ballroom 4201AB***	***Orchid Main Ballroom 4303***	***Orchid Main Ballroom 4203***
Session Chair: Dr Yongjing Yang *Session Co- chair: Mr Reddy*	*Session Chair: Mr Yusoof* *Session Co-chair: Mr William Chong*	*Session Chair: Mr Simon Wong* *Session Co-chair: Mr Samuel Lye*	*Session Chair: Dr Yongchao Yu* *Session Co-chair: Mr Subbiah Krishnan*	*Session Chair: Dr John Pang* *Session Co-chair: Mr Hooi Yu Koh*	*Session Chair: Zhifen Zhang* *Session Co-chair: Jun Xiong*
1400 HRS TO 1415 HRS Effect of Welding Condition on Porosity in Plasma-MIG Hybrid Welds of Al-Mg alloy OR-11-0214 **Dr Lee Hee-keun** **Research Institute of Medium & Small Shipbuilding**	**1400 HRS TO 1415 HRS** Effect of Laser Welding Heat-Input on Repassivation Characteristics during Pitting Corrosion Testing on 316L Orthopedic Cerclage-Wire OR-17-0161 **Eakkachai Warinsiriuk** **Mahidol University**	**1400 HRS TO 1420 HRS** **Invited (20mins)** Robust AM Process Development for High Performance Material and its Industrialization OR-08-0312 **Dr Youping Gao** **Castheon Inc**	**1400 HRS TO 1415 HRS** Wire and arc additive manufacturing high strength aluminum alloy OR-06-0291 **Xuewei Fang** **Xi'an Jiaotong University**	**1400 HRS TO 1415 HRS** Welding deformation law of complex variable section inclined strut structure OR-14-0335 **Fei-bin Zhang** **Department of Mechanical Engineering, Tsinghua University**	**1400 HRS TO 1415 HRS** Optimization of mild steel MIG welding penetration depth via reinforcement learning using stochastic policy optimization (SPO) OR-12-0341 **Giulio Mattera** **University of Naples Federico II, Italy**
1415 HRS TO 1430 HRS Improving Microstructure and Mechanical Properties of TIG Welds in Inconel 718 Super-alloy via Ultrasonic Pulse Current OR-11-0241 **Dr Yajie Wang** **Shanghai Jiao Tong University**	**1415 HRS TO 1430 HRS** Intergranular corrosion in Alloy 617 accelerated crept specimen by using electrochemical technique OR-17-0077 **Noppakorn Phuraya** **Mahidol University**	**1420 HRS TO 1435 HRS** Pathways towards building Computationally Efficient Heat Transfer Models for Laser Powder Bed Fusion OR-08-0221 **Ms Neelima Patnaikuni** **IIT Bombay**	**1415 HRS TO 1430 HRS** TiC-particle reinforced Al-Cu alloy fabricated via wire + ultrasonic-frequency pulsed arc additive manufacturing OR-06-0232 **Dr Caiyou Zeng** **Beihang University**	**1415 HRS TO 1430 HRS** The Need to Develop Standards for Weld Testing Facilities. OR-14-0324 **Bright Ikechi .C. Igwe** **Department of Welding Engineering and Offshore Technology/Petroleum Training Institute**	**1415 HRS TO 1430 HRS** Study of the influence of Al element on the arc and molten pool behavior during flux bands constricting arc welding (FBCA) process **Jisen Qiao** **Lanzhou University of Technology**
1430 HRS TO 1445 HRS Characterization of microstructures in welded joints of steel pipes produced by high frequency induction welding **Yongjing Yang** **NTU**		**1435 HRS TO 1450 HRS** Role of microstructural phases and surface modification in enhanced mechanical properties of additively manufactured IN718 alloy OR-08-0006 **Sumit Choudhary** **IIT Roorkee**	**1430 HRS TO 1445 HRS** Manipulating molten pool in in-situ additive manufacturing of Ti2AlNb through alternating dual-electron beams OR-06-0354 **Zixiang Li** **Tsinghua University**		**1430 HRS TO 1445 HRS** Strategies against the shortage of skilled welders OR-12-0121 **Aimee Schmelzer** **Artwelding GmbH /SVS Swiss Welding Association, Switzerland**
1445 HRS TO 1500 HRS Weld Repair of Crack-Prone Cast Superalloy Blades with Induction Preheating OR-11-0031 **Dr Vamadevan Gowreesan** **Sulzwe Turbo Services**					**1445 HRS TO 1500 HRS** An adaptive welding method for grooves with position and size errors OR-12-0343 **Wenkai Wang** **Lanzhou University of Technology**

	International Conference Day 2 - 21st July 2023, Friday					
15:00-15:30	Tea Beak @ Melati Room					
15:30-17:00	Session 4					
						Symposium on IWM
	Orchid Main Ballroom 4202	*Orchid Main Ballroom 4302*	*Orchid Main Ballroom 4301AB*	*Orchid Main Ballroom 4201AB*	*Orchid Main Ballroom 4303*	*Orchid Main Ballroom 4203*
						Session Chair: YuMing Zhang *Session Co-chair: Aprilia*
						1530 HRS TO 1545 HRS Optimization of welding parameters based on weld bead geometry in gas metal arc welding using a 1.0-mm-diameter wire OR-12-0159 **SolMi Lee** **Korea Institute of Industrial Technology**
						1545 HRS TO 1600 HRS Data Driven and Machine Learning based Design Framework for Self-Piercing Riveting Process **Li Huang** **Nanjing Tech University**
						1600 HRS TO 1615 HRS A Comprehensive Review of Deep Learning for Predicting Remaining Fatigue-Corrosion life of TIG-dressed Welded Joints **Badr EL Hajouji** **Hassan The First University of Settat, Morocco**
						1615 HRS TO 1630 HRS Weld Scoring Model for Virtual Welding Training System OR-12-0154 **Zhou Zeli** **University of Tokyo**
						1630 HRS TO 1645 HRS A Study on Machine Learning Algorithm Comparison for the Performance Evaluation of Manual Welding Process OR-12-0162 **Chang-Sub Song** **RIMS**