

Visual-JW 2014

26-28 November, 2014

Hotel Hankyu Expo Park, Osaka, Japan

The International Symposium
on Visualization in Joining & Welding Science through
Advanced Measurements and Simulation,

in conjunction with

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

FINAL PROGRAM

Organized by Joining and Welding Research Institute, Osaka University

Co-organized by Japan Welding Society

Visual-JW 2014

In the year 2014, 3rd International Symposium on Visualization in Joining & Welding Science through Advanced Measurements and Simulation (Visual-JW 2014) in conjunction with symposium on the Research Activities of Joint Usage / Research Center on Joining and Welding will be held on 26-28, November at the Hotel Hankyu Expo Park in Osaka, Japan.

The symposium aims to promote direct exchange of the latest scientific and technological information related to visualization of complex phenomena in material processing through advanced measurements and simulation. It will also provide a good opportunity to discuss on the future and the strategy regarding R&D of materials processing.

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Schedule of the Symposium

Registration

26-November: 15:30 -18:30
 27-November: 8:00 -18:30
 28-November: 9:30 -17:00

26-November

- 17:30-19:30 : Welcome Party at Room Seiun

27-November

Thursday 27-November				
Room	Room A	Room B	Room C	Room D
Session Name				
8:50-9:00	Opening Ceremony at Room G			
9:00-9:30	Plenary Lecture 1 at Room G			
9:30-10:00	Plenary Lecture 2 at Room G			
10:00-10:30	Plenary Lecture 3 at Room G			
10:30-10:50	Coffee Break			
Session Name	Visualization of Joining and Welding Process (1)	Visualization of Mechanics in Joining and Welding (1)	Visualization of Joining and Welding Process (6)	Visualization of Metallurgy in Joining and Welding (1)
10:50-11:10	JWP-1	MCJW-1	JWP-31	MTJW-1
11:10-11:30	JWP-2	MCJW-2	JWP-32	MTJW-2
11:30-11:50	JWP-3	MCJW-3	JWP-33	MTJW-3
11:50-12:10	JWP-4	MCJW-4	JWP-34	MTJW-4
12:10-12:30	JWP-5		JWP-35	MTJW-5
12:30-13:30	Lunch			
Session Name	Visualization of Joining and Welding Process (2)	Visualization of Mechanics in Joining and Welding (2)	Visualization of Joining and Welding Process (7)	Visualization of Metallurgy in Joining and Welding (2)
13:30-13:50	JWP-6	MCJW-6	JWP-36	MTJW-6
13:50-14:10	JWP-7	MCJW-7	JWP-37	MTJW-7
14:10-14:30	JWP-8	MCJW-8	JWP-38	MTJW-8
14:30-14:50	JWP-9	MCJW-9	JWP-39	MTJW-9
14:50-15:10	JWP-10	MCJW-10		
15:10-15:30	Coffee Break			
Session Name	Visualization of Joining and Welding Process (3)	Visualization of Mechanics in Joining and Welding (3)	Visualization of Joining and Welding Process (8)	Visualization of Advanced Material Processing (1)
15:30-15:50	JWP-11	MCJW-11	JWP-41	AMP-1
15:50-16:10	JWP-12	MCJW-12	JWP-42	AMP-2
16:10-16:30	JWP-13	MCJW-13	JWP-43	AMP-3
16:30-16:50	JWP-14	MCJW-14	JWP-44	AMP-4
16:50-17:10	JWP-15	MCJW-15		
17:10-17:20	Break			
17:20-18:20	Poster at Room F			
18:20-18:30	Break			
18:30-20:30	Reception at Orbit Hall			

28-November

Friday 28-November				
Room	Room A	Room B	Room C	Room D
Session Name	The Research Activities of Joint Usage / Research Center on Joining and Welding (Joining / Welding Processing)	Visualization of Mechanics in Joining and Welding (4)	Visualization of Joining and Welding Process (9)	The Research Activities of Joint Usage / Research Center on Joining and Welding (Nano & Micro Materials)
10:20-10:40	RAJU-JW1 RAJU-JW2 RAJU-JW3 RAJU-JW4		JWP-51	RAJU-NM1 RAJU-NM2 RAJU-NM3 RAJU-NM4
10:40-11:00			JWP-52	
11:00-11:20		MCJW-16	JWP-53	
11:20-11:40		MCJW-17	JWP-54	
11:40-12:00		MCJW-18	JWP-55	
12:00-13:00	Lunch			
Session Name	Visualization of Joining and Welding Process (4)	Visualization of Mechanics in Joining and Welding (5)	Visualization of Joining and Welding Process (10)	Visualization of Nano & Micro Joining (1)
13:00-13:20	JWP-16	MCJW-21	JWP-61	NMJ-1
13:20-13:40	JWP-17	MCJW-22	JWP-62	NMJ-2
13:40-14:00	JWP-18	MCJW-23	JWP-63	NMJ-3
14:00-14:20	JWP-19	MCJW-24	JWP-64	NMJ-4
14:20-14:40	JWP-20	MCJW-25	JWP-65	NMJ-5
14:40-15:00	Coffee Break			
Session Name	Visualization of Joining and Welding Process (5)	Visualization of Mechanics in Joining and Welding (6)	Visualization of Joining and Welding Process (11)	Visualization of Nano & Micro Joining (2)
15:00-15:20	JWP-21	MCJW-26	JWP-66	NMJ-6
15:20-15:40	JWP-22	MCJW-27	JWP-67	NMJ-7
15:40-16:00	JWP-23	MCJW-28	JWP-68	NMJ-8
16:00-16:20	JWP-24	MCJW-29	JWP-69	NMJ-9
16:20-16:40	JWP-25	MCJW-30	JWP-70	NMJ-10

Friday 28-November

The Research Activities of Joint Usage / Research Center on Joining and Welding

Room A

10:20-12:00: The Research Activities of Joint Usage / Research Center on Joining and Welding (Joining / Welding Processing) (RAJU-JW)

Chair Person: Rintaro UEJI (Osaka University)
Yousuke KAWAHITO (Osaka University)

RAJU-JW-1 **Invited Lecture:** "Effect of Heat Input on Microstructure and Hardness of Friction Stir Welded Joints of Middle Carbon Steel"

Yasuyuki MIYANO (Akita University), Rintaro UEJI (Osaka University), Osamu KAMIYA, Ryou OKUBO (Akita University), Hidetoshi FUJII (Osaka University)

RAJU-JW-2 **Invited Lecture:** "The Effect of Laser Welding Conditions on the Microstructure of F82H/SUS316L Weld Joint"

Hiroaki ABE, Akira OBA, Sho KANO, Yoshitaka MATSUKAWA, Yuhki SATOH (Tohoku University), Hiroyasu TANIGAWA (Japan Atomic Energy Agency), Hisashi SERIZAWA (Osaka University)

RAJU-JW-3 **Invited Lecture:** "Cohesive Crack Model to Reflect Chemical Action at Grain and Its Boundaries in Polycrystalline Metals"

Yuichi SHINTAKU, Mayu MURAMATSU, Shinsuke TAKASE (Tohoku University), Seiichiro Tsutsumi (Osaka University), Kenjiro Terada (Tohoku University)

RAJU-JW-4 **Invited Lecture:** "Study on Real-time Observation of Laser Cutting Front by Using X-Ray Transmission System"

Hitoshi OZAKI, Minh Quang LE, Hiroshi KAWAKAMI, Jippe SUZUKI (Mie University), Yousuke UEMURA, Yuichiro DOI, Masami MIZUTANI, Yousuke KAWAHITO (Osaka University)

Room D

10:20-12:00: The Research Activities of Joint Usage / Research Center on Joining and Welding (Nano & Micro Materials) (RAJU-NM)

Chair Person: Katsuyoshi KONDOH (Osaka University)
Kazuhiro ITO (Osaka University)

RAJU-NM-1 **Invited Lecture:** "Surface/Interface as a Foundation to Realizing Designer Materials"

Wilson Agerico DINO, Kazuki KOJIMA, Hideaki KASAI, Yousuke KAWAHITO, Seiji KATAYAMA (Osaka University)

RAJU-NM-2 **Invited Lecture:** "Bioactive Titanium Surface Using Carbon Nanotube Net Film"

Hirofumi MIYAJI, Erika NISHIDA (Hokkaido University), Junko UMEDA, Katsuyoshi KONDOH (Osaka University), Hiroko TAKITA, Bunshi FUGETSU, Saori TANAKA, Akihito KATO, Tsukasa AKASAKA, Masamitsu KAWANAMI (Hokkaido University)

RAJU-NM-3 **Invited Lecture:** "Charge Trap Mechanism of Memory Capacitors with Al₂O₃/(Ta/Nb)Ox/Al₂O₃ Multi-Layer"

Toshihide NABATAME, Akihiko OHI (NIMS WPI-MANA), Kazuhiro ITO, Makoto TAKAHASHI (Osaka University), Toyohiro CHIKYO (NIMS WPI-MANA)

RAJU-NM-4 **Invited Lecture:** "Joining and Interface Control of Metal Oxide Nanocrystals in Aqueous Solutions for Molecular Sensors"

Yoshitake MASUDA (AIST)