

**Tentative Program  
(26 September, 2019)**

# **Visual-JW 2019 & WSE 2019**

*The 5<sup>th</sup> International Symposium on  
Visualization in Joining & Welding Science  
through Advanced Measurements and Simulation*

**&**

*The 8<sup>th</sup> International Conference of Welding Science and Engineering*

*in conjunction with*

*Symposium on the Research Activities of  
Joint Usage/Research Center on Joining and Welding*

**21–22 November, 2019  
Osaka, Japan**

The Program Committee of the Visual-JW 2019 and WSE 2019

11-1, Mihogaoka, Ibaraki,  
Osaka 567-0047, Japan

- The paper title, names of Presenter, Authors are listed in the program. The information listed is based on those provided via the registration web site.
- The presentation room will be determined at the final program.
- The number to identify oral and poster presentation is subject to change.

If you have any questions, please contact the followings:

Visual-JW 2019: Makoto Takahashi, JWRI, Osaka University  
Seiichiro Tsutsumi, JWRI, Osaka University  
E-mail: [vjw2019@jwri.osaka-u.ac.jp](mailto:vjw2019@jwri.osaka-u.ac.jp)

WSE 2019: Yunwu Ma, JWRI, Osaka University  
E-mail: [wse2019@jwri.osaka-u.ac.jp](mailto:wse2019@jwri.osaka-u.ac.jp)

## Technical Program (Tentative)

Thursday 21-November					
Room	Orbit Hall				
9:50-10:00	Opening Ceremony				
10:00-10:30	Plenary Lecture 1				
10:30-11:00	Plenary Lecture 2				
11:00-11:30	Plenary Lecture 3				
11:30-12:30	Lunch at Orbit Hall				
Room	A	Room	B	Room	C
Session Name	A (1)	Session Name	B (1)	Session Name	WSE
12:30-12:50	A-1	12:30-12:50	B-1	12:30-12:50	C-1
12:50-13:05	A-2	12:50-13:05	B-2	12:50-13:05	C-2
13:05-13:20	A-3	13:05-13:20	B-3	13:05-13:20	C-3
13:20-13:35	A-4	13:20-13:35	B-4	13:20-13:35	C-4
13:35-13:50	A-5	13:35-13:50	B-5	13:35-13:50	C-5
13:50-14:05	Coffee Break				
Session Name	A (2)		B (2)	Session Name	WSE
14:05-14:25	A-6	14:05-14:25	B-6	14:05-14:25	C-6
14:25-14:40	A-7	14:25-14:40	B-7	14:25-14:40	C-7
14:40-14:55	A-8	14:40-14:55	B-8	14:40-14:55	C-8
14:55-15:10	A-9	14:55-15:10	B-9	14:55-15:10	C-9
15:10-15:25	A-10	15:10-15:25	B-10	15:10-15:25	C-10
15:25-15:40	Break				
Session Name	A (3)	Session Name	B (3)	Session Name	WSE
15:40-16:00	A-11	15:40-16:00	B-11	15:40-16:00	C-11
16:00-16:15	A-12	16:00-16:15	B-12	16:00-16:15	C-12
16:15-16:30	A-13	16:15-16:30	B-13	16:15-16:30	C-13
16:30-16:45	A-14	16:30-16:45	B-14	16:30-16:45	C-14
16:45-17:00	A-15	16:45-17:00	B-15	16:45-17:00	C-15
17:00-17:15	Coffee Break				
17:15-18:15	Visual-JW Poster Session			Session Name	WSE
				17:15-17:35	C-16
				17:35-17:50	C-17
				17:50-18:05	C-18
18:15-18:30	Break				
18:30-20:30	Banquet at Orbit Hall				

Keynote presentation: 20 min

## Technical Program (Tentative)

Friday 22-November						
Room	A	Room	B	Room	C	D
Session Name	A (4)	Session Name	B (4)	Session Name	WSE	VJW
9:00-9:20	A-16	9:00-9:20	B-16	9:00-9:20	C-19	D-16
9:20-9:35	A-17	9:20-9:35	B-17	9:20-9:35	C-20	D-17
9:35-9:50	A-18	9:35-9:50	B-18	9:35-9:50	C-21	D-18
9:50-10:00	Break					
Session Name	The Research Activities of Joint Usage / Research Center on Joining and Welding (1)	Session Name	B (5)	Session Name	WSE	VJW
10:00-10:05	Opening remark	10:00-10:20	B-19	10:00-10:20	C-22	D-19
10:05-10:25	RAJU-1	10:20-10:35	B-20	10:20-10:35	C-23	D-20
10:25-10:45	RAJU-2	10:35-10:50	B-21	10:35-10:50	C-24	D-21
10:45-11:05	RAJU-3	10:50-11:05	B-22	10:50-11:05	C-25	D-22
11:05-11:25	RAJU-4	11:05-11:20	B-23	11:05-11:20	C-26	D-23
11:25-11:35	Coffee Break	11:20-11:35	Coffee Break			
Session Name	The Research Activities of Joint Usage / Research Center on Joining and Welding (2)	Session Name	B (6)	Session Name	WSE Poster Session	VJW
11:35-11:55	RAJU-5	11:35-11:55	B-24	11:35-11:55	WSE Poster Session	D-24
11:55-12:10	RAJU-6	11:55-12:10	B-25	11:55-12:10		D-25
12:10-12:25	RAJU-7	12:10-12:25	B-26	12:10-12:25		D-26
12:25-12:40		12:25-12:40	B-27	12:25-12:40		D-27
12:40-13:40	Lunch at Seion					
Session Name	A (5)	Session Name	B (7)	Session Name	WSE	WSE
13:40-14:00	A-19	13:40-14:00	B-28	13:40-14:00	C-27	D-28
14:00-14:15	A-20	14:00-14:15	B-29	14:00-14:15	C-28	D-29
14:15-14:30	A-21	14:15-14:30	B-30	14:15-14:30	C-29	D-30
14:30-14:40	Break					
Session Name	A (6)	Session Name	B (8)	Session Name	WSE	WSE
14:40-15:00	A-22	14:40-15:00	B-31	14:40-15:00	C-30	D-31
15:00-15:15	A-23	15:00-15:15	B-32	15:00-15:15	C-31	D-32
15:15-15:30	A-24	15:15-15:30	B-33	15:15-15:30	C-32	D-33
15:30-15:45	A-25	15:30-15:45	B-34	15:30-15:45	C-33	D-34
15:45-16:00	A-26	15:45-16:00	B-35	15:45-16:00	C-34	D-35
16:00-16:15	Coffee Break					
Session Name	A (7)	Session Name	B (9)	Session Name	WSE	WSE
16:15-16:35	A-27	16:15-16:35	B-36	16:15-16:35	C-35	D-36
16:35-16:50	A-28	16:35-16:50	B-37	16:35-16:50	C-36	D-37
16:50-17:05	A-29	16:50-17:05	B-38	16:50-17:05	C-37	D-38

Keynote presentation: 20 min

Plenary

	Title	Presenter	Authors	Registrant	Abstract No.
Plenary 1	Metal vapour in arc welding	Anthony B. Murphy	Anthony B. Murphy, Junting Xiang, Hunkwan Park, Fiona F. Chen, David G. Thomas, Yuqing Feng, Keigo Tanaka, Masaya Shigeta, Manabu Tanaka	Anthony Bruce Murphy (CSIRO Manufacturing)	3197937
Plenary 2	Bonding development advances for need-based design of advanced thermal spray ceramic coatings	Chang-Jiu Li	Chang-Jiu Li, Cheng-Xin Li, Guan-Jun Yang	Chang-Jiu Li (Xi'an Jiaotong University)	3212349
Plenary 3	International Standardization of Constraint-Based Assessment of Fracture for Steel Components	Fumiyoshi Minami	Fumiyoshi Minami	Fumiyoshi Minami (JWRI, Osaka University)	3183076

## Day1-RoomA

Chairperson Zhimin Liang and Co-char (Osaka University, to be determined)

A (1)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
A-1	Keynote	Radiometric model for weld pool imaging by passive vision	Zhimin Liang	Zhimin Liang, Yingchao Suo, Liwei Wang , Dianlong Wang	Zhimin Liang (Hebei University of Science and Technology)	3195289
A-2		Characterization of the arc bubble in ultrasonic wave-assisted underwater wet welding through a visual sensing method	Jianfeng Wang	Jianfeng Wang, Qingjie Sun, Yuying Chen , Shaojun Hou, Jicai Feng	Jianfeng Wang (Northeastern University)	3191851
A-3		Revealing internal flow behavior in underwater wet FCAW using an X-ray transmission method	Changsheng Xu	Changsheng Xu, Ning Guo, Jicai Feng	Changsheng Xu (Harbin Institute of Technology)	3174961
A-4		Spatier reduction of Titanium alloy Gas Metal Arc Welding using cathode spot control	Tae-Hyun Lee	Tae-Hyun Lee, Je-Hoon Oh, Dong-Hyuk Kam , Jason Cheon	Tae Hyun Lee (Korea Institute of Industrial Technology)	3193476
A-5		Development of a low oxidation method in weld metals for narrow groove GMA welding with a local CO2 adding nozzle	Tomoaki Nakashima	Tomoaki Nakashima, Yoshihiro Ota, Yuji Kisaka , Fumiaki Kimura, Shinichi Tashiro, Manabu Tanaka, Masahiro Ohara	Tomoaki Nakashima (Nippon Steel Engineering)	3202465

Chairperson Jason Cheon and Co-char (Osaka University, to be determined)

A (2)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
A-6	Keynote	The numerical analysis based visualization of hook-shaped interlocking formation on a lap joint between Al5083 and DP590 via friction stir welding process	Jason Cheon	Jason Cheon, Jin-young Yoon, Minjung Kang , Junggho Cho, Cheolhee Kim	Jason Cheon (Korea Institute of Industrial Technology, KITECH)	3216994
A-7		Analysis of ultrasonic assisted FSW process with considering acoustic stress work and plastic strain	Wen zhen Zhao	Wen zhen Zhao, Chuan song Wu	wen zhen Zhao (Shandong University, China)	3181265
A-8		Enhancing the mechanical properties of dissimilar aluminum and copper friction stir welding joints by ultrasonic vibration assistance	Najib Ahmad Muhammad	Najib Ahmad Muhammad, ChuanSong Wu	Najib Ahmad Muhammad (Institute of Materials Joining, Shandong University, Jinan, China)	3183018
A-9		Dissimilar friction welding of Ti-6Al-4V alloy and SUS316L stainless steel	Huihong Liu	Huihong Liu, Yo Aoki, Yasuhiro Aoki , Hidetoshi Fujii	Huihong Liu (Joining and Welding Research Institute, Osaka University)	3195032
A-10		A novel flat FSSW using double side adjustable tools and its in-situ observation by X-ray radiography	Xiaopei Wang	Xiaopei Wang, Yoshiaki Morisada, Hidetoshi Fujii	Xiaopei Wang (Osaka University)	3190416

Chairperson Junmiao Shi and Co-char (Osaka University, to be determined)

A (3)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
A-11	Keynote	Relieving the residual stress in the ZrC-SiC ceramic and TC4 alloy brazed joint using laser deposited functionally graded material layers	Junmiao Shi	Junmiao Shi	Junmiao Shi (Northwestern Polytechnical University)	3162494
A-12		30 kW-level laser welding characteristics of thick plate steel	Shenghao Meng	Shenghao Meng, Wang Tao, Liqun Li , Lichen Feng, Ruisheng Huang, Hao Cao	Shenghao Meng (State Key Laboratory of Advanced Welding and Joining, Harbin Institute of Technology)	3181453
A-13		Optimization of Process Conditions for Hot-Wire Laser Brazing on Steel / Al Alloy Dissimilar Joint	Akira Takano	Akira Takano, Motomichi Yamamoto, Kenji Shinozaki , Chikaumi Sawanishi, Hiroshi Matsuda	Akira Takano (Materials Joining Science & Engineering lab, Hiroshima University)	3191644
A-14		Basic Study on Copper Deposition Method to Tungsten with Blue and Infrared Diode Lasers	Jun Shimaoka	Jun Shimaoka, Hisashi Serizawa, Yuji Sato , Takahiro Hara, Masahiro Tsukamoto, Hiroyasu Tanigawa	Jun Shimaoka (Graduate School of Engineering, Osaka University)	3186972
A-15		In situ determination of the critical staining condition for solidification cracking during laser beam welding	Nasim Bakir	Nasim Bakir, Andrey Gumenyuk, Michael Rethmeier	Nasim Bakir (BAM Bundesanstalt fur Materialforschung und -prufung)	3195112

## Day1-RoomB

Chairperson Sven F. Goecke and Co-char (Osaka University, to be determined)

B(1)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
B-1	Keynote	Monitoring and Control of the Heat Input and the Arc Plasma in GMA Wire Arc Additive Manufacturing	Sven F. Goecke	Sven F. Goecke, Gotz F. Gottschalk, Sebastian Baum , Danny Lubosch, Georg Fischer	Sven F. Goecke (TH Brandenburg)	3116196
B-2		Cryogenic high strength and ductile CrCoNi medium entropy alloy prepared by selective laser melting	Kai Feng	Kai Feng, Hiroyuki Kokawa, Zhuguo Li	Kai Feng (Shanghai Jiao Tong University)	3204060
B-3		Control and optimization of the coaxial powder flow for laser direct deposition process	Yicheng Yang	Yicheng Yang, Bing Du, Ruisheng Huang , Xiaomei Liang, Naiwen Fang	Yicheng Yang (Harbin Welding Institute limited Company)	3172597
B-4		Neutron diffraction works on wire-arc additive manufacturing (WAAM): Residual stress determination and material in-situ characterizations	Chen Shen	Chen Shen, Xueming Hua, Fang Li	Chen Shen (Shanghai Jiao Tong University)	3177674
B-5		Pure copper rod formation by laser metal deposition system with blue diode lasers	Hara Takahiro	Hara Takahiro, Masahiro Tsukamoto, Yuji Sato , Ritsuko Higashino, Kazuhiro Ono, Yoshinori Funada, Nobuyuki Abe	Takahiro Hara (Joining and Welding Research Institute, Osaka University)	3216415

Chairperson Haibin GENG and Co-char (Osaka University, to be determined)

B(2)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
B-6	Keynote	Thermal boundary evolution of molten pool during wire and arc additive manufacturing single wall process	Haibin GENG	Haibin GENG, Jian LUO, Jinglong Li , Jianjun GAO, Xin LIN	Jian LUO (School of Mechanical Engineering and Automation, Fuzhou University, Fuzhou 350108, P.R.China)	3191748
B-7		Comparative study of solidification behaviors of weld pool through modelling of heat transfer and fluid flow during single- and multiple-layer deposits of 2319-aluminum alloy based on variable polarity gas tungsten arc welding	Ruwei GENG	Jun Du, Ruwei GENG, Zhengying WEI	Jun Du (Xi'an Jiaotong University)	3191339
B-8		ASSESSMENT OF MICROSTRUCTURE AND MECHANICAL PROPERTIES IN LASER CLADDING, SURFACE POLISHING AND WELDING THROUGH ONLINE MONITORING	GOPINATH MUVVALA	GOPINATH MUVVALA, Ashish Kumar Nath	GOPINATH MUVVALA (Indian Institute of Technology Hyderabad)	3186426
B-9		Effects of annealing on the structure and properties of FeCoCrNi alloy fabricated by selective laser melting	Danyang Lin	Danyang Lin, Lianying Xu, Hongyang Jing , Yongdian Han, Lei Zhao	Danyang Lin (Tianjin University)	3174007
B-10		Development of New Material Model Considering Strain Hardening, Ultra-High Strain Rate Hardening, Thermal Softening and Recrystallization for Solid State Cold-Spray Additive Manufacturing	Qian Wang	Qian Wang, Ninshu Ma, Makoto Takahashi , Xiaotao Luo, Changjiu Li	Qian Wang (Joining and Welding Research Institute)	3173045

Chairperson Dean Deng and Co-char (Osaka University, to be determined)

B(3)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
B-11	Keynote	Investigation on influence of solid-state phase transformation on welding residual stress of high strength low alloy steel joints	Dean Deng	Dean Deng, Qiao Zheng, Suo Li	Dean Deng (Chongqing University)	3183122
B-12		An Enhanced Gurson Model with Cohesive Traction-Separation Law to Realize Transition from Ductile to Brittle Fracture	Takuya KAGIMURA	Takuya KAGIMURA, Yuichi SHINTAKU	Takuya KAGIMURA (University of Tsukuba)	3216121
B-13		Prediction of the Fatigue Life of Aluminum Alloy Joints by means of Cyclic Elasto-plasticity FEM Analyses	Riccardo Fincato	Seiichiro Tsutsumi, Moe Sano, Riccardo Fincato	Riccardo Fincato (Joining and Welding Research Institute, Osaka University)	3193341
B-14		Effect of Heat Removal on Heat Input Parameter of Tempering Treatment for Resistance Spot Welded Steel Sheets	Akira Sato	Akira Sato, Seiji Furusako, Izuru Nishikawa , Muneyoshi Iyota	Akira Sato (Osaka Institute of Technology)	3212065
B-15		Development of in-situ measurement system for welding robot by laser ultrasonic with microchip laser	Kazufumi Nomura	Kazufumi Nomura, Taketo Matsuida, Satoshi Otaki , Ryosuke Kita, Satoru Asai	Kazufumi Nomura (Graduate School of Engineering, Osaka University)	3214145

## Day1-RoomC

Chairperson Chairperson: Xu Lianyong

C(1)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
C-1	Keynote	Modeling the interaction mechanism of the multi-physical fields in different welding processes	ChuanSong Wu	ChuanSong Wu, Lei Shi, Ji Chen	ChuanSong Wu (Shandong University)	3178114
C-2	Invited	Influence of Mo Element on the Corrosion and Cavitation-erosion Resistance of High-entropy FeCoCrNiMoXB0.2 clad by laser	Ye-feng Bao	Ye-feng Bao	Ye-feng Bao (Ye-feng Bao)	3191443
C-3		Effects of graphene on microstructure and mechanical property of brazed C/C composite/TC4 joint	Duo Liu	Duo Liu, Yanyu Song, Xiaoguo Song	Duo Liu (Harbin Institute of Technology at Weihai)	3132033
C-4		Interfacial Microstructure and Nano-mechanical Properties of Dissimilar 304/AZ31B Alloy Welding Joint	Tingting Zhang	Tingting Zhang, Wenxian Wang	Tingting Zhang (Taiyuan University of Technology)	3146485
C-5		Effect of ultrasonic vibrations on axial force, torque, power and joint morphology during friction stir welding of Al-Mg alloys	SACHIN KUMAR	SACHIN KUMAR, Chuansong Wu	SACHIN KUMAR (Shandong University China)	3181254

Chairperson Chairperson: Wu Chuansong

C(2)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
C-6	Keynote	Mechanical Clinching Process with Preforming of Lower Sheet	Yohei Abe	Yohei Abe, Ken-ichiro Mori	Yohei Abe (Toyoashi University of Technology)	3189411
C-7	Invited	Influence of Mo Element on the Corrosion and Cavitation-erosion Resistance of High-entropy FeCoCrNiMoXB0.2 clad by laser	Ye-feng Bao	Ye-feng Bao	Ye-feng Bao (Ye-feng Bao)	3191443
C-8		Numerical Simulation of Fluid Dynamics and Weld Formations in Oscillation Laser Welding of 5A06 Aluminum Alloy	Jianfeng Gong	Jianfeng Gong, Genchen Peng, Yu Hao, Shenghao Meng, Liqun Li	Jianfeng Gong (Harbin Institute of Technology)	3181430
C-9		Double-pass laser welding of zero-gap lap galvanized sheet steel	Shen Li	Shen Li	Shen Li (Kyushu Institute of Technology Tobata Campus)	3189330
C-10		Preliminary study on 20kW fiber laser swing welding	Chao Fang	Chao Fang	Chao Fang (Hefei institutes of Physical Science, Chinese Academy of Sciences)	3191408

Chairperson Chairperson: Abe Yohei

C(3)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
C-11	Keynote	Effects of welding process on mechanical properties of AA7075-T6 ultra-thin sheet joints fabricated by high speed micro friction stir welding	Li Fu	Li Fu, Yu Ni, Qiang Ding Qin, Yue Mao, Xuan Xiao	Li Fu (Northwestern Polytechnical University)	3195372
C-12	Invited	Atomistic analysis on interface evolution during solid state welding between aluminum surfaces	Qingyu Shi	Qingyu Shi, Gaoqiang Chen	Qingyu Shi (Tsinghua University)	3187884
C-13		Strengthening mechanism in resistance riveting welded joints	Sizhe Niu	Sizhe Niu, Yunwu Ma, Yongbing Li, Chaoqun Zhang	Sizhe Niu (Shanghai Jiao Tong University)	3137211
C-14		Process Parameters and Material Flow During Refill Friction Stir Spot Welding For 2A12-T4 Aluminum Alloy	Li Zhou	Li Zhou	Li Zhou (Harbin Institute of Technology, Weihai)	3188786
C-15		Effect of alloy compositions on volume expansion accompanying martensitic transformation in low transformation temperature weld metals	Zhongyuan Feng	Zhongyuan Feng, Ninshu Ma, Xinjie Di, Shipin Wu	Zhongyuan Feng (Graduate School of Engineering, Osaka University)	3190597

Chairperson Chairperson: Lin Sanbao

C(4)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
C-16	Keynote	Oscillation behavior detection and surface tension measurement of weld pool in GTAW	Yu Shi	Yu Shi, Chun kai Li, Yu fen Gu, Gang Zhang, Ming Zhu	Yu Shi (Lanzhou University of Technology)	3213920
C-17		Computation of residual stresses in friction stir based welding techniques	Buchibabu Vicharapu	Buchibabu Vicharapu, Huihong Liu, Kunio Narasaki, Ninshu Ma, Hidetoshi Fujii	Buchibabu Vicharapu (Joining and Welding Research Institute)	3192012
C-18		Lap joining of carbon fiber reinforced PEEK with a resistance interlayer	Qian Guo	Qian Guo, Lin-Jie Zhang, Xian-Qing Yin, Jian-Xun Zhang	Qian Guo (State key laboratory of mechanical behavior for materials-Xian Jiaotong University)	3197451



## Day2-RoomA

Chairperson Chih-Ming Chen and Co-char (Osaka University, to be determined)

A(4)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
A-16	Keynote	Electroplating Formula Effects on the Cu-plated Solder joints	Chih-Ming Chen	Chih-Ming Chen, Sheng-Jye Cherng, Shien-Ping Feng	Chih-Ming Chen (National Chung Hsing University)	3209623
A-17	Invited	Characteristics of interfacial reaction between Sn-Cu-Cr solder alloy and Cu substrate	Junghwan Bang	Junghwan Bang, Dong-Yurl Yu, Jun-Hyuk Son, Min-Su Kim, Sehoon Yoo, Hiroshi Nishikawa	Junghwan Bang (Korea Institute of Industrial Technology)	3211421
A-18	Invited	Effect of Ni-P bath condition on the interfacial IMC growth at ENIG/SAC305 solder joint	Sehoon Yoo	Wonil Seo, Young-Ho Kim, Min-Su Kim, Sehoon Yoo	Sehoon Yoo (Korea Institute of Industrial Technology)	3210361

Chairperson Jun-Seok Oh and Co-char (Osaka University, to be determined)

RAJU(1)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
RAJU-1	Invited	Longer-lived Chemistry and Antimicrobial Activity of Plasma Activated Water	Jun-Seok Oh	Jun-Seok Oh, Naoyuki Iwata, Gichiro Uchida, Kosuke Takenaka, Yuichi Setsuhara, Mineo Hiramatsu, Masafumi Ito	Jun-Seok Oh (Osaka City University)	3215404
RAJU-2	Invited	Study on penetration control of the arc welding using external magnetic field (Influence of external magnetic field on arc shape and heat input)	Shoichi Matsuda	Shoichi Matsuda, Manabu Tanaka, Yasushi Tanahara	Shoichi Matsuda (Faculty of Engineering, University of the Ryukyus)	3181557
RAJU-3	Invited	Uniform laser-induced periodic surface structures on titanium irradiated with a two-color femtosecond double-pulse laser beam?	Masaki Hashida	Masaki Hashida, Yuki Furukawa, Shunsuke Inoue, Shuji Sakabe, Shinichiro Masuno, Mitsuhiko Kusaba, Hitoshi Sakagami, Masahiro Tsukamoto	Masaki Hashida (Institute for Chemical Research, Kyoto University)	3194057
RAJU-4	Invited	Creation of Functional Surfaces and Application for Joints	Shinji Koyama	Shinji Koyama, Takako Muraoka, Kohei Ozawa	Shinji Koyama (Gunma University)	3212362

Chairperson Kazuyoshi Sato and Co-char (Osaka University, to be determined)

RAJU(2)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
RAJU-5	Invited	Nanocrystals Technologies for Energy and Environmental Applications	Kazuyoshi Sato	Kazuyoshi Sato, Naokatsu Kannari, Takeshi Hashishin, Hiroya Abe	Kazuyoshi Sato (Gunma University)	3191703
RAJU-6	Invited	Influence of Surface Oxide Film on Surface Activate Bonding for Dissimilar Metallic Materials	Kazuhiro Ogawa	Kazuhiro Ogawa, Yudai Terui, Yuji Ichikawa	Kazuhiro Ogawa (Tohoku University)	3228973
RAJU-7	Invited	Numerical simulation for analysis and design of powder processing	Junya Kano	Junya Kano	Junya Kano (IMRAM(Tohoku University))	3206540

Chairperson Jianping He and Co-char (Osaka University, to be determined)

A (4)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
A-19	Keynote	NUMERICAL CALCULATION ON TEMPERATURE DISTRIBUTION CHARACTERISTIC OF HYBRID ARC IN MICROPLASMA ARC WELDING	Jianping He	Jianping He, Jinan Zhang, Shenglan Yang Lin, Fuxin Wang	Jianping He (Shanghai University of Engineering Science)	3179478
A-20		Influence of activating flux tungsten inert gas welding on mechanical and metallurgical properties of the Ti6Al4V alloy	Ravi Shanker Vidyarthi	Ravi Shanker Vidyarthi, Amit Kumar Gupta	Ravi Shanker Vidyarthi (Assistant Professor, Mechanical engineering, BITS Pilani, Hyderabad campus)	3216876
A-21		In situ observation of solidification cracking for stainless steel during TIG welding using synchrotron X-ray imaging	Tomoya NAGIRA	Tomoya NAGIRA, Daisuke YAMASHITA, Masayoshi KAMAI, Hidetoshi FUJII	Tomoya NAGIRA (JWRI, Osaka University)	3190758

Chairperson Kiyokazu Yasuda and Co-char (Osaka University, to be determined)

A (6)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
A-22	Keynote	Ultrasonic Joining of CFRTP to Selective Laser Melting SUS316L-Coated Titanium Alloy	Kiyokazu Yasuda	Kiyokazu Yasuda, Rennosuke Tamura	Kiyokazu Yasuda (Osaka University)	3216452
A-23		Microstructure and mechanical properties of Ti6Al4V titanium alloy joints diffusion bonded with Ag interlayer	Yu Peng	Yu Peng, Jinglong Li, Jiangtao Xiong, Junmiao Shi, Fusheng Zhang	Yu Peng (Shaanxi Key Laboratory of Friction Welding Technologies, Northwestern Polytechnical University)	3191458
A-24		Numerical study of the effect of bubble behaviors on the temperature field of underwater wet welding	Tao Zhang	Tao Zhang, Qingjie Sun, Yibo Liu, Yan Teng, Shaojun Hou, Jicai Feng	Tao Zhang (Harbin Institute of Technology)	3192099
A-25		Approach for automation of line heating by combination of reinforcement learning and FEM simulation	Manami Maekawa	Manami Maekawa, Kazuki Ikushima, Akira Notsu, Masakazu Shibahara, Yoshihiko Tango, Noboru Kiji	Manami Maekawa (Graduate School of Engineering, Osaka Prefecture University)	3216087
A-26		Development of a computational welding mechanics software InteWeld	Shengyong Pang	Shengyong Pang	Shengyong Pang (Huazhong University of Science and Technology)	3190346

Chairperson ChuanSong Wu and Co-char (Osaka University, to be determined)

A (7)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
A-27	Keynote	Ultrasonic vibration induced increment of arc pressure and current density in plasma arc welding	ChuanSong Wu	ChuanSong Wu, Cheng Zhang, ShuoShuo Tian	ChuanSong Wu (Shandong University)	3178118
A-28		Numerical simulation for dynamic behavior of molten pool and fusion hole in thin plate TIG welding with preset butt gap	Min LU	Min LU	Min LU (Shandong University, China)	3192084
A-29		Visual observation of fusion hole in thin plate TIG welding with a reserved gap	Chuanzong Li	Chuanzong Li	Chuanzong Li (Institute of Materials Joining, ShanDong University, Jinan, China)	3184008

Day2-RoomB

Chairperson Yutaka S. Sato and Co-char (Osaka University, to be determined)

B(4)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
B-16	Keynote	Effect of friction stir processing on microstructure of Cu with dispersed Cr particles	Yutaka S. Sato	Yutaka S. Sato, Momoka Honda	Yutaka S. Sato (Tohoku University)	3192245
B-17	Invited	Microstructure and mechanical properties of friction stir welding between AZ31 and AA6061 with low rotation speed	Ke Chen	Ke Chen	Ke Chen (School of Materials Science and Engineering, Shanghai Jiao Tong University)	3192866
B-18		Microstructure and mechanical properties of carbon materials reinforced metal matrix composites fabricated by friction stir processing	Shuai Zhang	Shuai Zhang, Gaoqiang Chen, Qingyu Shi	Shuai Zhang (Tsinghua University)	3189859

Chairperson Fuad Khoshnaw and Co-char (Osaka University, to be determined)

B(5)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
B-19	Keynote	Correlation between the Metallurgical Changes with the Mechanical Properties of Different Welded -Heat Treated Duplex Stainless Steel Alloys	Fuad Khoshnaw	Fuad Khoshnaw, Veronique Vitry, Fabienne Delaunois	Fuad M Khoshnaw (Dr. Fuad Khoshnaw, Senior Lecturer - DeMontfort University, United Kingdom)	3196722
B-20		Effect of alloying elements on corrosion resistance of weld metal of austenitic stainless steels	Yudai KANNO	Yudai KANNO, Shun TOKITA, Kota KADOI, Hiroshige INOUE	Yudai Kanno (Graduate School of Engineering, Osaka University)	3191588
B-21		A study on the acicular ferrite formation in steel weld metals for gas metal arc welding	Kyohei Uto	Kyohei Uto, Koyo Nakayama, Yuji Kisaka, Fumiaki Kimura, Hidenori Terasaki	Kyohei Uto (Kumamoto University)	3169809
B-22		Effects of Heat Input on Microstructure, Hardness and Residual Stress of GMA Welded Dissimilar Butt Joints between Stainless Steel AISI316L and Marine Steel AH36	Winarto Winarto	Winarto Winarto, Adhi Prihastomo, Sunoto Mudiantoro, Eddy S Siradj, Muhammad Rifai Muslih	Winarto Winarto (Universitas Indonesia)	3216895
B-23		Microstructure and Impact Toughness Relationship for Different Nickel Level of Electrode in Multi-pass FCA Welded SM570-TMC Steel Joint	Herry Oktadinata	Herry Oktadinata, Winarto Winarto, Eddy S Siradj, Dedi Priadi	Herry Oktadinata (Universitas Indonesia)	3193242

Chairperson Shotaro Yamashita and Co-char (Osaka University, to be determined)

B(6)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
B-24	Keynote	Effect of Yield Strength on Solidification Cracking Occurrence by using U-type Hot Cracking Test	Shotaro Yamashita	Shotaro Yamashita, Jae Hyeon Lee, Tomo Ogura, Kazuyoshi Saida	Shotaro Yamashita (Osaka University)	3217014
B-25		Evaluation of Solidification Cracking Susceptibility of Al alloys during Laser Welding	Kai Tomita	Kai Tomita, Motomichi Yamamoto, Kenji Shinozaki, Takuro Aoki, Tsuyoshi Matsumoto	Kai Tomita (Materials Joining Science & Engineering lab., Hiroshima University)	3189213
B-26		Effect of Microstructure of Base Metal on Solidification Cracking Susceptibility of Fully Austenitic Stainless Steel Weld Metal	Shun Tokita	Shun Tokita, Kota Kadoi, Yudai Kanno, Hiroshige Inoue	Shun Tokita (Joining and Welding Institute, Osaka University)	3188731
B-27		Microstructure observation of high current buried arc welded joint	Hayato Baba	Hayato Baba, Tetsuo Era, Reo Honda, Hisaya Komen, Hidenori Terasaki, Manabu Tanaka	Hayato Baba (DAIHEN Corporation)	3190498

Chairperson Thomas Kannengieser and Co-char (Osaka University, to be determined)

B(7)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
B-28	Keynote	In-situ Observation of Stress Evolution and Cracking during High Strength Steel Welding	Thomas Kannengieser	Thomas Kannengieser, Arne Kromm, Dirk Schroepler, Thomas Lausch, Jonny Dixneit, Andreas Hannemann	Thomas Kannengieser (Bundesanstalt für Materialforschung und -prüfung)	3214257
B-29		Online-Observation of Martensite Formation by combined use of Synchrotron Diffraction and Dilatometry	Arne Kromm	Arne Kromm, Thomas Kannengieser	Arne Kromm (Bundesanstalt für Materialforschung und -prüfung (BAM))	3213908
B-30		Measurement of residual stress distribution at the weld root for a U-rib specimen using the contour method	Ramy Gadallah	Ramy Gadallah, Seichiro Tsutsumi, Takayuki Yonezawa, Hiroshi Shimanuki	Ramy Gadallah (Osaka University)	3182346

Chairperson Haichao Cui and Co-char (Osaka University, to be determined)

B(8)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
B-31	Keynote	Effects of inhomogeneous microstructure on low-cycle Fatigue life evaluation	Haichao Cui	Haichao Cui, Jingchao wang, Chendong Shao, Fenggui Lu	Haichao Cui (Shanghai Jiao Tong university)	3203628
B-32		Effects of repair weld on the deck-to-vertical stiffener joint after fatigue cracking	Yixun Wang	Yixun Wang, Zhongqiu Fu	Yixun Wang (Joining and Welding Research Institute, Osaka University)	3208226
B-33		Experimental Study for the Effect of Additional Weld on Fatigue Strength in Out-of-Plane Gusset Welded Joints	Yuki Kotani	Yuki Kotani, Tadahisa Tsuyama, Seichiro Tsutsumi, Buerlihan Ayang	Yuki Kotani (Kawada Industries, Inc.)	3193695
B-34		Influence of residual stress and deformation on dynamic characteristics	Sheng ZHAO	Sheng ZHAO, Yu LUO	Sheng ZHAO (School of Naval Architecture, Ocean and Civil Engineering, Shanghai Jiaotong University)	3193330
B-35		Effect of metal type and heating condition on joint strength of metal and polymer prepared by arc welding	Hiroaki Kobayashi	Hiroaki Kobayashi, Makoto Uchida, Houichi Kitano, Yoshinisa Kaneko	Hiroaki Kobayashi (Osaka City University)	3189684

Chairperson Houichi Kitano and Co-char (Osaka University, to be determined)

B(9)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
B-36	Keynote	Simplified Analysis of Welding Heat Conduction Behavior Utilized Neural Network Technique	Houichi Kitano	Houichi Kitano, Yoshiki Mikami, Kazuhiro Ito, Terumi Nakamura	Houichi Kitano (National Institute for Materials Science)	3186297
B-37		Numerical study on transverse and axial residual stresses in GTA welded similar and dissimilar base metal components	Vijay Sai Chamarthi	Vijay Sai Chamarthi, Satish K. Velaga, Chandran C., Biswanath Sen, B.P.C Rao	Vijay Sai Chamarthi (Indira Gandhi Centre for Atomic Research)	3216274
B-38		Application of a Simple Simulation Model of Welding Deformation to the Large Welded Structure	Hiroki Murakami	Hiroki Murakami, Takeshi Terasaki, Katsumasa Miyazaki, Yoshihisa Maeda, Shigetaka Okano, Masahito Mochizuki	Hiroki Murakami (Hitachi, Ltd. Center for Technology Innovation - Materials)	3183290

## Day2-RoomC

Chairperson Chairperson: Shi Yu

C(4)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
C-19	Keynote	Effects of Helium in Narrow Gap GMAW and Optimization of Shielding Gas Constituents	Lin		Sanbao	
C-20		Comparative study on microstructure and mechanical properties between fiber laser and CMT arc additive manufacturing of X80 pipeline steel	Yan-Bin Zhang	Yan-Bin Zhang, Mei-Juan Hu, Lin-Jie Zhang Jing Niu, Jian-Xun Zhang	Yan Bin Zhang (Xian Jiaotong University)	3197485
C-21		Estimating weld joint penetration by monitoring weld pool surface dynamic in GTAW	Gang Zhang	Gang Zhang, Yu Shi, Ming Zhu , Ding Fan, Yu Ming Zhang	Gang Zhang (Lanzhou University of Technology)	3213910

Chairperson Chairperson: Lu Fenggui

C(5)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
C-22	Keynote	Numerical Study of Crack Growth in Welded Structures Using Characteristic Tensor Method	Hidekazu Murakawa	Hidekazu Murakawa	Hidekazu Murakawa (Osaka University)	3191129
C-23	Invited	Thermal Buckling Behavior during Thin Plate Welding and Joining	Jiangchao Wang	Jiangchao Wang	Jiangchao Wang (School of Naval Architecture and Ocean Engineering, Huazhong University of Science and Technology)	3100014
C-24		Optimization of the Friction Stir Welding Parameters in Dissimilar Aluminium alloy joints using a Bottom-Up Experimental Approach	ANIL KUMAR K S	ANIL KUMAR K S, Rajneesh H, Murigendrappa S M , Hemantha Kumar	ANIL KUMAR K S (J.S.S.ACADEMY OF TECHNICAL EDUCATION)	3181240
C-25		Numerical simulation and sensitivity analysis of 7XXX aluminum alloy multipass welding	Jijin Xu	Jijin Xu, Jie Hong, Shuai Wang , Hao Lu	Jijin XU (Shanghai Jiao Tong University)	3188844
C-26		Influence of Cu-coated Layer on Interfacial Intermetallics of Laser-MIG Hybrid Welded-brazed Al/steel Joint	Wei Dai	Wei Dai, Tao Yang, Zengming Zhou , Juncheng Hu, Hui Chen	Wei Dai (Southwest Jiaotong University)	3188506

Chairperson Chairperson: Feng Zhili

C(7)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
C-27	Keynote	Numerical investigation on the fracture driving force for different welds of Q980 high strength steel	Chendong Shao	Chendong Shao, Haichao Cui, Yasuhiro Takashima , Fumiyoshi Minami, Ninshu Ma, Fenggui Lu	Chendong Shao (School of Materials Science and Engineering, Shanghai Jiao Tong University)	3189535
C-28	Invited	Experimental and numerical simulation on fracture toughness of stainless steel clad plate joint	Chang'an Li	Chang'an Li, Guoliang Qin	Guoliang Qin (Shandong University)	3187735
C-29		Evaluation of singular stress field at crack tip considering welding residual stress using characteristic tensor	Kei Saito	Kei Saito, Tei Hirashima, Ninshu Ma , Hidekazu Murakawa	Kei Saito (JSOL Corporation)	3215812

Chairperson Chairperson: Murakawa Hidekazu

C(8)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
C-30	Keynote	Creep Rupture Behavior and Lifetime Prediction for Weldments of Creep Strength Enhanced Ferritic Steels	Zhili Feng	Zhili Feng, Wei Zhang, Yiyu Wang , Yanfei Gao	Zhili Feng (Oak Ridge National Laboratory)	3197820
C-31	Invited	Numerical simulation on the creep failure of dissimilar welded joint between T91 and HR3C heat-resistant steels	qiang jian zhang	qiang jian zhang, Dong Guo Zhang, Lin Jia Guo , Hong Chuan Luo	qiang jian zhang (School of Power and mechanical Engineering, Wuhan university, China)	3188194
C-32		Evaluation of material toughness using Instrumented Indentation Technique	Seunghun Choi	Seunghun Choi, Woojoo Kim, Dongil Kwon	seunghun choi (Seoul National University)	3190098
C-33		A NOVEL APPROACH TO EVALUATE RESIDUAL STRESS USING INSTRUMENTED INDENTATION TECHNIQUE	Dongil Kwon	Dongil Kwon, SungKi Choi, JunSang Lee , Kyungyul Lee, Seungha Lee	JunSang Lee (Seoul National University)	3190240
C-34		Effect of tool rotation speed on microstructure evolution and mechanical properties of dissimilar friction stir lap weld	Amlan Kar	Amlan Kar, Yoshiaki Morisada, Buchibabu Vicharapu , Hidetoshi Fujii	Amlan Kar (Joining and Welding Research Institute (JWRI), Osaka University, Japan)	3190450

Chairperson Chairperson: Gong Shuili

C(9)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
C-35	Keynote	Integrated modeling and simulation of Electron Beam Selective Melting process with experimental validation	Haiyan Zhao	Haiyan Zhao, Chaochao Wu, Muhammad Qasim Zafar , Jinnan Wang	Haiyan Zhao (Department of Mechanical Engineering, Tsinghua University)	3183212
C-36		Fabrication of the AlFeCrCoNi high entropy alloy coating by resistance seam welding method and its tribological properties in different conditions	Dechao ZHAO	Dechao ZHAO, Tomiko Yamaguchi, Wenqin Wang	Dechao ZHAO (Kyushu Institute of Technology)	3191259
C-37		Simplified Calculation of Induction Heating in Line Heating	Lichun Chang	Lichun Chang, Yao Zhao, Hua Yuan , Xiaocai Hu	Lichun Chang (School of Naval Architecture and Ocean Engineering, Huazhong University of Sciences and Technology)	3212208

## Day2-RoomD

Chairperson Martin Hertel and Co-char (Osaka University, to be determined)

D(4)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
D-16	Keynote	Numerical simulation of a GMAW hot-wire process using a two-dimensional arc deflection	Martin Hertel	Martin Hertel, Erik Spaniol, Marcus Trautmann, Sebastian Jackel, Uwe Fussel	Martin Hertel (Technische Universität Dresden)	3190238
D-17		Investigation of arc interruption behavior in induction heating assisted gas metal arc welding process using numerical approach	ADEEL IKRAM	ADEEL IKRAM, Hyun Chung	ADEEL IKRAM (Department of Naval Architecture and Ocean Engineering, Chungnam National University, South Korea)	3202987
D-18	Invited	Numerical study of arc and droplet for GMAW with external compound magnetic field	Lin Wang	Lin Wang, Ji Chen, ChuanSong Wu	Lin Wang (Shandong University)	3187275

Chairperson Yasutaka Ando and Co-char (Osaka University, to be determined)

D(5)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
D-19	Keynote	Deposition of titanium oxide film by APS using vortex arc flow	Yasutaka Ando	Yasutaka Ando, Yoshimasa Noda, Masaya Shigeta, Manabu Tanaka, Hideya Nishiyama	Yasutaka Ando (Ashikaga University)	3191687
D-20		Characteristics of 431 stainless steel coating by extra high speed laser cladding technology	fa ming shen	li qun li, li qun li, fa ming shen, wang tao, wei wang, liang shu wang	ming fa shen (faming shen)	3186178
D-21		Obtaining welding materials of various structures, fractional and chemical composition using plasma granulation	Stanislav Valentinovich Naumov	Stanislav Valentinovich Naumov, Arseniy Olegovich Artemov, Maksim Fedorovich Kartashev	Stanislav Valentinovich Naumov (Perm National Research Polytechnic University)	3216864
D-22		Investigation of the processes for producing carbide-containing welding fused fluxes using plasma granulation	Arseniy Olegovich Artemov	Arseniy Olegovich Artemov, Stanislav Valentinovich Naumov, Michael Nikolaevich Ignatov	Arseniy Olegovich Artemov (Perm National Research Polytechnic University)	3216936
D-23		Experiment and Theory of Buckling Failure of Si Grating for Imprinting Mold	Masanari DATEKYU	Masanari DATEKYU, Wataru YASHIRO, Hidemi KATO	Masanari DATEKYU (Institute for Materials Research)	3189490

Chairperson Xiaoyu Cai and Co-char (Osaka University, to be determined)

D(6)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
D-24	Keynote	Ar-He alternating gas shielded MIG welding for aluminum alloy	Xiaoyu Cai	Xiaoyu Cai, Sanbao Lin, Hongbin Dai, Benze Wang, Chenglei Fan, Chunli Yang	Xiaoyu Cai (State Key Laboratory of Advanced Welding and Joining, Harbin Institute of Technology)	3187901
D-25		Droplet transfer behavior of Al-Cu alloy in pulsed ultrasonic assisted GMAW	Chao Chen	Chao Chen, Chenglei Fan, Xiaoyu Cai, Sanbao Lin, Chunli Yang	Chao Chen (State Key Laboratory of Advanced Welding and Joining, Harbin Institute of Technology)	3185393
D-26		Study on high speed P-GMAW process regulated by compound magnetic-field	Qiang Chen	Qiang Chen, Ji Chen, Chuansong Wu	Qiang Chen (Institute of Materials Joining, Shandong University 250061, China)	3184281
D-27		Metal transfer in accordance with arc modes in asynchronous tandem GMA welding	Sanghoon Kang	Sanghoon Kang, Minjung Kang, Jason Cheon, Yong Hoon Jang, Cheohee Kim	Sanghoon Kang (Korea Institute of Industrial Technology)	3193572

Chairperson Chairperson: Fu Li

D(7)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
D-28	Keynote	Residual stresses and deformation of 2319 aluminum alloy cylindrical structure fabricated by CMT WAAM	Aiping Wu	Aiping Wu, Mingye Dong, Tianyi Zhao, Quan Li, Fude Wang, Yue Zhao	Aiping Wu (Department of Mechanical Engineering, Tsinghua University)	3192230
D-29		Analysis and Observation of Solid State Cold-Spray Additive Manufacturing Using a New Material Model Considering Strain Hardening, Ultra-High Strain Rate Hardening, Thermal Softening and Recrystallization	Qian Wang	Qian Wang, Ninshu Ma, Makoto Takahashi, Xiaotao Luo, Changjiu Li	Qian Wang (Joining and Welding Research Institute)	3173067
D-30		Laser cladding of (Ti3Al+TiB)/Ti Composite for High Temperature Application	Yueqiao Feng	Yueqiao Feng, Kai Feng, Chengwu Yao, Zhuguo Li	Yueqiao Feng (School of Materials Science and Engineering Shanghai Jiao Tong University)	3188721

Chairperson Chairperson: Zhao Haiyan

D(8)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
D-31	Keynote	Enhanced models of creep crack initiation prediction coupled the stress regime creep properties and constraint effect	Lian Yong Xu	Lian Yong Xu	Lian Yong Xu (Tianjin University)	3191351
D-32	Invited	Tear Strength Modeling and Improvement of Steel and Aluminum CMT Lap Joint	Jian LIN	Jian LIN, Li LU, Ninshu MA, Yongping LEI, Fu GUO	Jian Lin (College of Materials Science and Engineering, Beijing University of Technology)	3185782
D-33		Fatigue Life Prediction of AZ31B Magnesium Alloy and Its FSW Joints Based on Energy Analysis	Zhifeng Yan	Zhifeng Yan, Wenxian Wang, Hongxia Zhang	Zhifeng Yan (Taiyuan University of Technology)	3148948
D-34		A new creep interaction factor to estimate multiple cracks interaction at elevated temperatures	Lei Zhao	Lei Zhao, Lian Yong Xu, Yong Dian Han	Lei Zhao (Tianjin University)	3170464
D-35		Experimental investigations of creep-fatigue crack growth behavior in parent G115 steel	Zhengxin Tang	Zhengxin Tang, Hongyang Jing, Lianyong Xu, Lei Zhao, Yongdian Han	Zhengxin Tang (Tianjin University)	3194061

Chairperson Chairperson: Wu Aiping

D(9)	Keynote/Invite	Title	Presenter	Authors	Registrant	Abstract No.
D-36	Keynote	The Issue on Additive Manufacturing on Selective Melting and Direct Deposition	Shuli GONG	Shuli GONG, li CHEN, Feihu SHAN	LI CHEN (AVIC Manufacturing Technology Institute)	3194083
D-37		Full-field strain distribution and evolution behavior during wire arc additive manufacturing by digital image correlation in-situ measurement	Yue Zhao	Yue Zhao, Jinlong Jia, Quan Li, Aiping Wu	Yue Zhao (Tsinghua University)	3191594
D-38		The effects of micro-segregation and isothermal temperatures on nano bainitic microstructure and mechanical properties in laser clad coatings	Yanbing Guo	Yanbing Guo, Liqun Li, Zhuguo Li	Yanbing Guo (Shanghai Dianji University)	3174111

## VJW-POSTER

No.	Title	Presenter	Authors	Registrant	Abstract No.
VJW-P1	Diode laser selective surface homogenization of Ni thermal-sprayed layer	Min-Su Kim	Min-Su Kim, Eun-Joon Chun	Min-Su Kim (Korea Institute of Industrial Technology)	3216868
VJW-P2	Development of Novel MIG Welding Process with Duplex Current Feeding	Atsuhito Aoki	Atsuhito Aoki, Shinichi Tashiro, Hideaki Kurokawa, Manabu Tanaka	Atsuhito Aoki (Kawasaki Technology co., LTD., Joining and Welding Research Institute, Osaka University)	3151564
VJW-P3	Numerical Analysis of Friction Stir Welded V-Alloy/SUS316L Joint with New Particle Method based on MPS	Hisashi Serizawa	Hisashi Serizawa, Hirotaka Ogura, Kenta Mitsufuji, Fumikazu Miyasaka	Hisashi Serizawa (Joining and Welding Research Institute, Osaka University)	3186994
VJW-P4	Numerical model of a hollow cathode arc discharge formation in vacuum	Gleb Lvovich Permyakov	Gleb Lvovich Permyakov, Dmitriy Nikolaevich Trushnikov	Gleb Lvovich Permyakov (Perm National Research Polytechnic University)	3187821
VJW-P5	Numerical modelling and its validity for coaxial one-side resistance spot welding of metals and plastics	Sendong Ren	Sendong Ren, Yunwu Ma, Shuhei Saeki, Yoshiaki Iwamoto, Kunio Narasaki, Ninshu Ma	Sendong Ren (Joining and Welding Research Institute)	3188235
VJW-P6	Imaging Spectroscopy for Dynamic Transport of Chromium Vapor During a Helium TIG Welding	Keigo Tanaka	Keigo Tanaka, Masaya Shigeta, Manabu Tanaka, Anthony B. Murphy	Keigo Tanaka (Joining and Welding Research Institute, Osaka University)	3191132
VJW-P7	Numerical Simulation of Droplet Transfer with Flux Column During Flux Cored Arc Welding by Three-dimensional Smoothed Particle Hydrodynamics Method	Ryo Ueno	Ryo Ueno, Hisaya Komen, Masaya Shigeta, Manabu Tanaka	Ryo Ueno (Joining and Welding Research Institute, Osaka University)	3191133
VJW-P8	Glass-to-glass anodic bonding using conductive intermediate layers on joint surfaces of both glasses	Makoto Takahashi	Makoto Takahashi	Makoto Takahashi (Joining and Welding Research Institute, Osaka University)	3191789
VJW-P9	Joint Characteristics of Dissimilar Materials (AA5052 Aluminium Alloy - DP590 High Strength Steel) by Direct Current Pulsed Gas Metal Arc Welding	Seong Min Hong	Seong Min Hong, Shinichi Tashiro, Hee-Seon Bang, Manabu Tanaka	Seong Min Hong (Joining and Welding Research Institute, Osaka University)	3202233
VJW-P10	Investigation of energy propagation in variable polarity plasma arc welding using a fully coupled plasma arc-keyhole-weld pool model	Dongsheng Wu	Dongsheng Wu, Shinichi Tashiro, Xueming Hua, Manabu Tanaka	Dongsheng Wu (Joining and Welding Research Institute)	3205582
VJW-P11	Plasma surfacing of corrosion resistant heat resistant steel on the current of direct and reverse polarity	Dmitry Sergeevich Belinin	Dmitry Sergeevich Belinin, Yuri Dmitrievich Shitsyn, Sergey Dmitrievich Neulybin, Gleb Lvovich Permyakov	Dmitry Sergeevich Belinin (Perm National Research Polytechnic University)	3227021
VJW-P12	Methods for the determination of temperature dependent material properties of filler metals for hot-wire welding	Erik Spaniol	Erik Spaniol, Martin Lohse, Martin Hertel, Uwe Fussel	Erik Spaniol (TU Dresden)	3185325
VJW-P13	Estimation of appropriate laser irradiation position in laser enhanced Ar-GMA welding according to welding conditions	Houichi Kitano	Houichi Kitano, Terumi Nakamura	Houichi Kitano (National Institute for Materials Science)	3186110
VJW-P14	Computational Prediction of Penetration Shape in Horizontal Fillet MAG Welded Joint with Gap	Shingo Sato	Shingo Sato, Hisashi Serizawa, Fumikazu Miyasaka	Shingo Sato (Graduate School of Engineering, Osaka University)	3186949
VJW-P15	An Economical Reduce Crack Method for Thin-Wellded Stainless Steel Tube Joint by the LMF-GTAW Technique in Nuclear Industry	Haibin GENG	Jian LUO, Jianjun GAO, Haibin GENG, Zehan HUANG, Zhiyong LIN	Jian LUO (School of Mechanical Engineering and Automation, Fuzhou University, Fuzhou 350108, P.R.China)	3190263
VJW-P16	Numerical Simulation of welding defect in 7075 Aluminum Alloy FSW and EFSW Processing	Haibin GENG	Jian LUO, Haibin GENG, Jianjun GAO, Jiafa WANG, Gaosong LI, Zhiming Chen	Jian LUO (School of Mechanical Engineering and Automation, Fuzhou University, Fuzhou 350108, P.R.China)	3190274
VJW-P17	Development of Image Sensing Technology for In-process Quality Control	Kazuki Kasano	Kazuki Kasano, Satoru Asai, Yosuke Ogino	Kazuki Kasano (Sumitomo Heavy Industries, LTD.)	3190717
VJW-P18	Relationship between fusion hole center deviation distance and fusion hole stability in TIG welding process	Yu Cao	Yu Cao	Yu Cao (Shandong University, China)	3191415
VJW-P19	Single pass full penetration welding of high-strength steel on square-groove butt joint using hybrid welding process	Kazuya Ishida	Kazuya Ishida, Shinichi Tashiro, Masami Mizutani, Manabu Tanaka	Kazuya Ishida (Morita corporation)	3191708
VJW-P20	A unique CEL numerical method on material flow in a molten pool of workpiece vibration assisted welding	Habib Hamed Zargari	Habib Hamed Zargari, Kazuhiro Ito, Yoshiki Mikami, Abhay Sharma	Habib Hamed Zargari (Joining and Welding Research Institute Osaka University)	3193465
VJW-P21	Numerical and experimental observation of the melt pool behaviour for laser beam welded thick plates in partial penetration mode	Nasim Bakir	Nasim Bakir, Omer Ustunda?, Andrey Gumenyuk, Michael Rethmeier	Nasim Bakir (BAM Bundesanstalt für Materialforschung und -prüfung)	3195117
VJW-P22	Simulation of Gas Metal Arc Welding Process Using Three-Dimensional Smoothed Particle Hydrodynamics Method	Hisaya Komen	Hisaya Komen, Manabu Tanaka, Hidenori Terasaki	Hisaya Komen (Magnesium Research Center, Kumamoto University)	3207363
VJW-P23	Development of Welding Condition Optimization Program for Narrow Gap SAW	Yohei ABE	Yohei ABE, Takahiro FUJIMOTO, Mitsuyoshi NAKATANI, Masaya SHIGETA, Manabu TANAKA	Yohei ABE (Osaka university (Hitachi Zosen))	3215647
VJW-P24	Numerical investigation of the variability of the droplet transfer cycles in a controlled short-circuit transfer process	Satoshi Eda	Satoshi Eda, Yosuke Ogino, Satoru Asai	Satoshi Eda (Graduate School of Engineering, Osaka University)	3216111
VJW-P25	Observation of droplet properties in the arc atmosphere of GMAW	Koichi Hosoi	Koichi Hosoi, Shigeki Takagi, Manabu Tanaka	Koichi Hosoi (AIRI (Advanced Intellectual Research Institute))	3227752
VJW-P26	An investigation on Plasma-MIG Hybrid Welding Process of Thick Plate SUS304	Toshifumi Yuji	Toshifumi Yuji	Toshifumi Yuji (University of Miyazaki)	3154366
VJW-P27	Effects of the exerted ultrasonic power on microstructure and mechanical properties of Al/Mg alloys FSW joints	Jun Jie Zhao	Jun Jie Zhao, Chuan Song Wu	Jun Jie Zhao (Shandong University)	3182965
VJW-P28	Modeling transient development of weld pool and keyhole in ultrasonic vibration assisted plasma arc welding	Jun Nan Qiao	Jun Nan Qiao, Chuan Song Wu	Jun Nan Qiao (Shandong University)	3183332

VJW-POSTER

VJW-P29	A comparison of the spectra features and expansion dynamics of laser welding plumes at 10 Pa and 101 KPa ambient pressures	Kang Ben Liu	Kang Ben Liu	Kang Ben Liu (Liu Benkang)	3184339
VJW-P30	Joining of Alumina Ceramics Using Si-Mg Pastes for High-Temperature Application	Kazuyuki Kohama	Kazuyuki Kohama	Kazuyuki Kohama (Kyoto Municipal Institute of Industrial Technology and Culture)	3190466
VJW-P31	In-process monitoring of weld quality in thin plate lap welding by using image sensing	Seiya Nitta	Seiya Nitta, Yosuke Ogino, Satoru Asai	Seiya Nitta (Graduate school of engineering Osaka university)	3190657
VJW-P32	Development of a supporting system of layer design in multi-pass robot welding	Toshihiro Osumi	Toshihiro Osumi, Yosuke Ogino, Satoru Asai, Shin-ichi Sakamoto, Takuro Sanada	Toshihiro Osumi (Graduate school of engineering Osaka university)	3190702
VJW-P33	Effect of laser wavelength on welding of pure copper sheet with fiber and blue diode lasers.	Kento Morimoto	Kento Morimoto, Tsukamoto Masahiro, Sato Yuji, Shin-ichiro Masuno, Nobuyuki Abe, Azumi Kazuyuki, Hayashi Yoshihiko	Kento Morimoto (Graduate School of Engineering, Osaka University)	3190902
VJW-P34	Spectroscopic Measurement of the Arc and the Weld Pool in Robotic Welding	Daiki Komaya	Daiki Komaya, Satoshi Yamane	Daiki Komaya (Saitama university)	3191528
VJW-P35	Effect of Electrode Radius on Expulsion in Two Pulsed Spot Welding	Hinako Kinoshita	Hinako Kinoshita, Satoshi Yamane	Hinako Kinoshita (Saitama University)	3191552
	#N/A	#N/A	#N/A	#N/A	Cancelled
VJW-P36	Development of a high-speed welding simulation model by using machine learning technique	Yosuke Ogino	Yosuke Ogino, Satoru Asai, Hoichi Kitano, Terumi Nakamura	Yosuke Ogino (Osaka University)	3195420
VJW-P37	Degradation mechanism of structural adhesive under high temperature and high humidity conditions	Hitomi Abiko	Hitomi Abiko, Kosaku Nakayama, Tatsuya Kobayashi, Ikuo Shohji, Yugo Tomita, Tatsunori Matsunaga	Hitomi Abiko (Gunma University)	3203715
VJW-P38	Study on suppressing bead meandering of pure Ar-MIG arc welding using external magnetic field	Noboru Sakurai	Noboru Sakurai, Yasuyoshi Kaneko	Noboru Sakurai (Saitama University, Graduate school of Science and Engineering)	3203730
VJW-P39	Fundamental plasma diagnostic study for guiding TIG arc phenomenon by laser irradiation	Hiroyuki Okuda	Hiroyuki Okuda, Kazufumi Nomura, Satoru Asai, Shohei Iwata, Yasushi Kitani, Kenji Oi	Hiroyuki Okuda (Osaka University)	3206107
VJW-P40	Numerical analysis of duplex current feeding MIG welding process	Shinichi Tashiro	Shinichi Tashiro, Atsuhito AOKI, Hideaki KUROKAWA, Manabu TANAKA	Shinichi Tashiro (Osaka University)	3207200
VJW-P41	Modeling of Xenon Short Arc Lamp Considering Behavior of Tungsten Vapour Evaporated from Electrodes	Shiro Maenaka	Shiro Maenaka, Shinichi Tashiro, Anthony B Murphy, Kazunori Fujita, Manabu Tanaka	Shiro Maenaka (Yumex-inc.)	3208374
VJW-P42	Characterization of high-frequency linear friction welding process for Al/Cu dissimilar joining	Tomoki Matsuda	Tomoki Matsuda, Hideo Mogami, Tomokazu Sano, Ryo Yoshida, Hisahi Hori, Akio Hirose	Tomoki Matsuda (Osaka University)	3212609
VJW-P43	Investigation of Corrosion Resistance of Nickel-based Brazing Filler Metal for Stainless Steel by Electrochemical Measurement	Yusuke Fukai	Yusuke Fukai, Tatsuya Kobayashi, Ikuo Shohji, Tetsuya Ando, Takuya Yoshida, Tsuyoshi Kashiwase, Noboru Otomo	Yusuke Fukai (Gunma University)	3213442
VJW-P44	Investigation of High Temperature Fatigue Properties and Microstructures of Sn-Sb-Ag alloys	kohei MITSUI	kohei MITSUI, Tatsuya KOBAYASHI, Ikuo SHOHJI, Hirohiko WATANABE	Kohei Mitsui (Gunma University)	3213507
VJW-P45	Texture randomization of friction stir welded Mg alloy	Nan Xu	Nan Xu, Qining Song, Ruonan Feng, Yefeng Bao	Nan Xu (Hohai University)	3213515
VJW-P46	A study on the influence of welding positions on the keyhole and molten pool behavior in laser welding of Ti6Al4V alloy	Baohua Chang	Baohua Chang, Zhang Yuan, Hao Cheng, Haigang Li, Dong Du, Jiguo Shan	Baohua Chang (Tsinghua University)	3216939
VJW-P47	Investigation on the Corrosion and Cavitation Erosion Behaviors of the Cast and Friction Stir Welded Ni-Al Bronze in Sulfide-Containing Chloride Solution	Qining Song	Qining Song, Nan Xu, Yefeng Bao	Qining Song (Hohai University)	3217132
VJW-P48	Effect of keyhole size on weld pool dynamics in VPPA keyhole flat welding of aluminum alloy by 3D X-ray transmission in-situ observation	Bin Xu	Bin Xu, Shujun Chen, Shinichi Tashiro, Fan Jiang, V?n anh nguy?n, Manabu Tanaka	Bin Xu (Beijing University of Technology)	3181556
VJW-P49	Numerical simulation of deformation behavior during chisel testing of resistance spot welds of high-strength steel	Takuya Otsuka	Takuya Otsuka, Kazuhiro Ito, Yoshiki Mikami	Takuya Otsuka (Joining and Welding Research Institute Osaka University)	3182820
VJW-P50	Effect of grain boundary geometry on opening and sliding behavior in Ni base alloy weld metal	Takumi OKUDA	Takumi OKUDA, Keisuke TORIGATA, Daisuke ABE, Yoshiki MIKAMI, Kazuhiro ITO	Takumi Okuda (Graduate School of Engineering, Osaka University)	3190761
VJW-P51	Proposal of an effective Kt formula for butt weld joint using backing metal	Koyo Takata	Seichiro Tsutsumi, Koyo Takata, Riccardo Fincato, Masaki Ogawa	Seichiro Tsutsumi (Joining and Welding Research Institute, Osaka University)	3192504
VJW-P52	Prediction of welding deformation of automotive component using large-scale thermal elastic plastic analysis method	Taro Uchimura	Kazuki Ikushima, Taro Uchimura, Atsushi Kawahara, Kuwabara Hitoshi, Kanetake Hiroaki, Masakazu Shibahara	Kazuki Ikushima (Graduate School of Engineering, Osaka Prefecture University)	3211151
VJW-P53	Efficient modelling on analysis of welding mechanics using mesh superposition method	Ryo Ashida	Kazuki Ikushima, Ryo Ashida, Masakazu Shibahara	Kazuki Ikushima (Graduate School of Engineering, Osaka Prefecture University)	3211154
VJW-P54	Residual stress analysis of dissimilar weld joint between cast iron pipe and steel flange	Tomohiro Murata	Tomohiro Murata, Shigetaka Okano, Shimpei Tsutsumi, Kenji Sawada, Koji Nakamoto, Masahito Mochizuki	Tomohiro Murata (Division of Materials and Manufacturing Science, Graduate School of Engineering, Osaka University)	3216517
VJW-P55	Fatigue crack initiation and propagation life assessment of butt joint considering the effect of corrosion	Hirokazu Nagahama	Seichiro Tsutsumi, Hirokazu Nagahama, Riccardo Fincato	Seichiro Tsutsumi (Joining and Welding Research Institute, Osaka University)	3190174

VJW-POSTER

VJW-P56		Numerical Study for the Effect of Additional Weld on Fatigue Strength in Out-of-Plane Gusset Joints	Ayang Buerihan	Seichiro Tsutsumi, Ayang Buerihan, Riccardo Fincato , Yuki Kotani, Tadahisa Tsuyama	Seichiro Tsutsumi (Joining and Welding Research Institute, Osaka University)	3190179
VJW-P57		Effect of pre-overload on fatigue life extension of U-rib steel floor slab root	Homare Shibata	Seichiro Tsutsumi, Homare Shibata, Riccardo Fincato , Takayuki Yonezawa, Hiroshi Shimanuki	Seichiro Tsutsumi (Joining and Welding Research Institute, Osaka University)	3192626
VJW-P58		Effect of Ferrite Content and Chemical Composition on Weld Solidification Cracking Susceptibility of Stainless Steel with F mode Solidification	Seiya UENO	Seiya UENO, Kota KADOI, Shun TOKITA , Hiroshige INOUE	Seiya Ueno (Graduate School of Engineering, Osaka university)	3191607
VJW-P59		Influence of oxide particles on toughness of modified 9Cr-1Mo steel shielded metal arc weld metals with different Ni+Mn contents	Satoru Nishikawa	Satoru Nishikawa, Shinji Murayama, Kotone Numakura	Satoru Nishikawa (Iwate University)	3192960
VJW-P60		Dissimilar friction welding of titanium alloy to nickel alloy using metal interlayers	Tomo Ogura	Tomo Ogura, Tomoya Imai, Kazuyoshi Saida	Tomo Ogura (Osaka University)	3225680
VJW-P61		A Comparative Study on the Laser Welding Versus Friction Stir Welding of Ti-Ni Alloy	Abdollah Bahador	Abdollah Bahador, Junko Umeda, Seichiro Tsutsumi , Hidetoshi Fujii, Katsuyoshi Kondoh	Abdollah Bahador (JWRI, Osaka University)	3179847
VJW-P62		W alloying due to WC tool wear during friction stir processing for fatigue strength improvement of high-strength low-alloy steel joints	Shodai Koga	Shodai Koga, Hajime Yamamoto, Kazuhiro Ito , Makoto Takahashi, Yoshiki Mikami, Hidetoshi Fuji	Shodai Koga (Joining and Welding Research Institute)	3186779
VJW-P63		Travel distance for exhibiting homogeneous W alloying associated with WC tool wear during friction stir processing on low-carbon steel plates	Yudai Imagawa	Yudai Imagawa, Hajime Yamamoto, Kazuhiro Ito , Yoshiki Mikami	Yudai Imagawa (Joining and Welding Research Institute)	3186587
VJW-P64		Effect of laser cladding NiWC25 bionic structure on thermal fatigue resistance of H13 plate	Jianjun GAO	Gaosong LI, Jian LUO, Jianjun GAO , Haibin GENG, Yi LI, Chenglong WU	Jian LUO (School of Mechanical Engineering and Automation, Fuzhou University, Fuzhou 350108, P.R.China)	3191802
VJW-P65		Residual Stress Measurement by Neutron Diffraction in a Multi-pass FCA Welded SM570-TMC Steel Joint	Winarto Winarto	Winarto Winarto, Herry Oktadinata, Eddy S Siradj , Dedi Priadi, Ario Sunar Baskoro, Muhammad Rifai Muslih	Winarto Winarto (Universitas Indonesia)	3193175
VJW-P66		Machine-learning of low-carbon steel microstructure	Tatsuya Maemura	Kazumasa Tsutsui, Tatsuya Maemura, Kotaro Hayashi , Koji Moriguchi, Shigekazu Morito, Hidenori Terasaki	Tatsuya Maemura (Kumamoto University)	3191042
VJW-P67		Influence of Thermomigration on Microstructure and Properties of Cu/Sn-58Bi/Cu Solder Joint	Yu-An Shen	Yu-An Shen, Shiqi ZhouJiahui Li , Hiroshi Nishikawa	Yu-An Shen (Joining and Welding Research Institute, Osaka University)	3179648
VJW-P68		Sn steaming phenomenon under formic acid atmosphere	Siliang He	Siliang He, Runhua Gao, Jiahui Li , Hiroshi Nishikawa	Siliang He (Graduate School of Engineering, Osaka University)	3196743
VJW-P69		Synthesis and Joining of Tailor-Made Ceramic Nanocrystals towards Energy and Environmental Applications	Satoshi Ohara	Satoshi Ohara, Kazuhiro Yamamoto, Masakuni Ozawa	Satoshi Ohara (Joining and Welding Research Institute)	3175831
VJW-P70		Relationship between grinding results in wet ball milling and the analysis of ball motions using DEM simulation	Akira Kondo	Akira Kondo, Shingo Ishihara, Kizuku Kushimoto , Takahiro Kozawa, Junya Kano, Makio Naito	Akira Kondo (Joining and Welding Research Institute, Osaka University)	3188637
VJW-P71		Non-Autoclave synthesis of magnetite nanocrystal clusters and their magnetic properties	Hiroya Abe	Hiroya Abe, Kazuyoshi Sato, Yoshikazu Suzuki , Takashi Naka	Hiroya Abe (Osaka University)	3196392
VJW-P72		Interface Chemistry Control for Enhancing Electrical Conductivity of Epoxy-based Adhesives Containing Silver Fillers Treated with a Triazole Surfactant	Shiho NAKAZAWA	Shiho NAKAZAWA, Masahiro INOUE	Shiho NAKAZAWA (Graduate School of Science and Technology, Gunma University, Japan)	3198943
VJW-P73		Solute Diffusion Mechanism and Electronic Structures in Alpha Titanium	Kazuki Shitara	Kazuki Shitara, Masato Yoshiya, Junko Umeda , Katsuyoshi Kondoh	Kazuki Shitara (Joining and Welding Research Institute, Osaka University)	3205731
VJW-P74		In-situ monitoring technique of the welding defects during GMA welding by using laser ultrasonic	Satoshi OTAKI	Satoshi OTAKI, Taketo MATSUIDA, Kazufumi NOMURA , Satoru ASAI	Satoshi Otaki (Graduate School of Engineering Osaka University )	3201842
VJW-P75		Study of burn-through prediction in MAG arc welding using molten pool monitoring technique	Takumi MATSUMURA	Takumi MATSUMURA, Satoru ASAI, Kazufumi NOMURA	Takumi Matsumura (Division of Materials and Manufacturing Science, Graduate school of engineering Osaka university )	3205696
VJW-P76		Burn-through Prediction Using Deep Learning Model in Single Bevel Groove Welding	Koki Fukushima	Koki Fukushima, Takumi Matsumura, Kazufumi Nomura , Satoru Asai	Koki Fukushima (school of engineering, Osaka university)	3204009
VJW-P77		Probabilistic analysis for Charpy impact toughness of steel for welded structure in ductile-to-brittle fracture transition temperature range	Yasuhiro Takashima	Yasuhiro Takashima, Fumiyo Minami	Yasuhiro Takashima (Joining and Welding Research Institute, Osaka University)	3215570
VJW-P78		On reducing the quenching distortion of Aluminum-Copper alloy thin-wall components by optimizing the local heat transfer	Chengsong Zhang	Chengsong Zhang, Mufu Yan	Chengsong Zhang (School of Material Science and Engineering, Southwest Jiaotong University)	3184865
VJW-P79		Prediction of fatigue notch sensitivity of medium- and high-strength steels	Yuki Kiyokawa	Seichiro Tsutsumi, Yuki Kiyokawa, Riccardo Fincato	Riccardo Fincato (Joining and Welding Research Institute, Osaka University)	3192687
VJW-P80		Effect of blowholes on fatigue crack initiation life of aluminum alloy lap-joint	Gaku Daimon	Seichiro Tsutsumi, Gaku Daimon, Riccardo Fincato	Riccardo Fincato (Joining and Welding Research Institute, Osaka University)	3195776
VJW-P81		Ductile damage criterion for thermal fatigue failure of Sn-Ag-Cu solder using finite element method	Mai Morishita	Mai Morishita, Kunio Narasaki, Ninshu Ma , Hiroshi Nishikawa	Mai Morishita (Osaka University)	3206204

## VJW-POSTER

VJW-P82		Electrochemical Corrosion Resistance of 7075 Aluminum Alloy FSW and PWHT FSW Joint	Jianjun GAO	Jian LUO, Jianjun GAO, Haibin GENG, Yiqi WANG, Ying Li, Zenggui Chen	Jian LUO (School of Mechanical Engineering and Automation, Fuzhou University, Fuzhou 350108, P.R.China)	3190280
VJW-P83		Role of $\delta$ -ferrite in CF8A austenitic stainless steels regarding susceptibility to stress corrosion cracking in simulated pressurized water reactor environment	Youwei Xu	Youwei Xu, Hongyang Jing, Lianyong Xu	Youwei Xu (Tianjin University)	3174872
VJW-P84		Microstructure, Mechanical and Acoustic Properties of 316L Stainless Steel Lattice Structures Manufactured by Selective Laser Melting	Xiaojing Sun	Xiaojing Sun, Jiandong Wang, Fengchun Jiang	Xiaojing Sun (College of Materials Science and Chemical Engineering)	3184877
VJW-P85		Investigation of residual stress in multi arc-based cooperative metal additive manufacturing	Ruwei Geng	Ruwei Geng, Jun Du, Zhengying Wei	Ruwei Geng (Xi'an Jiaotong University)	3168956
VJW-P86		Influence of processing parameters and nitrogen solid-solution on microstructures of pure titanium materials fabricated by selective laser melting	Ammarueda Issariyapat	Ammarueda Issariyapat, Junko Umeda, Katsuyoshi Kondoh	Ammarueda Issariyapat (Mechanical engineering, Osaka university)	3173051
VJW-P87		High temperature tensile properties of TiC/Ti6Al4V titanium matrix composite fabricated by laser melting deposition	Jiandong Wang	Jiandong Wang, Jiandong Wang, Fengchun Jiang, Liqun Li, Panpan Lin	Jiandong Wang (Liqun Li)	3192701
VJW-P88		Fundamental study for in-situ quality measurement of WAAM process by laser ultrasonic technique	Taketo Matsuida	Taketo Matsuida, Ryosuke Kita, Satoshi Otaki, Kazufumi Nomura, Satoru Asai	Taketo Matsuida (Osaka University Graduate School of Engineering)	3206383
VJW-P89		Laser surface polishing of NiCrSiBC ? 60WC ceramic-metal composite deposited by direct metal laser deposition	Gopinath Muvvala	Abhijit Sadhu, Amit Choudhary, Sagar Sarkar, Pawar Sagar Dadasaheb, Krishna Chaitanya Masetty, Gopinath Muvvala, Surjya K Pal, Ashish Kumar Nath	GOPINATH MUVVALA (Indian Institute of Technology Hyderabad)	3188055



## WSE-POSTER

Poster	Title	Presenter	Authors	Registrant	Abstract No.
WSE-P1	Dynamic keyhole profile induced defects formation during 20 kW fiber laser deep penetration welding	Jijun Xin	Jijun Xin, Wenhua Dai, Chao Fang, Wuxiong Yang, Jing Wei, Jiefeng Wu, Yuntao Song	Jijun Xin (Institute of Plasma Physics, Chinese Academy of Sciences)	3178294
WSE-P2	High-speed tandem pulsed TIG welding process based on coordination control of tandem pulsed welding current	Guoliang Qin	Guoliang Qin	Guoliang Qin (Shandong University)	3186749
WSE-P3	Resistance spot welding of dissimilar DP590GA and AA6061 metals	Zhengqiang Zhu	Zhengqiang Zhu, Teng Liu, Fangjuan Qi, Yifeng Tian, Xiaomin Ge	Zhengqiang Zhu (Nanchang University)	3181763
WSE-P4	Droplet Transfer Behavior of Bypass Coupled Twin-Wire Indirect Arc Welding	Dongting Wu	Dongting Wu, Changshan Zhou, Qi An, Yongang Zhang, Yong Zou	Dongting Wu (MOE Key Lab for Liquid-Solid Structure Evolution and Materials Processing, Shandong University)	3192025
WSE-P5	Thermo-Mechanical Coupling Simulation for the Refill Friction Stir Spot Welding of AA6061 Alloy	Mingrun Yu	Mingrun Yu, Yitang Tang, Weiguang Chen, Li Zhou, Hongyun Zhao, Ninshu Ma	Mingrun Yu (Harbin Institute of Technology)	3179995
WSE-P6	Brazing of TC4/Ti2AlNb alloy with Ti-Zr-Cu-Ni filler metal by addition of Ti or Zr powder	Lin Yuan	Lin Yuan, Jiangtao Xiong, Junmiao Shi, Jinglong Li, Fusheng Zhang	Lin Yuan (Shaanxi Key Laboratory of Friction Welding Technologies, Northwestern Polytechnical University)	3183146
WSE-P7	Study on the numerical simulation method of rotating impact connection technology	qiu hui liao	qiu hui liao, biao sun, xue qi, jian ping He	qiu hui liao (shanghai university of engineering science)	3188422
WSE-P8	Effect of scanning laser beam motion mode on welding characteristics of aluminum alloy	吉? ?	吉? ?, 吉? ?, 瑞生 黄, 建? ?, 浩 曹, ?梅 梁	jipeng zou (Harbin Welding Institute Limited Company)	3190505
WSE-P9	Equal strength connection of high strength steel thick section with low matching welding material by narrow gap hybrid laser - arc welding	Yanming Wu	Yanming Wu, Jiguo Shan	Yanming Wu (Tsinghua University)	3191161
WSE-P10	Comparative study on laser/MIG hybrid welding and MIG welding of high-nitrogen austenitic stainless steel	Chen-Hong Wang	Chen-Hong Wang, Jun Hou, Lin-Jie Zhang, Gui-Feng Zhang, Jian-Xun Zhang	Chen-Hong Wang (State key laboratory of mechanical behavior for materials, Xi'an Jiaotong University, Xi'an, China)	3197440
WSE-P11	Laser Micro-welding of Stainless Steel Foils	Rongshi Xiao	Rongshi Xiao, Weizhi Du, Ting Huang	Rongshi Xiao (Beijing University of Technology)	3194011
WSE-P12	The influence of ultrasonic vibration on the mechanical properties of high strength steel welding seam of hybrid plasma-arc welding	Xiaoteng Wang	Xiaoteng Wang, Zhimin Luo, Yanbin Liu, Ling Fu	Xiaoteng Wang (State Key Laboratory of Key Technologies on Construction Machinery)	3194042
WSE-P13	Formation investigation of intermetallic compounds of thick plate Al/Mg alloys joints by friction stir welding	Liming Ke	Liming Ke	Li Xing (Li Xing)	3200758
WSE-P14		Zhidong Yang	Zhidong Yang, Chenfu Fang, Yong Chen, Shujing Chen	Zhidong Yang (Jiangsu University of Science and Technology)	3217062
WSE-P15	Numerical study of arc plasma in Ar-O <sub>2</sub> mixture gas	Xinxin Wang	Xinxin Wang, Ding Fan	Xinxin Wang (Chongqing University of Technology)	3217069
WSE-P16	Phase-field modeling of dynamic recrystallization process during friction stir welding of aluminum alloys	Chunliang Yang	Chunliang Yang, ChuanSong Wu	Chunliang Yang (Shandong University, China)	3247257
WSE-P17	Thermo-mechanical numerical simulation of linear friction welding of GH4169 superalloy	Peihao Geng	Peihao Geng	Peihao Geng (Institute of Materials Joining, Shandong University)	3178231
WSE-P18	Process Optimization and Fatigue Strength of Ultrasonic Impact Treatment of 7A52 Aluminum Alloy MIG-VPPA Welded Joints	Furong Chen	Furong Chen, Nan Li	Furong Chen (Inner Mongolia University of Technology)	3191940
WSE-P19	CFD-based modeling of friction stir welding: A new approach	Gaoqiang Chen	Gaoqiang Chen, Qingyu Shi	Gaoqiang Chen (Tsinghua University)	3187882
WSE-P20	Sintering of Pure Magnesium by Spark Plasma Sintering-Discussion of Densification Mechanism	Wenxian Wang	Wenxian Wang, Zhifeng Yan, Tingting Zhang	Wenxian Wang (Taiyuan University of Technology)	3209488
WSE-P21	Failure mechanism of the softening zone in the laser-welded DP 800 steel butt joints subjected to tensile loading	Yong Liu	Yong Liu, Caiyan Deng, Baoming Gong, Ce Liu	Yong Liu (Tianjin University)	3201035
WSE-P22	Creep deformation behavior of G115 steel joint under different applied stress	zhiyuan yu	zhiyuan yu, Hao Lu, Chun Yu, Junmei Chen, Jijin Xu	zhiyuan yu (Yuzhiyuan)	3205564
WSE-P23	Development of a weld filler metal dedicated to Sanicro 25	Yu Zhang	Yu Zhang, Hongyang Jing, Lianyong Xu, Yongdian Han, Lei Zhao, Haizhou Li, Zhengxin Tang, Tainwang Tang	Yu Zhang (Tianjin University)	3078961
WSE-P24	Texture inhomogeneity and fracture behavior of bobbin tool friction stir welded ZK60 magnesium alloy	Gaohui Li	Gaohui Li	Gaohui Li (Ligaoahui)	3133784
WSE-P25	Microstructure Evolution during Laser Pressure Welding	Ting Huang	Ting Huang, Jingquan Zhang, Sergey Mironov, Rongshi Xiao	Ting Huang (Beijing University of Technology)	3194001
WSE-P26	Mechanism of the M23C <sub>6</sub> carbide evolution and the liquation crack formation in the HAZ of Inconel 617B	Junhao Sun	Junhao Sun, Fenggui Lu, Zhuguo Li	Junhao Sun (Shanghai Jiaotong University)	3199917
WSE-P27	Prediction of thermal fatigue crack propagation behavior and the evaluation of thermal fatigue stability	Jinnan Wang	Jinnan Wang, Haiyan Zhao, Yunbo Chen, Muhammad Qasim Zafar, Chaochao Wu, Xin Wang	Jinnan Wang (Department of Mechanical Engineering, Tsinghua University)	3175043
WSE-P28	Failure Mechanism Research and Service Safety Assessment of the Main Steam Valve in Power Plants	Chong Cui	Chong Cui, Deming Xiao	Chong Cui (Guodian Boiler and Pressure Inspection Center)	3187311
WSE-P29	Creep damage evaluations of 740H Welds	Deming Xiao	Deming Xiao, Hongyang Jing	Deming Xiao (Guodian Boiler and Pressure Inspection Co., Ltd.)	3187339

## WSE-POSTER

WSE-P30	Fatigue properties of advanced high strength steel plate welded by hybrid plasma arc welding	Xiaoteng Wang	Xiaoteng Wang, Zhimin Luo, Yanbin Liu , Ling Fu	Xiaoteng Wang (State Key Laboratory of Key Technologies on Construction Machinery)	3194049
WSE-P31	Corrosion behavior of reheated CGHAZ of X80 pipeline steel in H <sub>2</sub> S-containing environments	Wei Zhao	Wei Zhao	Wei Zhao (Qilu University of Technology)	3200657
WSE-P32	New insight into high frequency impacting and rolling of 2A12 aluminum welded joint involving nanocrystallization	Huijing Zhang	Huijing Zhang, Xiaohui Zhao, Desheng Xu , Yu Liu, Xiaoming Qiu	Huijing Zhang (Huijing Zhang)	3189534
WSE-P33	Analysis of microstructure formation of epitaxial MCrAlY coating on Ni-base superalloy produced by electron beam cladding	Qin Wen Wang	Qin Wen Wang, Tomiko Yamaguchi, chao De Zhao , De Wang, long Yu Li	Qin Wen Wang (Nanchang University )	3191182
WSE-P34	Temperature measurement of symmetrical high frequency pulse GTAW arc plasma by monochromatic imaging method	Heng LIU	Heng LIU, Mingxuan Yang , Bojin Qi	Heng LIU (Beihang University)	3216980
WSE-P35	Research on microstructures and mechanical properties of additive manufacturing (SLM) components of Inconel 718 superalloy	qiang jian zhang	qiang jian zhang, Sheng LiuChen Zhang , Hui Li, Gang Jun Wen	qiang jian zhang (School of Power and mechanical Engineering, Wuhan university, China)	3188988
WSE-P36	Microstructure and Mechanical Property Anisotropy in WAAM Wall Structure Using ER2319 Welding Wire	Mingye Dong	Mingye Dong, Aiping Wu, Tianyi Zhao , Quan Li, Yue Zhao, Junjun Fei	Mingye Dong (Department of Mechanical Engineering, Tsinghua University, Beijing 100084, China)	3171274
WSE-P37	Review on the Thermal Distortion in Metal Additive Manufacturing	Qingyu Shi	Ruishan Xie, Qingyu Shi	Ruishan Xie (Tsinghua University)	3186906
WSE-P38	Study on wear of middle trough and plasma arc surfacing repair in coal mine	Jianxun Zhang	Jianxun Zhang, Jing Niu, Fei Gao	Jianxun Zhang (Materials Science and Engineering School, Xian Jiaotong University, Xian 710049, China)	3187236
WSE-P39	Intergranular Corrosion behavior of FeCoCrNi high entropy alloy fabricated by laser selective melting	Yongdian Han	Yongdian Han, Danyang Lin, Lianyong Xu , Hongyang Jing, Lei Zhao	Yongdian Han (Tianjin University)	3188960
WSE-P40	Simulated and Experimental Study on Laser Metal Deposition of AlSi10Mg Alloy	Xian Wang	Xian Wang	Xian Wang (State Key Laboratory of Advanced Welding and Joining, Harbin Institute of Technology)	3189517
WSE-P41	Influence of mechanical shock peening on heat-affected zone liquation cracking of K447A laser cladding zone	zhenlin zhang	zhenlin zhang, yue zhao, jiguo shan	zhenlin zhang (zhenlin zhang)	3204734
WSE-P42	A full-size prediction model of welding bead in wire and arc additive manufacturing	Chang xing Wang	Chang xing Wang, Xue wei Fang, Hao Bai , Chuan qi Ren	Changxing Wang (School of Mechanical Engineering, Xi'an Jiao Tong University)	3192015
WSE-P43	Effects of pulse parameters on in-situ Ti-V carbides size and properties of Fe-based laser cladding layers	Hui Zhang	Hui Zhang	Hui Zhang (Qilu University of Technology)	3200583
WSE-P44	Effect of heat input on the microstructure and mechanical properties of additive manufactured magnesium alloy	Xuwei Fang	Xuwei Fang, Jiannan Yang, Hao Bai , Chuanqi Ren, Ke Huang, Bingheng Lu	Xuwei Fang (Xi'an Jiaotong University)	3214508
WSE-P45	Efficient thermo-mechanical simulation approaches for arc-and-wire based additive manufacturing	Zhili Feng	Hui Huang, Jian Chen, Zhili Feng , Ninsu Ma, Hidekazu Murakawa	Hui Huang (Oak Ridge National Laboratory)	3227826
WSE-P46	Numerical Analysis on Thermal Characteristics of Direct Current Pulsed Gas Metal Arc Dissimilar Materials Welded Joints of AA5052 Aluminium Alloy to DP590 High Strength Steel	Seong Min Hong	Seong Min Hong, Shinichi Tashiro, Hee-Seon Bang , Manabu Tanaka	Seong Min Hong (Joining and Welding Research Institute, Osaka University)	3202240
WSE-P47	Study on the weld bead formation on square-groove butt joint using hybrid welding process	Kazuya Ishida	Kazuya Ishida, Shinichi Tashiro, Masami Mizutani , Manabu Tanaka	Kazuya Ishida (Morita corporation)	3191709
WSE-P48	Numerical simulation of magnetic blowout process of air arc plasma in electrical contact	Shinichi Tashiro	Shinichi Tashiro, Shuichi ITODA, Takahiro MORICHI , Anthony B MURPHY, Manabu TANAKA	Shinichi Tashiro (Osaka University)	3207205
WSE-P49	Effects of additional weld and grinding on fatigue life extension of non-load-carrying cruciform joints	Koyo Takata	Seichiro Tsutsumi, Koyo Takata, Riccardo Fincato	Seichiro Tsutsumi (Joining and Welding Research Institute, Osaka University)	3192517