	International Conference Day 2 - 21st July 2023, Friday				
Time			Progr	amme	
			Sess	ion 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 Weld
	Orchid Main Ballroom 4202	Orchid Main Ballroom 4302	Orchid Main Ballroom 4301AB	Orchid Main Ballroom 4201AB	Orchid Main Ballroo
	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 Jo Session Co-chair: Mr H
	<u>0900 HRS TO 0915 HRS</u> 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 <sup>°</sup> -phase on Additive Manufactured IN718 OR-06-0063 Dr Naiyuan Xi Xi'an Jiaotong University	0900 HRS TO 091 Dynamic Behavior and Eruption Pattern power Laser Welding of S OR-09-0062 Dr Wang Ca Wuhan Textile Un
	<u>0915 HRS TO 0930 HRS</u> 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	<u>0915 HRS TO 093</u> Numerical and experimental study on welding of aluminii OR-09-0124 Jianmin Li Huazhong University of Scien
09:00-10:30	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	<u>0930 HRS TO 0945 HRS</u> 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 094 Comparison of welding characteristics u laser systems for non-fe OR-09-0296 Su Jin Lee Korea Institute of Machine
	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 100 Effect of beam oscillation on weld cha 1400M stee OR-09-0212 Dr Raghawendra Pratap Institute of Materials Science and Techr
	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	<u>1010 HRS TO 1025 HRS</u> 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	<u>1000 HRS TO 1015 HRS</u> 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 101 The Study on influence of Oscillation Fre on Joint Quality in Laser Welding OR-09-0111 JiYoung Shir Department of Advanced Materials University
	<u>1015 HRS TO 1030 HRS</u> Revolutionizing TVET Welding Teacher Training in Indonesia through Innovative Digital Resources OR-11-0218 Hidayat W H Mercado Seabery Soluciones SL.		<u>1015 HRS TO 1030 HRS</u> 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	<u>1015 HRS TO 1030 HRS</u> Evaluation of WAAM processes through metallurgy and mechanical properties in Mild Carbon Steel OR-06-0280 Aishwarya CETIM-Matcor Technology & Service Pte Ltd	<u>1015 HRS TO 103</u> Experimental study on laser welding of r with adjustable rin OR-09-0122 Lu Yang Huazhong University of Scien

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lelding	Symposium on IWM
lroom 4303	Orchid Main Ballroom 4203
r John Pang Ir Hooi Yu Koh	Session Chair: Zengxi Pan Session Co-chair: Abhay Sharma
0915 HRS rrn of Metal Vapor Plume in High- of Stainless Steel 062 ; Cai 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
0930 HRS on adjustable-ring-mode laser inium alloy 124 N Li cience & 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
0945 HRS cs using various high-brightness n-ferrous metals 296 ee hinery & Materials	<u>0935 HRS TO 0950 HRS</u> Development of electron optical capabilities for manufacturing of complex components by Electron Beam Welding Thomas Dutilleul University of Sheffield, UK
1000 HRS characteristics of laser welded teel 212 tap Singh Sisodia schnology, 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
1015 HRS Frequency and Defocused Beam ing of High Strength Steel 111 Shin rials Engineering / Dong-eui ity	<u>1005 HRS TO 1020 HRS</u> Time shift Effects of Input Images in Weld Depth Estimation Model using CNN through Molten Pool Monitoring in GMAW Kazufumi Nomura Osaka University
1030 HRS_ of medium-thick aluminum alloy ring-mode 122 Vg cience & Technology	<u>1020 HRS TO 1035 HRS</u> An algorithm for path distribution and scheduling for multi-robot cooperative wire and arc additive manufacturing of large-scale parts Yongzhe Li Southeast University

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10:30-11:00	Tea Beak @ Melati Room					
	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	1100 HRS TO 1115 HRS	1100 HRS TO 1115 HRS	1100 HRS TO 1115 HRS	1100 HRS TO 1115 HRS	1100 HRS TO 1120 HRS
	Successful procurement and construction of small (3â€) and higher (24â€) size of welded Duplex Stainless steel line pipes for cross- country gas projects OR-11-0258 Manivannan Pasupathi Petroleum Development Oman (PDO)	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	Additive manufactured ultra-high strength low density austenitic stainless steel via synergistic strengthening of multi-nanopreicitation OR-08-0068 Dr Xiaopei Wang Tsinghua University	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	Laser Welding of Aluminum with Multifocus Technology OR-09-0352 Markus Lindemann Trumpf Pte Ltd	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 nonferrous 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	<u>1115 HRS TO 1130 HRS</u> Energy-efficient 4D printing leveraging in-situ precipitation OR-07-0247 Dr Chaolin Tan Singapore Institute of Manufacturing Technology, A*STAR	<u>1115 HRS TO 1130 HRS</u> 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	<u>1115 HRS TO 1130 HRS</u> Quantifying Particulate Generation of Laser Coupling-in Window Protection Systems in Laser in Vacuum Welding OR-09-0104 Max Nentwich Cambridge Vacuum Engineering	<u>1120 HRS TO 1140 HRS</u> Invited (20 mins) Deep learning-based surface reconstruction model of wire-arc additively manufactured surface Abhay Sharma KU Leuven
11:00-12:30	<u>1130 HRS TO 1145 HRS</u> 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	<u>1130 HRS TO 1145 HRS</u> 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	<u>1130 HRS TO 1145 HRS</u> POWDER MOVEMENT DURING GREEN LASER POWDER BED FUSION OF COPPER OR-08-0048 Prof Joerg Volpp Lulea University of Technology	<u>1130 HRS TO 1145 HRS</u> 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.	<u>1130 HRS TO 1145 HRS</u> A Study on Silk Fabric Joining by Laser-induced Polymerization of Photosensitive Resin OR-09-0021 Yongling Wu Shandong University of Technology	<u>1140 HRS TO 1155 HRS</u> Real-time Sensing and Control of GTAW Penetration Using Deep Learning and Model Predictive Control Zhifei Xu Beijing University of Technology
	<u>1145 HRS TO 1200 HRS</u> 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	<u>1145 HRS TO 1200 HRS</u> Coupling mechanism of splitting laser melting coaxial feeding wire OR-07-0235 Dr Liu Qi AVIC Manufacturing Technology Institute	<u>1145 HRS TO 1200 HRS</u> 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	<u>1145 HRS TO 1200 HRS</u> Fabrication process of semi-open impeller via wire arc additive manufacturing and post machining OR-06-0136 Hwi Jun Son Changwon National University	<u>1145 HRS TO 1200 HRS</u> 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	<u>1155 HRS TO 1210 HRS</u> 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		<u>1200 HRS TO 1215 HRS</u> 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	<u>1200 HRS TO 1215 HRS</u> 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	<u>1200 HRS TO 1215 HRS</u> 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					
	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	1400 HRS TO 1415 HRS	1400 HRS TO 1420 HRS	1400 HRS TO 1415 HRS	1400 HRS TO 1415 HRS	<u>1400 HRS TO 1415 HRS</u>
	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		Invited (20mins) Robust AM Process Development for High Performance Material and its Industrialization OR-08-0312 Dr Youping Gao Castheon Inc	Wire and arc additive manufacturing high strength aluminum alloy OR-06-0291 Xuewei Fang Xi'an Jiaotong University	Welding deformation law of complex variable section inclined strut structure OR-14-0335 Fei-bin Zhang Department of Mechanical Engineering, Tsinghua University	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
14:00-15:00	<u>1415 HRS TO 1430 HRS</u> 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	<u>1415 HRS TO 1430 HRS</u> Intergranular corrosion in Alloy 617 accelerated crept specimen by using electrochemical technique OR-17-0077 Noppakorn Phuraya Mahidol University	<u>1420 HRS TO 1435 HRS</u> Pathways towards building Computationally Efficient Heat Transfer Models for Laser Powder Bed Fusion OR-08-0221 Ms Neelima Patnaikuni IIT Bombay	<u>1415 HRS TO 1430 HRS</u> TiC-particle reinforced Al-Cu alloy fabricated via wire + ultrasonic- frequency pulsed arc additive manufacturing OR-06-0232 Dr Caiyou Zeng Beihang University	<u>1415 HRS TO 1430 HRS</u> 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	<u>1415 HRS TO 1430 HRS</u> 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
	<u>1430 HRS TO 1445 HRS</u> Characterization of microstructures in welded joints of steel pipes produced by high frequency induction welding Yongjing Yang NTU		<u>1435 HRS TO 1450 HRS</u> Role of microstructural phases and surface modification in enhanced mechanical properties of additively manufactured IN718 alloy OR-08-0006 Sumit Choudhary IIT Roorkee	<u>1430 HRS TO 1445 HRS</u> Manipulating molten pool in in-situ additive manufacturing of Ti2AlNb through alternating dual-electron beams OR-06-0354 Zixiang Li Tsinghua University		<u>1430 HRS TO 1445 HRS</u> 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			
	Session 4						
	Orchid Main Ballroom 4202	Orrhid Main Dollaroon (1992	Orshid Main Dollan on 1991 A.B.	Orabid Maria Dallanara (1991 AD	Orabid Maria Dalla		
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15:30-17:00							
15:3(							

	Symposium on IWM
room 4303	Orchid Main Ballroom 4203
	Session Chair: YuMing Zhang Session Co-chair: Aprilia
	<u>1530 HRS TO 1545 HRS</u> 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
	<u>1600 HRS TO 1615 HRS</u> 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
	<u>1615 HRS TO 1630 HRS</u> Weld Scoring Model for Virtual Welding Training System OR-12-0154 Zhou Zeli University of Tokyo
	<u>1630 HRS TO 1645 HRS</u> A Study on Machine Learning Algorithm Comparison for the Performance Evaluation of Manual Welding Process OR-12-0162 Chang-Sub Song RIMS