

VHCF8 Final Program

Live Session: Plenary & Keynote

■ Monday, July 5, 2021			■ Tuesday, July 6, 2021			■ Wednesday, July 7, 2021			■ Thursday, July 8, 2020			■ Friday, July 9, 2021		
16:00-16:30	Opening	Chair Prof. Kouike TAKAHASHI (Hokkaido University)	16:00-16:30	Online Exhibition 1 INSTRON		15:15-16:30	Steering committee		16:00-16:30	Online Exhibition 2 PULSTEC Industrial Co., Ltd.		16:00-16:30	Online Exhibition 3 Yamamoto Metal Technos Co., Ltd.	
16:30-17:30	Plenary 1. Prof. Thierry PALIN-LUC (University of Bordeaux)	Chair Dr. Hiroyuki OGUMA (NIMS)	16:30-16:40	Break		16:40-17:20	Keynote 4. Prof. Stefano INVERNIZZI (Politecnico di Torino)	Chair: Prof. Masahiro ENDO (Fukuoka Univ.)	16:30-16:40	Break		16:30-16:40	Break	
17:30-17:40	Break		16:40-17:20	Keynote 1. Prof. Youshi HONG (Chinese Academy of Sciences)	17:20-17:30	Break	16:40-17:20		Keynote 7. Prof. Davide S. PAOLINO (Politecnico di Torino)	16:40-17:30	Plenary 4. Prof. Tatsu SAKAI (Ritsumeikan University) (Video streaming)	Chair: Prof. Yoshinobu SHIMAMURA (Sizuoka Univ.)		
17:40-18:40	Plenary 2. Dr. Yoshiyuki FURUYA (NIMS)		17:20-17:30	Keynote 2. Prof. Manuel FREITAS (Instituto Superior Tecnico)	17:30-18:10	Break	17:30-18:10		Keynote 5. Prof. Martina ZIMMERMANN (Fraunhofer IWS)	17:30-18:10	Keynote 8. Dr. Alice CERVELLON (Institut Pyrene, UCSB)	17:30-17:40	Break	
18:40-19:10	Online Social Gathering		18:10-18:20	Break	18:10-18:20	Break	18:10-18:20		Keynote 6. Dr. Bernd SCHÖNBAUER (BOKU University)	18:10-18:20	Break	17:40-18:10	Announcement of YRA winners	Chair: Prof. Yoshihiko JEMATSU (Gifu Univ.)
			18:20-19:00	Keynote 3. Prof. Frank BALLE (University of Freiburg)	18:20-19:00	Keynote 9. Prof. Guocai CHAI (Linköping University)	18:20-19:00	Online Social Gathering	18:20-19:00	Keynote 9. Prof. Guocai CHAI (Linköping University)	18:10-18:40	Closing		
			19:00-19:30	Online Social Gathering	19:00-19:30	Online Social Gathering	19:00-19:30	Online Social Gathering	19:00-19:30	Online Social Gathering	18:40-19:10	Online Social Gathering		

Time difference: 16:30 Sapporo/Japan = 9:30 Berlin/Germany = 8:30 London/UK = 8:30 Lisbon/Portugal = 15:30 Beijing/China = 10:30 Moscow/Russia = 3:30 NY/US = 0:30 San Francisco/US
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On-demand Video Session: Regular (20 mintes)

■ Monday, July 5, 2021			■ Tuesday, July 6, 2021			■ Wednesday, July 7, 2021			■ Thursday, July 8, 2020			■ Friday, July 9, 2021				
Time	ROOM A	ROOM B	Time	ROOM A	ROOM B	Time	ROOM A	ROOM B	Time	ROOM A	ROOM B	Time	ROOM A	ROOM B		
9:30-9:50			9:30-9:50			9:30-9:50			9:30-9:50			9:30-9:50				
9:50-10:10	Fatigue properties and damage mechanisms (7)	State-of-the-art technologies in ultrasonic testing (8)	9:50-10:10			9:50-10:10			9:50-10:10	Additively manufactured materials (12)	Mechanism of crack initiation (12)	9:50-10:10	Statistical and prognostic modeling (5)	Influence of environment (4)		
10:10-10:30			10:10-10:30			10:10-10:30			10:10-10:30					10:10-10:30		
10:30-10:50			10:30-10:50			10:30-10:50			10:30-10:50					10:30-10:50		
10:50-11:10			10:50-11:10			10:50-11:10			10:50-11:10					10:50-11:10		
11:10-11:30			11:10-11:30			11:10-11:30			11:10-11:30			11:10-11:30	Surface treatment (3)	Effects of loading conditions (7)		
11:30-11:50			11:30-11:50			11:30-11:50			11:30-11:50			11:30-11:50				
11:50-12:10	Influence of microstructure, defects, and notches (7)	Nondestructive inspection using Synchrotron X-ray (4)	11:50-12:10			11:50-12:10			11:50-12:10			11:50-12:10				
12:10-12:30			12:10-12:30			12:10-12:30			12:10-12:30			12:10-12:30				
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12:50-13:10			12:50-13:10			12:50-13:10			12:50-13:10			12:50-13:10				
13:10-13:30			13:10-13:30			13:10-13:30			13:10-13:30			13:10-13:30				
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VHCF8 Final Program

■ **Monday, July 5, 2021**

Live Session: Opening, Plenary

Time	Session	Submission No.	Presenter	Affiliation	Presentation title
16:00-16:30	Opening				
16:30-17:30	Plenary 1.	C000005	Prof. Thierry PALIN-LUC	Arts et Metiers Institute of Technology, University of Bordeaux, CNRS, Bordeaux INP, INRAe, I2M Bordeaux, 33400 Talence, France.	Observation of internal fatigue crack initiation and early crack growth in a cast aluminium alloy with an in-situ synchrotron ultrasonic fatigue testing device
17:30-17:40	Break				
17:40-18:40	Plenary 2.	C000007	Dr. Yoshiyuki FURUYA	Research Center for Structural Materials, National Institute for Materials Science, Japan	Standardization of an ultrasonic fatigue testing method in Japan
18:40-19:10	Online social gathering (tbd)				

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VHCF8 Final Program

■ Tuesday, July 6, 2021

On-demand Video Session: Regular (20 mintes)

Time	Room A						Room B					
	Session	Submission No.	Presentation No.	YRA	Presentation title	Presenter	Session	Submission No.	Presentation No.	YRA	Presentation title	Presenter
9:30-9:50	Fatigue properties and damage mechanisms (7)	C000009	2A01		Super or Very High Cycle fatigue regime treated as peculiar to the micro-scale level of metal fatigue fracture	Prof. Andrey Andreevich Shanyavskiy	State-of-the-art technologies in ultrasonic testing (8)	C000032	2B01	#	Experimental methodology and analytical solution for cruciform ultrasonic fatigue testing	Mr. Pedro Rodrigues da Costa
9:50-10:10		C000090	2A02		Factors governing surface or internal crack initiation during VHCF of high strength steel	Prof. Ulrich Krupp		C000102	2B02		The effect of damping in fatigue testing of automotive steels at 20 kHz	Dr. Mohamed Sadek
10:10-10:30		C000067	2A03		Mathematical modeling of the VHCF damage development in smooth specimens under arbitrary loading mode	Dr. Alexander Nikitin		C000021	2B03	#	Harmonic balance framework for ultrasonic fatigue vibration	Mr. Shawn L. Kiser
10:30-10:50		C000011	2A04	#	Change in crack initiation modes under HCF and VHCF in a type 304 stainless steel in annealed and pre-deformed condition	Dr. Antra Sarkar		C000079	2B04		In situ characterization of fatigue damage accumulation in titanium and aluminum alloys via nonlinear ultrasonic measurements	Dr. Mikhail Bannikov
10:50-11:10		C000082	2A05	#	Very high cycle fatigue properties and damage mechanism of magnesium alloy	Ms. Michiru Abe		C000008	2B05		Internal fatigue crack monitoring during ultrasonic fatigue test using temperature measurements and tomography	Prof. Nicolas Ranc
11:10-11:30		C000084	2A06		Very high cycle fatigue properties of the aeronautical aluminum alloy D16T	Dr. Alexander Nikitin		C000041	2B06		Stress estimation using in-situ time-resolved X-Ray diffraction technique in a pearlitic steel loaded in VHCF regime at 20 kHz	Mr. Vincent Jacquemain
11:30-11:50		C000083	2A07	#	Very high cycle fatigue properties and damage mechanism of cast aluminum alloy	Mr. Ryo Anzai		C000042	2B07		In Situ Rime-Resolved X-Ray Diffraction Technique Applied to a Copper Single Crystal Loaded in VHCF Regime at 20 kHz	Ms. Doriana Vinci
11:50-12:10	C000010	2A08		Mixed-mode I+II+III fracture for subsurface crack path of ball-bearing races in VHCF regime	Mr. Alexey Pavlovich Soldatenkov	C000026		2B08		High speed in situ synchrotron observation of super elastic Nitinol fatigue at ultrasonic frequency	Dr. Michael Fitzka	
12:10-12:30	C000101	2A09		On the relationship between stress intensity factor and fractographic aspects of a crankshaft steel in VHCF	Ms. Maria Clara Carvalho Teixeira	Nondestructive inspection using Synchrotron X-ray (4)	C000088	2B10	#	Nondestructive observation of internal fatigue crack initiation in Ti-6Al-4V via synchrotron radiation X-ray CT	Dr. Fumiyoshi Yoshinaka	
12:30-12:50	C000030	2A10	#	VHCF ultrasonic tests on EN AW-6082 aluminium alloy samples over a wide dimensional range	Mr. Francesco Montagnoli		C000095	2B11	#	Initiation and propagation process of small fatigue crack in beta titanium alloy via multiscale synchrotron radiation computed tomography	Mr. Gaoge Xue	
12:50-13:10	C000077	2A11	#	Quantitative investigation of the fatigue strength of Ni-resist using various types of small defects	Mr. Kaito Hayashi	C000002	2B12	#	A trial for detecting small fatigue cracks initiating from non-metallic inclusions in precipitation-hardened stainless steel	Mr. Sourav Kumar Modi		
13:10-13:30	C000068	2A12		Investigation of S275JR+AR structural steel fatigue performance in very high cycle domain	Dr. Yevgen Gorash	C000086	2B13		Effect of Inclusion Shape and Orientation on Flaking Process in Very High Cycle Rolling Contact Fatigue by Laminography Using Ultra-Bright Synchrotron Radiation	Prof. Daiki Shiozawa		
13:30-13:50	C000104	2A13		Characterization of cyclic deformation behavior of austenitic stainless steels in the very high cycle fatigue regime	Dr. Marek Smaga							
13:50-14:10	C000093	2A14	#	Influence of preforming and laser cutting on VHCF behavior of AISI304	Mr. André Till Zeuner							
14:10-14:30												
14:30-14:50												

Live Session: Keynote

Time	Session	Submission No.	Presenter	Affiliation	Presentation title
16:00-16:30	Exhibition 1: INSTRON				
16:30-16:40	Break				
16:40-17:20	Keynote 1.	C000035	Prof. Youshi HONG	Institute of Mechanics, Chinese Academy of Sciences, China	Does loading frequency affect fatigue behavior of metallic materials?
17:20-17:30	Break				
17:30-18:10	Keynote 2.	C000022	Prof. Manuel FREITAS	IDMEC, Instituto Superior Tecnico, Portugal	Very high cycle fatigue under tension/torsion loading of medium carbon and low alloy steel
18:10-18:20	Break				
18:20-19:00	Keynote 3.	C000057	Prof. Frank BALLE	Department of Sustainable Systems Engineering (INATECH), Walter-and-Ingeborg-Herrmann-Chair for Power Ultrasonics and Engineering of Functional Materials (EFM), University of Freiburg, Germany	Challenges and concepts for VHCF analysis of polymer composites
19:00-19:30	Online social gathering (tbd)				

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■ **Wednesday, July 7, 2021**

Live Session: Plenary 3.

Time	Session	Submission No.	Presenter	Affiliation	Presentation title
9:30-10:30	Plenary 3.	C000105	Prof. Aaron P. STEBNER	Woodruff School of Mechanical Engineering and School of Materials Science & Engineering, Georgia Institute of Technology, Atlanta, GA USA	High temperature fatigue performances of laser powder bed fusion additively manufactured Inconel 718 heat treated using several different strategies
10:30-11:00	Online social gathering (tbd)				

On-demand Video Session: Regular (20 mintes)

Time	Room A						Room B					
	Session	Submission No.	Presentation No.	YRA	Presentation title	Presenter	Session	Submission No.	Presentation No.	YRA	Presentation title	Presenter
12:30-12:50	Fatigue properties at elevated temperature (7)	C000047	3A01		Orientation dependence of Ni-based single-crystal superalloys in the very high cycle fatigue regime	Dr. Alice Cervellon	Composites (6)	C000058	3B01	#	Flexural (V)HCF behaviour of carbon fibre reinforced polymer composites at frequencies from 10 to 20000 Hz	M.Sc. Dominic Weibel
12:50-13:10		C000055	3A02	#	Decreased very high cycle fatigue life of pre-deformed Ni-based single crystal superalloy	Dr. Satoshi Utada		C000006	3B02		Accelerated axial fatigue testing of CFRP laminate by using ultrasonic fatigue testing machine	Prof. Yoshinobu Shimamura
13:10-13:30		C000056	3A03		Failure mode and life prediction of high cycle fatigue and very high cycle fatigue of a nickel-based superalloy	Dr. Xiaolong Li		C000033	3B03	#	Evaluation of transverse crack initiation of cross-ply CFRP laminates by using ultrasonic fatigue testing	Mr. Tsuyoshi Miyakoshi
13:30-13:50		C000016	3A04		Thermo-elastic heating in VHCF specimen	Dr. saeid amin		C000049	3B04		Nondestructive fatigue damage detection of CFRTP using positron annihilation method	Prof. Yoshihiko Uematsu
13:50-14:10		C000061	3A05		The fatigue life of 42CrMo4 steel in the range of HCF and VHCF at elevated temperatures up to 773 K	Mr. Alexander Schmiedel		C000059	3B05	#	A study on temperature evolution and its influence on damage propagation during ultrasonic fatigue loading of CF-PEKK material	Mr. Aravind Premanand
14:10-14:30		C000094	3A06		Very high cycle fatigue properties of Inconel 718 at high temperatures	Mr. Sebastian Schöne		C000004	3B06		Damage behavior of glass fiber-reinforced polymers in the VHCF regime investigated by intermittent in situ X-ray computed tomography	Mr. Daniel Huelsbusch
14:30-14:50		C000046	3A07		Creep and fatigue interactions during high and very high cycle fatigue of a Ni-based single crystal superalloy at 1000°C	Dr. Jonathan Cormier						

Live Session: Keynote

Time	Session	Submission No.	Presenter	Affiliation	Presentation title
16:40-17:20	Keynote 4.	C000031	Prof. Stefano Invernizzi	Politecnico di Torino, Italy	Very high cycle fatigue failures in bridge civil infrastructures
17:20-17:30	Break				
17:30-18:10	Keynote 5.	C000091	Prof. Martina Zimmermann	Fraunhofer Institute for Material and Beam Technology IWS, Dresden, Germany	Effect of defects on the fatigue strength of brazed joints
18:10-18:20	Break				
18:20-19:00	Keynote 6.	C000045	Dr. Bernd M. Schönbauer	Institute of Physics and Materials Science, BOKU University, Vienna, Austria	Very high cycle fatigue properties of ultrahigh-strength steel – a fracture mechanics evaluation
19:00-19:30	Online social gathering (tbd)				

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VHCF8 Final Program

■ Thursday, July 8, 2021

On-demand Video Session: Regular (20 mintes)

Time	Room A					Room B						
	Session	Submission No.	Presentation No.	YRA	Presentation title	Presenter	Session	Submission No.	Presentation No.	YRA	Presentation title	Presenter
9:30-9:50	Additively manufactured materials (12)	C000050	4A01	#	Experimental study of damage mechanism of additively manufactured 316L stainless steel in VHCF regime	Mr. Boris Voloskov	Mechanism of crack initiation (12)	C000066	4B01		Fatigue of pure FCC copper in the gigacycle regime: A study using discrete dislocation dynamics simulations	Ms. Margarita Longworth
9:50-10:10		C000092	4A02		Fatigue behavior of 17-4PH stainless steel fabricated by Laser Powder Bed Fusion	Mr. Sebastian Schettler		C000069	4B02	#	Influence of soft/hard inclusions on the stress distribution and the slip formation in a polycrystal matrix	Dr. Riccardo Fincato
10:10-10:30		C000074	4A03	#	VHCF endurance of an additive manufactured single-crystal Ni-based superalloy	Ms. Luciana Maria Bortoluci Ormastroni		C000103	4B03	#	Interior crack initiation during the very-high-cycle fatigue of railway wheel steel under axial loading and rolling contact loading	Prof. Xiaolong Liu
10:30-10:50		C000027	4A04		Microstructure related interior failure mechanism of selective laser melting Ni-based superalloy in the very high cycle fatigue regime	Dr. Rui Sun		C000029	4B04		On micro-defect induced cracking in very high cycle fatigue regime	Prof. Ming Liang Zhu
10:50-11:10		C000060	4A05		Very high cycle fatigue behaviour of IN718 studied at 873 K	Mr. Alexander Schmiedel		C000015	4B05	#	Characteristics of fatigue strength and crack growth of stainless steel SUS630 investigated by ultrasonic fatigue testing	Prof. Shota Hasunuma
11:10-11:30		C000085	4A06		Very high cycle fatigue properties of 3D printed metallic materials	Dr. Alexander Nikitin		C000073	4B06		Formation mechanism of FGA around interior inclusion based on discrete micro-bondings and their coalescence in very high cycle fatigue	Prof. Tatsuo Sakai
11:30-11:50		C000012	4A07	#	Microstructure-based assessment of damage mechanisms of selective laser melted Al-Si alloys under very high-cycle fatigue loading	Mr. Mustafa Awd		C000078	4B07		Nanostructure analysis of FGA formed around interior inclusion in very high cycle fatigue of bearing steel	Prof. Noriyasu Oguma
11:50-12:10		C000023	4A08	#	VHCF response of AISI10Mg specimens produced through SLM and related size-effect	Dr. Andrea Tridello		C000043	4B08	#	Characteristics of internal crack initiation region for a titanium alloy with lamellar and equiaxed microstructures	Dr. Xiangnan Pan
12:10-12:30		C000080	4A09		Very-high-cycle fatigue behavior and grain refinement characteristics of additively manufactured AISI10Mg alloy	Prof. Guian Qian		C000064	4B09		Subsurface crack nucleation and growth behavior of titanium alloy under very high cycle fatigue	Dr. Cheng Li
12:30-12:50		C000051	4A10		Crack initiation behavior and fatigue performance up to very-high-cycle regime of AISI10Mg fabricated by selective laser melting	Dr. Zhimo Jian		C000096	4B10	#	Classification of internal fatigue crack growth stages of ($\alpha+\beta$) Ti-6Al-4V by fractographic analysis focusing on multiple facet formation	Mr. Takuya Yamazaki
12:50-13:10		C000028	4A11		Surface roughness influence on additive manufacturing Ti6Al4V alloy under VHCF regime	Prof. Luis Reis		C000013	4B11		Effects of vacuum environment on the formation of distinctive fracture surface in subsurface fracture of Ti6Al4V alloy	Dr. Hiroyuki Oguma
13:10-13:30		C000044	4A12	#	The influence of selective laser melting processing parameters on high-cycle and very-high-cycle fatigue behavior of Ti-6Al-4V	Mr. Leiming Du		C000036	4B12	#	Life-dependent nanostructuring of persistent slip bands in very high cycle fatigue	Dr. Chao He
13:30-13:50												
13:50-14:10												
14:10-14:30												
14:30-14:50												

Live Session: Keynote

Time	Session	Submission No.	Presenter	Affiliation	Presentation title
16:00-16:30	Exhibition 2: PULSTEC Industrial Co., Ltd.				
16:30-16:40	Break				
16:40-17:20	Keynote 7.	C000020	Prof. Davide S. Paolino	Politecnico di Torino - Department of Mechanical and Aerospace Engineering, Italy	Statistical size-effects in components subjected to VHCF
17:20-17:30	Break				
17:30-18:10	Keynote 8.	C000048	Dr. Alice Cervellon	Institut Pprime University of California Santa Barbara	Crack initiation mechanisms during VHCF of Ni-based single crystal superalloys
18:10-18:20	Break				
18:20-19:00	Keynote 9.	C000098	Prof. Guocai Chai	Linköping University, Sweden	Damage and formation of fine granular area in austenitic stainless steel during very high cycle fatigue
19:00-19:30	Online social gathering (tbd)				

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Friday, July 9, 2021

On-demand Video Session: Regular (20 minutes)

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	Session	Submission No.	Presentation No.	YRA	Presentation title	Presenter	Session	Submission No.	Presentation No.	YRA	Presentation title	Presenter
9:30-9:50	Statistical and probabilistic modeling (5)	C000014	5A01	#	On the influence of maximum number of load cycles in fatigue tests on derived S-N curves	Mr. Max Benedikt Gellen	Influence of environment (4)	C000070	5B01	#	Effect of hydrogen and anisotropy on fatigue properties in cold-rolled 301 stainless-steel	Dr. Kentaro Wada
9:50-10:10		C000024	5A02	#	A new statistical software for the estimation of P-S-N curves in VHCF	Dr. Andrea Tridello		C000089	5B02	#	Hydrogen Effect on Fatigue Crack Growth Behaviors of Low Alloy Cr-Mo steel Under Continuous Hydrogen Charging	Mr. Shotaro Shimomura
10:10-10:30		C000075	5A03	#	Analysis of fatigue life distribution of Ti-6Al-4V based on the initiation and propagation behaviors of small internal cracks	Mr. Hironori Morishita		C000018	5B03	#	Very high cycle fatigue behaviour of different steels in artificial seawater	Mr. Carsten Stacker
10:30-10:50		C000081	5A04	#	Proposal of S-N curve estimation method for structural steels on very high cycle regime based on their static mechanical properties	Dr. Tsutomu Ito		C000063	5B04	#	Development of medium chamber for ultrasonic fatigue testing systems	Mr. Tobias Daniel
10:50-11:10	Surface treatment (3)	C000087	5A05	#	Physical interpretation of statistical aspect on very high cycle fatigue property of bearing steel in rotating bending	Dr. Yuki Nakamura	Effects of loading conditions (7)	C000017	5B05	#	Comparison of fatigue results of SAE 4150 under force-control and displacement-control	Dr. Marcus Klein
11:10-11:30		C000072	5A06	#	VHCF crack initiation at high temperatures of Ni-based Single Crystalline superalloys coated with a slurry aluminide	Ms. Luciana Maria Bortoluci Ormastroni		C000065	5B06	#	Temperature-frequency evolution during 20 kHz cyclic loading of Dual-Phase 780 steel	Prof. Veronique Favier
11:30-11:50		C000054	5A07	#	Effects of surface roughness and stress ratio on high-cycle and very-high-cycle fatigue behavior of additively manufactured Ti-6Al-4V	Mr. Rui Fu		C000019	5B07	#	Fatigue performance and damage characterization of S355 steel welded joints under periodic underloads in gigacycle fatigue	Dr. Hang Liang
11:50-12:10		C000097	5A08	#	Improvement of the fatigue property of magnesium alloy AZ31 through a new surface modification technique: scanning cyclic press	Dr. Nao Fujimura		C000025	5B08	#	Variable amplitude VHCF of 17-4PH stainless steel with inclusion-initiated fracture and stepwise S-N curve	Prof. Herwig Mayer
12:10-12:30								C000071	5B09	#	Evaluation of fatigue life under block loading including cycles below the fatigue limit up to very high cycle regime	Dr. Lei He
12:30-12:50								C000076	5B10	#	Torsional fatigue of SUS304N1 austenitic stainless steel with small scratches	Mr. Kenta Kuwahara
12:50-13:10								C000052	5B11	#	Inclusion initiated fracture under torsion very high cycle fatigue loading at different load ratios	Ms. Ulrike Karr
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Live Session: Plenary, Announcement of YRA Winners, Closing

Time	Session	Submission No.	Presenter	Affiliation	Presentation title
16:00-16:30				Exhibition 3: Yamamoto Metal Technos Co., Ltd.	
16:30-16:40				Break	
16:40-17:30	Plenary 4	C000062	Prof. Tatsuo SAKAI	Research Organization of Science and Technology, Ritsumeikan University, Japan	Historical review and future prospects for researches on very high cycle fatigue of metallic materials
17:30-17:40				Break	
17:40-18:10				Announcement of YRA winners	
18:10-18:40				Closing	

Time difference: 16:30 Sapporo/Japan = 9:30 Berlin/Germany = 9:30 Paris/France = 8:30 London/UK = 8:30 Lisbon/Portugal = 15:30 Beijing/China = 10:30 Moscow/Russia = 3:30 NY/US = 0:30 San Francisco/US
 Time difference: 9:30 Sapporo/Japan = 2:30 Berlin/Germany = 2:30 Paris/France = 1:30 London/UK = 1:30 Lisbon/Portugal = 8:30 Beijing/China = 3:30 Moscow/Russia = 20:30 NY/US = 17:30 San Francisco/US