

AEPA2018 Technical Program

Sunday, December 2, 2018

Registration Opened (13:00 ~ 19:30)

Time	Activity	Location
14:00 ~ 15:30	Educational Workshop 1: F. Barlat "Constitutive Modeling" Chair: Jeong Whan Yoon	Diamond Hall
15:30 ~ 16:00	Coffee Break	
16:00 ~ 17:30	Educational Workshop 2: F. Yoshida and T. Uemori "Kinematic Hardening" Chair: Jeong Whan Yoon	Diamond Hall

Standing Cocktail Reception (18:00 ~ 19:30), Location: Crystal Room

Monday, December 3, 2018 (Start at 8:30 AM)

Registration Opened (08:00 ~ 18:00)

Time	Activity	Location
8:30 ~ 9:00	Opening: Jeong Whan Yoon and W. B. Lee	Diamond Hall
9:00 ~ 9:30	Industrial plenary Session 1: Dong-Jin Kim (POSCO) <i>"Lightweight Solution of High Formable Giga Grade Steel"</i> Chair: Jeong Whan Yoon	Diamond Hall
9:30 ~ 10:00	Industrial plenary Session 2: Bart Carleer (Autoform) <i>"Accurate Stamping Simulations not only require Accurate Models"</i> Chair: Jeong Whan Yoon	Diamond Hall

Time	Activity	Location
10:00 ~ 10:30 (30 min)	<i>Coffee Break</i>	

Time	Activity	Location
10:30 ~ 11:00	Industrial plenary Session 3: Daeyong Seong (LG Electronics) <i>"Practical Applications of Advanced Forming Limit Theory"</i> Chair: Young Suk Kim	Diamond Hall
11:00 ~ 11:30	Industrial plenary Session 4: Youngseon Lee (KIMS) <i>"Warm Precision Forging of Ferrous Driven Parts"</i> Chair: Young Suk Kim	Diamond Hall
11:30 ~ 12:00	Industrial plenary Session 5: William SH Joo <i>"Perspective of Metal Additive Manufacturing: The 4th Industrial Revolution"</i> Chair: Beom Soo Kang	Diamond Hall

Time	Activity	Location
12:00 ~ 13:00 (60 min)	<i>Lunch</i>	Crystal Room

Time	Activity	Location
13:00 ~ 13:40	Academic plenary Session 1: Fusahito Yoshida <i>"Descriptions of several cyclic plasticity behaviors: non-linear unloading, closure of stress-strain hysteresis loop, tension-compression asymmetry and strain-rate effect, by extended version of Yoshida-Uemori model"</i> Chair: Thomas Stoughton	Diamond Hall
13:40 ~ 14:20	Academic plenary Session 2: Peter Hodgson <i>"Revisiting Bending Related Forming Processes to Develop Innovative Products"</i> Chair : Bernie Rolfe	Diamond Hall

Time	Activity	Location
14:20 ~ 14:50 (30 min)	<i>Coffee Break</i>	

Monday, December 3, 2018

Time	Activity			
	Parallel Sessions:			
	Diamond Hall	Emerald Room	Rose Hall	Sapphire Room
14:50 ~ 16:05 (75 min)	MS-2: Ductile Fracture (Y. Lou)	MS-6: Microstructural Behavior of Deformation and Failure in Advanced Structural Materials (S.H. Choi)	Material Characterization-1 (Mechanics and Modeling)	Formability, Damage, and Failure-1 (Mechanics and Modeling)
	Chair: Yanshan Lou & Junhe Lian	Chair: Shihoon Choi & Jae Hyung Cho	Chair: Sandrine Thuillier & Liangchi Zhang	Chair: Takeshi Uemori & František Šebek
14:50 ~ 15:05	Yanshan Lou, Hoon Huh, Jeong Whan Yoon, A. Erman Tekkaya "Progress in modeling of shear ductile fracture for advanced metals" (Paper #: 160)	Kee-Ahn Lee, Min-Seok Baek, Bandar AlMangour "Microstructure and High Temperature Deformation Behavior of TiC Reinforced 316L Stainless Steel Nanocomposite Developed by Selective Laser Melting" (Paper #: 127)	Sandrine Thuillier "Material Characterization for Virtual Sheet Metal Forming" (Paper #: 91)	František Šebek, Petr Kubík, Jindřich Petruška "Complex ductile failure predictions with coupled continuum damage mechanics criteria" (Paper #: 153)
15:05 ~ 15:20		Sung-Min Hong, Myung-Yeon Kim, Jin-Yoo Suh, Dong-Ik Kim, Woo-Sang Jung "Creep deformation and degradation of heat affect zone of 9Cr heat resistant steel" (Paper #: 173)		Tsutomu Umeda, Koji Mimura "Numerical Analysis of the Impact Fracture of Metallic Glass Based on Free Volume Model" (Paper #: 119)
15:20 ~ 15:35	Saijun Zhang, Yanchun Lu, Zhaohui Shen "Prediction of ductile fracture for SUS304 under medium stress triaxiality" (Paper #: 64) Cancelled	Eun-Young Kim, Wi-Geol Seo, JaeEun Lee, HeungNam Han, Shi-Hoon Choi "Micromechanical deformation behavior of austenite phase of duplex stainless steel during a nano-indentation test" (Paper #: 131)	Weixing Xu, Hossein Sedaghat, Liangchi Zhang "On the deformation behaviour of some metals under high strain rate and high frequency impact" (Paper #: 58)	Bo Qiu, Qianhua Kan, Guozheng Kang, Tianxing Zhao, Chao Yu "Experimental investigation on multi-axial rate-dependent whole-life transformation ratcheting and fatigue failure of super-elastic NiTi alloy" (Paper #: 11)

15:35 ~ 15:50	Ji He, Bin Gu, Yongfeng Li, Yuan Chen, Shuhui Li, Bin Feng “Anisotropic Fracture of High Strength Steels: Experimental Investigation of Out-of- plane Shear Strength for DP and QP Steel” (Paper #: 5)	JaeHyung Cho, Yun Soo Lee, Geon Young Lee “Evolution of texture and microstructure during tensile draw- bending of magnesium sheets” (Paper #: 132)	Akito Taniguchi, Takatoshi Maeyama, Makoto Uchida, Yoshihisa Kaneko “Macroscopic and Microscopic Nonuniform Deformation of Polycrystalline Pure Copper during Uniaxial Tensile Test with High Stress Gradient” (Paper #: 101)	Takeshi Uemori, Naoya Tada, Takashi Katahira, Michihiro Takiguchi “Finite element calculations of deformation behaviors of high ductile adhesive with consideration of hydrostatic pressure dependent yield function” (Paper #: 114)
15:50 ~ 16:05	F. Li, G. Fang “Forming Limit Predictions of Magnesium Alloy Sheet Based on Two Fracture Criteria” (Paper #: 30)	Dong-Kyu Kim, Wanchuck Woo, Huai Wang, Soo-Yoel Lee “Simulation of ductile fracture considering the effect of residual stress for structural steel and aluminum alloys” (Paper #: 82)	S. Kao-Walter, J. Pilthammar, M. Sigvant, W. Reheman “A Study of Anisotropic Influences to the Elastic and Plastic Stress Concentration Factor of Metal Sheet with a Hole” (Paper #: 135)	

Time	Activity	Location
16:05 ~ 16:35 (30 min)	Coffee Break	

Monday, December 3, 2018

Time	Activity			
	Parallel Sessions:			
	Diamond Hall	Emerald Room	Rose Hall	Sapphire Room
16:35 ~ 17:35 (60 min)	MS-6: Microstructural Behavior of Deformation and Failure in Advanced Structural Materials (S.H. Choi)	MS-5: Advanced Roll Forming Solutions (M. Weiss)	Analytical and Numerical Methods-1 (Mechanics and Modeling)	MS-4: Intelligent Manufacturing and Forming Technology (G.Y. Tzou)
	Chair: Shihoon Choi & Seung Zeon Han	Chair: Matthias Weiss & Eun-Ho Lee	Chair: Bernard Rolfe & Yuichi Tadano	Chair: Yeong-Maw Hwang & Chao-Cheng Chang
16:35 ~ 16:50	<u>Tea-Sung Jun</u> <i>“Understanding local deformation behaviour of lightweight metallic materials using experimental micromechanics”</i> (Paper #: 130)	<u>Kwanghyun Yu,</u> Jeong Whan Yoon <i>“Calibration of the Bauschinger Effect from Three Loading/Reverse Loading Tests on Sheet Metal”</i> (Paper #: 168)	<u>Bernard Rolfe,</u> Simon Rabold, Joseba Mendiguren Olaeta, Matthias Weiss, Pavel Hora	<u>Yeong-Maw Hwang,</u> Yung-Lin Wang <i>“Microstructures and Mechanical Properties of Magnesium Alloy ZK60 Sheets after Multi-pass Hot Rolling”</i> (Paper #: 1)
16:50 ~ 17:05	<u>Min-Seong Kim,</u> Jaiveer Singh, Seong-Eum Lee, Jun-Ho Park, Jae-Joong Kim, Shi-Hoon Choi <i>“The effect of anisotropy in Mg alloys on bendability under the mini-V-bending test”</i> (Paper #: 34)	<u>Eun-Ho Lee,</u> Soo-Hyun Park, Min-Hyung Kim, Ba-Woul Chung <i>“Design of focused infrared heaters to improve the formability and springback of hard-to-form materials”</i> (Paper #: 73)	<i>“The simulation and validation of hot stamping Ti6Al4V sheet”</i> (Paper #: 144)	
17:05 ~ 17:20	<u>Jaiveer Singh,</u> Min-Seong Kim, Joo-Hee Kang, Shi-Hoon Choi <i>“Detwinning behavior of in-plane compressed E-form Mg alloy sheet during the in-situ tensile test”</i> (Paper #: 36)	<u>Hadi Ghiabakloo,</u> Min-Gyu Kil, Ji-Woo Park, Jeong Kim, Beom-Soo Kang <i>“A comparison of Finite Element Approaches for Shape Prediction in Flexibly-Reconfigurable Roll Forming Process”</i> (Paper #: 25)	<u>Haibo Xie,</u> Tianwu Liu, Enrui Wang, Lianjie Li, Zhengyi Jiang <i>“Three dimensional finite element simulation of strip shape and flatness of high strength steel”</i> (Paper #: 113)	<u>Chao-Cheng Chang,</u> Shuo-Kai Pan <i>“Forming Limit in the Nosing Process of Micro Copper Cups”</i> (Paper #: 52)

<p>17:20 ~ 17:35</p>	<p><u>Seung Zeon Han,</u> Eun-Ae Choi, Sung Hwan Lim</p> <p><i>“Simultaneous increasing strength and ductility of Al alloy in tensile test even after room temperature drawing”</i> (Paper #: 136)</p>	<p><u>Daiki Tamura,</u> Takeshi Iwamoto</p> <p><i>“An Observation of Anomalous Deformation Behavior in SUS304 by Digital Image Correlation Method”</i> (Paper #: 105)</p>	<p><u>Jinsu Kim,</u> Jeong Whan Yoon Sung-Uk Lee, Hyo-Chan Kim</p> <p><i>“Development of thermomechanical FEM code for analyzing high temperature creep deformation of nuclear fuel cladding”</i> (Paper #: 157)</p>	<p>Byung-Jin Choi, Young-Seok Oh, Seong-Hoon Kang, <u>Ho Won Lee</u></p> <p><i>“Numerical Design of Extrusion Process for Manufacturing of Seamless Titanium Tube”</i> (Paper #: 110)</p> <p>Moved to Wednesday Afternoon #2 session</p>
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Welcome Dinner-Buffer (19:00 ~21:00), Location: Diamond Hall

Tuesday, December 4, 2018 (Start at 8:30 AM)

Registration Opened (08:00 ~ 18:00)

The Ladies Program with Lunch (10:00 ~ 17:00)

Time	Activity	Location
8:30 ~ 9:10	Academic plenary Session 3: Ricardo Lebensohn "Polycrystal Plasticity Models: State-of-the-Art and Applications" Chair : Heung Nam Han	Diamond Hall
9:10 ~ 9:50	Academic plenary Session 4: Guangyao Li "Application of magnetic pulse technology in vehicle body manufacturing" Chair: Jeong Whan Yoon	Diamond Hall

Time	Activity	Location
9:50 ~ 10:20 (30 min)	Coffee Break	

Time	Activity			
	Parallel Sessions:			
	Diamond Hall	Emerald Room	Rose Hall	Sapphire Room
10:20 ~ 11:50 (90 min)	MS-1: In Honor of Professor Hoon Huh (S.S. Han) Chair: Guoxing Lu & Nobutada Ohno	MS-3: Multiscale Modelling of Mechanical Behaviours of Metals and Composites (J. Lian) Chair: Junhe Lian & Liangchi Zhang	Crystal Plasticity (Mechanics and Modeling) Chair: Takeshi Iwamoto & Y.P. Chen	Composite (Mechanics and Modeling) Chair: Dong Ruan & Daiki Towata
10:20 ~ 10:35	Nobutada Ohno, Yusuke Morimatsu, Hisashi Nakamoto, Dai Okumura	Liangchi Zhang	Y. P. Chen, J. P. Guo, Y. Y. Cai, Q. Ni	Rafea Dakhil Hussein, Dong Ruan, Guoxing Lu, Jeong Whan Yoon
10:35 ~ 10:50	"Resetting Scheme for Strain Range Evaluation in Constitutive Modeling of Cyclic Plasticity" (Paper #: 19)	"Practical Modelling of Sheet Metal Rolling Across Multiple Dimensional Scales: Interface Stress, Surface Roughness and Texture Transfer" (Paper #: 35)	"Dislocation Loop Elastic Fields in Anisotropically Elastic Half/Full Space and Their Application in Nanoindentation of Single Crystals and Interaction with Interface of Bimatereials" (Paper #: 15)	"Dynamic axial compression of square CFRP/aluminium tubes" (Paper #: 68)

10:50 ~ 11:05	<u>Yoshihiro Tomita,</u> Makoto Uchida	<u>Junhe Lian,</u> Wenqi Liu, Sebastian Münstermann	<u>Tota Niiro,</u> Yuichi Tadano	Tong Pang, Guangyong Sun, <u>Dong Ruan,</u> Xiaodong Huang, Guoxing Lu
11:05 ~ 11:20	<i>“Constitutive equations for rubber under abrupt change of deformation direction”</i> (Paper #: 12)	<i>“A multiscale modelling approach bridging the microstructure with deformation and failure behavior”</i> (Paper #: 169)	<u>Tomoaki Koga,</u> Yuichi Tadano	<u>Junyong Park,</u> Jeong Whan Yoon
11:20 ~ 11:35	Yang Lv, Ying Zhang, Neng Gong, Zhong-xian Li, <u>Guoxing Lu</u>	<u>Gai Kubo,</u> Tetsuya Matsuda, Hiroma Nagaoka, Yoshihiko Sato	<u>Kazuki Sadamoto,</u> Yuichi Tadano, Shigeki Morita	<u>Jesung Yoo,</u> Hoon Huh, Gwanglyeon Kim, Jongwon Yoon, Yeonghyeok Jeong
11:35 ~ 11:50	<i>“Quasi-static out-of-plane compression of Miura-ori patterned sheet: experimental and numerical analysis”</i> (Paper #: 81)	<u>Shoto Oka,</u> Yoshihisa Kaneko, Makoto Uchida	<u>Bo Cao,</u> Takeshi Iwamoto	<u>Daiki Towata,</u> Yuichi Tadano
		<i>“EBSD Analysis on Microstructures Developed near Fracture Surface of a Fatigued Copper Single Crystal Oriented for Single Slip”</i> (Paper #: 98)	<i>“Effect of Grain Size and Strain Rate on Shape Memory Effect of Fe-28Mn-6Si-5Cr Shape Memory Alloy”</i> (Paper #: 80)	<i>“Mechanical Behavior and Fracture of Al6061/Al2O3 : Metal Matrix Composite”</i> (Paper #: 164)
		<i>“Development and Validation of Multiscale Thermoelastoviscoplastic Analysis Method for Plain-Woven Composites”</i> (Paper #: 26)	<i>“A Three-dimensional Formulation of Phase Field Model Representing Polycrystalline Solidification”</i> (Paper #: 44)	<i>“Tensile Properties of STYCAST for Molding in Electronic Part of Fuze with Various Strain Rates”</i> (Paper #: 161)
				<i>“Experimental and analytical study on crushing resistance of CFRP square cones under axial loading”</i> (Paper #: 141)

Tuesday, December 4, 2018

Time	Activity	Location
11:50 ~ 13:00 (70 min)	<i>Lunch</i>	Crystal Room

Time	Activity	
	Semi-Plenary Session:	
	Diamond Hall	Emerald Room
13:00 ~ 14:30 (90 min)	SP-1: Pavel Hora <i>“General applicability of Nakajima experiments for the improvement of constitutive and failure models in the sheet metal forming”</i> Chair: Thomas B Stoughton	SP-2: Kaan Inal <i>“A New Non-Ordinary State Based Peridynamic Implementation of Crystal Plasticity Theory to Simulate Intergranular Fracture in Polycrystalline Materials”</i> Chair: Ricardo Lebenshon
	SP-3: Wolfram Volk <i>“Advanced strategies for material characterization and validation in sheet metal forming”</i> Chair: Thomas B Stoughton	SP-4: Heung Nam Han <i>“Mechanism on Electroplasticity in Metallic Materials”</i> Chair: Ricardo Lebensohn
	SP-5: Pierre-yves Manach <i>“Modeling Portevin Le Châtelier effect in Al-Mg alloys using a configurational approach”</i> Chair: Thomas B Stoughton	SP-6: Holm Altenbach <i>“A Damage Mechanics based Cohesive Zone Model with Damage Gradient Extension for Creep-Fatigue-Interaction”</i> Chair: Ricardo Lebenshon

Time	Activity	Location
14:30 ~ 15:00 (30 min)	<i>Coffee Break</i>	

Tuesday, December 4, 2018

Time	Activity			
	Parallel Sessions:			
	Diamond Hall	Emerald Room	Rose Hall	Sapphire Room
15:00 ~ 16:15 (75 min)	MS-2: Ductile Fracture (Y. Lou)	Forming Process-1	Analytical and Numerical Methods-2 (Mechanics and Modeling)	Constitutive Modeling (Mechanics and Modeling)
	Chair: Young Suk Kim & Fusahito Yoshida	Chair: Fuh-Koh Chen & Zhang Qi	Chair: T.X. Yu & Y. Liu	Chair: Jun Ma & Seung-Yong Yang
15:00 ~ 15:15	Ryutaro Hino, Koudai Watanabe, Fusahito Yoshida "Fracture of High Strength Steel Sheets in In-plane Stretch Bending" (Paper #: 97)	Zhang Qi, Liang Zhenglong, Niu Liqun "The Integrated Casting and Forging Process for the Aluminum Alloy Automobile Parts" (Paper #: 156)	Heng Peng, Yinghua Liu "Stress compensation method for structural shakedown analysis" (Paper #: 17)	Seung-Yong Yang, Wei Tong "Finite element calculation of anisotropy of hole expansion in a thin steel sheet with six degree polynomial yield function" (Paper #: 124)
15:15 ~ 15:30	Qi Hu, Xifeng Li, Jun Chen "Forming limit evaluation with perturbation approach considering through-thickness normal stress" (Paper #: 56)			Toshiro Amaishi, Hideo Tsutamori, Takeshi Nishiwaki, Takaaki Kimoto "A plane stress yield function described by multi-segment third order Bézier curves" (Paper #: 51)
15:30 ~ 15:45	Pham Quoc Tuan, Young Suk Kim "A graphical method to estimate forming limit curve of sheet metals" (Paper #: 100)	Fuh-Kuo Chen, Shun-Wei Yao, Ping-Kun Lee "Springback and Side-Wall Curl Reduction in the Stamping of Advanced High Strength Steel Sheets" (Paper #: 167)	Shiyun SHI, Ling ZHU, Tongxi YU "Dynamic Response of Elastic-Plastic Beams to Repeated Impacts" (Paper #: 38)	Jun Ma, Heng Li, Zi-rui He, M.W. Fu "Physically based modeling of nonlinear unloading behaviors for high strength titanium tube at elevated temperatures" (Paper #: 37)

<p>15:45 ~ 16:00</p>	<p><u>Yong Wu</u> <i>“Hot forming limit curve of Ti2AlNb rolled sheet by hot bulging testing at 970°C with equivalent strain rate 0.001s-1”</i> (Paper #: 94)</p>	<p><u>In Yong Moon,</u> <u>Ho Won Lee,</u> <u>Young-Seuk Oh,</u> <u>Seong-Hoon Kang</u> <i>“Realization of Oil-Water Separation and Superhydrophobicity Based on Hot Imprinting with Electrical Discharge Textured Mold”</i> (Paper #: 39)</p>	<p><u>T.X. Yu,</u> <u>L. Zhu,</u> <u>X.Y. Bai</u> <i>“Modeling Large Plastic Deformation of Plates under Pulse and Blast Loading”</i> (Paper #: 50)</p>	<p><u>Choong Myoung Lee,</u> <u>Jeong Whan Yoon</u> <i>“Modeling of the Yield Point Elongation using Non-Associated Flow Rule”</i> (Paper #: 165)</p>
<p>16:00 ~ 16:15</p>	<p><u>Zhenzhu Wang,</u> <u>Qiquan Lin,</u> <u>Chengwu Hu,</u> <u>Wenzheng Dong</u> <i>“An Analytical Solution of the Subsequent drawing Force on Multistage deep drawing of Cylindrical Cups”</i> (Paper #: 60)</p>	<p><u>K.P. Rao,</u> <u>K. Suresh,</u> <u>Y.V.R.K. Prasad</u> <i>“Hot working behavior and processing maps of AZ31 alloy deformed in tension versus compression”</i> (Paper #: 47)</p>		

Time	Activity	Location
<p>16:15 ~ 16:45 (30 min)</p>	<p>Coffee Break</p>	

Tuesday, December 4, 2018

Time	Activity			
	Parallel Sessions:			
	Diamond Hall	Emerald Room	Rose Hall	Sapphire Room
16:45 ~ 17:45 (60 min)	MS-2: Ductile Fracture (Y. Lou)	Formability, Damage, and Failure-2 (Mechanics and Modeling)	Experimental Methods (Mechanics and Modeling)	Forming Process-2
	Chair: Junhe Lian & Turbadrakh Chuluunbat	Chair: Xiang Xu and Jonghun Yoon	Chair: Toshihiko Kuwabara & Takeshi Iwamoto	Chair: Hiroyuki Akiyama and Choon-man Lee
	<u>Turbadrakh Chuluunbat,</u> Andrii Kostryzhev, Olexandra Marenych "Investigation of X80 line pipe steels fracture during tensile testing using acoustic emission monitoring" (Paper #: 4)	<u>Xiang Xu,</u> Yilin Fan, Guozheng Kang, Qianhua Kan "A new prediction method of wheel-rail rolling contact fatigue by considering ratchetting-fatigue interaction" (Paper #: 23)	<u>Rikuto Oikawa,</u> Gai Kubo, Tetsuya Matsuda, Keita Goto, Nobutada Ohno, Masahiro Arai "Measurement of Negative Poisson's Ratio of CFRP Laminates Using 3D Digital Scanning Method" (Paper #: 32)	<u>Bonyoung Gho,</u> Junho Son, Yasuyoshi Umezu, Tei Hirashima, Yuko Watanabe "Ultra-thin Steel Sheet Forming Analyses Considering Size- Effect through Thickness Direction" (Paper #: 92) Cancelled
16:45 ~ 17:00				
17:00 ~ 17:15	Wen Zhang, <u>Xincun Zhuang,</u> Zhen Zhao, Yu Zhang "Influence of Tensile Pre-strain on Material Formability of 6061 Sheet" (Paper #: 55)	<u>Izabela J. Drygala,</u> <u>Joanna M. Dulinska,</u> <u>Lukasz Bednarz,</u> <u>Jerzy Jasienko</u> "Plastic and damage- behaviour of a Masonry Arch Viaduct to Foreshocks and a Mainshock Seismic Sequence with a Barcelona Material Model" (Paper #: 83) Cancelled	<u>Zhonghuai Wu,</u> Weidong Liu, Liangchi Zhang "An experimental investigation on the deformation of 6H-SiC under micro- indentation" (Paper #: 24)	<u>Hiroyuki Akiyama,</u> Makoto Uchida, Yoshihisa Kaneko "Evaluation of Effect of Sample Size and Layer Direction on Mechanical Property of Specimen Manufactured by FDM- type 3D Printer" (Paper #: 99)
17:15 ~ 17:30	<u>Junhe Lian,</u> Fuhui Shen, Sebastian Münstermann "An evolving anisotropic plasticity model coupled with damage and fracture" (Paper #: 179)	<u>Ryohei Yamakawa,</u> Tomoyuki Fujii, Keiichiro Tohgo, Yoshinobu Shimamura "Nucleation of intergranular stress corrosion cracking based on surface strain distribution measured by DIC" (Paper #: 104)	<u>Taiki Maeda,</u> Nobuyasu Noma, Toshihiko Kuwabara "Measurement of the Strength Differential Effect and Unloading Behavior of a DP980 Steel Sheet Subjected to Stress Reversal" (Paper #: 78)	<u>Yea-jin Yang,</u> Choon-man Lee "A Basic Study on the Long Elbow Copper Pipe Forming Analysis for Heat Exchanger" (Paper #: 152)

<p>17:30 ~ 17:45</p>	<p><u>Rugang Chai,</u> Yanshan Lou, Jeong Whan Yoon</p> <p><i>“Assessment of newly developed ductile fracture criteria for lightweight metals”</i> (Paper #: 102)</p>	<p><u>Junyong Park,</u> <u>Yongnam Kim,</u> Hyunwoo So, Jongshin Lee, Sangjin Ko, Jeong Whan Yoon</p> <p><i>“Numerical investigation of tool life and failure for elastoforming process”</i> (Paper #: 154)</p>	<p><u>Chong Gao,</u> Takeshi Iwamoto</p> <p><i>“A Study on Change in Temperature of Pure Aluminum During Impact Compressive Test Based on Taylor Impact Test”</i> (Paper #: 88)</p>	<p><u>Q.X.X.Liu,</u> X. Zhang, D. Cai, D.Y. Dong, J.J. Cui, G.Y. Li</p> <p><i>“Magnetic pulse spot welding of aluminum-steel sheets with a novel welding torch”</i> (Paper #: 159)</p>
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Free evening

Wednesday, December 5, 2018 (Start at 8:30 AM)

Time	Activity	Location
8:30 ~ 9:10	Academic plenary Session 5: Thomas B. Stoughton "To Be Associated or Not To Be: That is the Flow Question" Chair : Sandrine Thuillier	Diamond Hall
9:10 ~ 9:50	Academic plenary Session 6: Hoon Huh "Pilgrim's Journey to Plasticity: Theory and Practice" Chair: Jonghun Yoon	Diamond Hall

Time	Activity	Location
9:50 ~ 10:20 (30 min)	Coffee Break	

Time	Activity			
	Parallel Sessions:			
	Diamond Hall	Emerald Room	Rose Hall	Sapphire Room
10:20 ~ 12:05 (105 min)	MS-1: In Honor of Professor Hoon Huh (S.S. Han) Chair: Seho Kim & Jongsup Lee	MS-7: Advances in Constitutive Modeling for Metal Forming (M.G. Lee, J.H. Kim, and S. Li) Chair: MG Lee & Ji Hoon Kim	MS-5: Advanced Roll Forming Solutions Chair: Matthias Weiss & Beom-Soo Kang	MS-3: Multiscale Modelling of Mechanical Behaviours of Metals and Composites (J. Lian) Chair: Mandeep Singh & Yuichi Tadano
10:20 ~ 10:35	Sang Chul Hong, In Gi Kim, Sae Gwang Lee, Chul Woo Lee, Dong Nyung Lee, Insoo Kim	Hongjin Choi, Myoung-Gyu Lee, Geunsu Joo, Hoon Huh	Aditya Dole, Matthew Barnett, Matthias Weiss	Yuichi Tadano
10:35 ~ 10:50	"Recrystallization Texture of Electrodeposited Zinc" (Paper #: 8)	"Strain rate dependent homogeneous anisotropic hardening model with analytical parameter identification" (Paper #: 151)	"Fracture prediction in bilinear strain path based on a forming severity concept" (Paper #: 28)	"Numerical Study on Bicrystalline Micropillar Compression Using High-order Gradient Crystal Plasticity" (Paper #: 84)

10:50 ~ 11:05	<u>H.W. Lee,</u> J.M. Lee, M.S. Chon, J.H. Jeong "Fitting Analysis of Metal Sealing of Hydrogen Fuel Pipe for FCEV" (Paper #: 140)	<u>S.K. Lee,</u> C.Y. Kim, Y.M. Choi, M.G. Lee "Mechanical properties and fracture behavior of W-tempered high strength aluminum alloy" (Paper #: 121)	<u>Ji-Woo Park,</u> Jeong Kim, Woo-Jin Song, Beom-Soo Kang "Longitudinal Curvature Prediction of Flexibly- Reconfigurable Roll Forming Process by Regression Analysis" (Paper #: 85)	<u>Truong Duc Trinh,</u> Takeshi Iwamoto "A Computational Simulation of Martensitic Transformation in Polycrystal TRIP Steel By Crystal Plasticity FEM With Voronoi Tessellation" (Paper #: 62)
11:05 ~ 11:20	<u>Gihyun Bae</u> "Spring-back Simulation Considering the Tool Deformation" (Paper #: 137)	<u>Bin Zhang,</u> Yang Wang "Tensile behavior of Ti- 5Al-2.5Sn at low temperatures and different strain rates" (Paper #: 13)	<u>A. Sedlmaier,</u> J. Harrasser, T. Dietl "Industry 4.0 in Roll Forming – Recent Developments" (Paper #: 147)	<u>Hyuk Jong Bong,</u> Xiaohua Hu, Sun Xin, Hyoung Wook Kim "Forming Limit Diagram Prediction Using Coupled M-K model and Crystal Plasticity Finite Element Analysis" (Paper #: 90)
11:20 ~ 11:35	<u>Jongsup Lee,</u> Seon-Ho Jung, Chong-Du Cho "Effect of deformation on aging behavior of Al 7075-T6 alloy during warm forming and post-treatment" (Paper #: 150)	<u>Donghoon Yoo,</u> Hyeonil Park, Jinwoo Lee, Daeyong Kim "Evaluation of Bendability for Aluminum Alloy Sheet Using V-bending test" (Paper #: 76)	<u>Hyunsung Choi,</u> Jeong Whan Yoon, Jongsup Lee, Geunho Kim "A springback prediction of 1.5 GPa grade steel after roll- forming process for automotive sill-side component" (Paper #: 133)	<u>Hiroma Nagaoka,</u> Tetsuya Matsuda, Tsubasa Ogaki "Development of a Decoupled Multiscale Analysis Method for Woven Composites" (Paper #: 21)
11:35 ~ 11:50	<u>Chanhee Won,</u> Hyung-gyu Kim, Seokryul Lee, Dongjin Kim, Jonghun Yoon "Phenomenological wrinkling criterion for stamping GPa-grade steels" (Paper #: 71)	<u>Gyeong. Uk. Jeong,</u> Jun Park, Chul. Kyu. Jin, Young. Hoon. Moon, Chung. Gil. Kang "Thermal Deformation Behavior and Formability of High Temperature with Corrosion Resistance Alloy" (Paper #: 143)		<u>Mandeep Singh,</u> Dongbin Wei, Anamul Hossain "A hybrid model for studying size effects on flow stress in micro-forming with the consideration of grain hardening" (Paper #: 65)
11:50 ~ 12:05	<u>Min-Kyu Son,</u> Se-Ho Kim "Stochastic Evaluation of the Restriking Effect on the Springback Distribution in the Stamping Process with UHSS" (Paper #: 163)			

Time	Activity	Location
11:50 ~ 13:05 (75 min)	<i>Lunch</i>	Crystal Room

Time	Activity			
	Parallel Sessions:			
	Diamond Hall	Emerald Room	Rose Hall	Sapphire Room
13:05 ~ 14:50 (105 min)	MS-1: In Honor of Professor Hoon Huh (S.S. Han)	MS-7: Advances in Constitutive Modeling for Metal Forming (M.G. Lee, J.H. Kim, and S. Li)	MS-8: Optimization in Metal Forming (M.S. Joun)	MS-4: Intelligent Manufacturing and Forming Technology (G.Y. Tzou)
	Chair: J Lim & Soo Sik Han	Chair: Sandrine Thuillier & Heung Nam Han	Chair: Seokmoo Hong & Mansoo Joun	Chair: S. Alexandrov & Gow-Yi Tzou
13:05 ~ 13:20	Soo Sik Han, Hyun Young Lee "Development of Stretch Flangeability Test for High Strength Steel Sheet" (Paper #: 134)	Ting Zhou, Chao Yu, Qianhua Kan, Guozheng Kang "A microplane constitutive model for super-elastic shape memory alloys under non-proportional loadings" (Paper #: 10)	S. W. Lee, J. H. Cho, M. C. Kim, J. M. Lee, M. S. Joun "Optimized frictional condition to minimize the geometric difference between predictions and experiments" (Paper #: 176)	Gow-Yi Tzou, Shih Hsien Lin, Un-Chin Chai, Dyi Cheng Chen, Chao-Ming Hsu, Hung-Ying Hsu "Comparisons of FEM simulation and Slab Analysis of Wire Rod Drawing Process Using the Rotating Die under Coulomb Friction" (Paper #: 16)
13:20 ~ 13:35		Thi Anh Nguyet Nguyen, Sung-Tae Hong, Ju-Won Park, Heung Nam Han "Electrically Assisted Pressure Joining of High Entropy Alloy CrMnFeCoNi" (Paper #: 40)	Missam Irani, S. H. Chung, K. O. Lee, Mansoo Joun "Application of Finite Element Optimization to Obtain Material Properties in Metal Forming and Heat treatment Processes" (Paper #: 174)	
13:35 ~ 13:50	Jinsung Kim, Hyunseung Jung, Taeso Kwon "Crash test and evaluation of energy absorbers for railway vehicles" (Paper #: 128)	Deukkyu Lee, Beomsoo Kang "A study on the design of components for 10kWh Flywheel Energy Storage System with Steel Rotor" (Paper #: 75)	M. C. Kim, S. H. Chung, M. S. Joun "Optimal process design of hot forging processes in terms of grain flow quality" (Paper #: 175)	Y. Erisov, D. Chernikov, V. Glushchenkov, S. Alexandrov, L. Lang "Research of High-Speed Forming of Metal Polymer Laminates" (Paper #: 61)
13:50 ~ 14:05	J. Ha, J. Lim, Y.-S. Kang "Lightweight Characteristics of the Hat Tube Manufactured with a Variable Thickness Blank" (Paper #: 149)	Eu-Tteum Park, Youngheon Lee, Jeong Kim, Beom-Soo Kang, Woojin Song "Cohesive Zone Modeling to Estimate Mode-I Adhesive Behavior of Fiber Metal Laminate using Levenberg-Marquardt Approach" (Paper #: 108)	Minsoo Kim, Jun Young Kim, Seokmoo Hong "Optimization of process parameters for thin-walled stainless steel tube rotary draw bending based on wrinkle index" (Paper #: 177)	

14:05 ~ 14:20	Jun Beom Kwon, Won Jon Yang, Young Mok Rhyim, Hoon Huh "Effect of out-of-plane specimen movement on strain measurement using 3D digital image correlation in high rate tensile tests" (Paper #: 145)	Shiyuan Luo, Sandrine Thuillier, Philippe Castany, Pierre-Yves Manach "Portevin-Le Chatelier Effect in Ti-xMo Alloys" (Paper #: 18)	Sungmin Cho, Dongguk Son, Wanjin Chung "Minimization of Surface Deflection in Rectangular Embossing Using Machine Learning" (Paper #: 162)	Shih-Hsien Lin, Dyi-Cheng Chen, Gow-Yi Tzou "FEM simulation on Multi-stage Forging of Torx Round Flange Bolt with Constant Shear Friction" (Paper #: 2)
14:20 ~ 14:35	Minki Kim, Hoon Huh "Anisotropic/Asymmetric Hardening Behavior of AZ31B Sheet at Various Strain Rates" (Paper #: 111)	Jaehyun Kim, Do-Nyun Kim "An efficient stress integration algorithm using the two-point Newton method for an elasto-viscoplastic constitutive model describing yield-point phenomena" (Paper #: 14)	D. H. Cho, Y. Lee "Application of ANN-NSGA-II hybrid methodology for the automation of die design in single-pass drawing" (Paper #: 166)	Takashi Katahira, Takeshi Uemori, Tetsuya Yoshida, Michihiro Takiguchi, Tetsuo Naka, Komgrit Lawanwong, Fusahito Yoshida "Springback Suppression of AZ31 Magnesium Alloy Sheet in Draw Bending at Elevated Temperature" (Paper #: 123)
14:35 ~ 14:50	Seungbo Lee, Hoon Huh "Prediction of Shear Properties at Ultra-high Strain Rates" (Paper #: 69)			H. Ou, X. Zhang, D. Cai, D.Y. Dong, G.Y. Li, J.J. Cui, Y. Cai, X.Y. Cui "Electromagnetic and quasi-static combined forming: manufacturing the groove feature in car door handle" (Paper #: 158)

Time	Activity	Location
14:50 ~ 15:20 (30 min)	Coffee Break	

Wednesday, December 5, 2018

Time	Activity		
	Parallel Sessions:		
	Emerald Room	Rose Hall	Sapphire Room
15:20 ~ 17:05 (105 min)	MS-1: In Honor of Professor Hoon Huh (S.S. Han)	MS-7: Advances in Constitutive Modeling for Metal Forming (M.G. Lee, J.H. Kim, and S. Li)	Process
	Chair: Y. Lou & M.G. Lee	Chair: Daeyong Kim & Jinwoo Lee	Chair: W. Volk & T. Yamada
15:20 ~ 15:35	J. H. Song, S. Gwak, W. Noh, M. G. Lee	Hyeonil Park, Jinwoo Lee, Youngseon Lee, Daeyong Kim "Numerical analysis of the mechanical joining between an aluminum tube and sheet using electromagnetic forming" (Paper #: 96)	Tomohiro Yamada "Mechanism of Galling Generation using TiCN coating in finish blanking - Thermochemical Simulation and Elemental Analysis-" (Paper #: 42)
15:35 ~ 15:50		Jinwoo Lee, Donghoon Yoo, Yong-Nam Kwon, Young-Seon Lee, Daeyong Kim "Numerical investigations of high-strength aluminum alloy sheet after solution heat treatment" (Paper #: 106)	Daniel Maier, Christoph Hartmann, Michael Till, Mohammad Kazhai, Bernd-Arno Behrens, Wolfram Volk "Data-driven compensation for bulk-formed parts based on material point tracking" (Paper #: 20)
15:50 ~ 16:05	Yanshan Lou, Jeong Whan Yoon "A stress based model for shear ductile fracture" (Paper #: 54)	Yong Chan Hur, Daeyong Kim, Kwang Seok Lee, Min Gwan Bae, Sang Eon Park, Ji Hoon Kim "Simulation of self-piercing riveting of advanced high strength steel and aluminum alloy sheet" (Paper #: 74)	Maximilian Gruber, Christian Illgen, Philipp Frint, Martin F.-X. Wagner, Wolfram Volk "Numerical study on ECAP-processing parameters for efficient grain refinement of AA5083 sheet metal" (Paper #: 22)
16:05 ~ 16:20	Jiho Lim, Jiwoong Ha "Prediction of Spot Weld Failure for Automotive Steels" (Paper #: 148)	M. Abebe, B. S. Kang "Six-Sigma Robust Optimization of Multi-point Forming Process for Product Defect Reduction" (Paper #: 95)	Chen Shanshan, Cheung Chi Fai, Ho Lai Ting, Zhang Feifu "A Study of Uniform Surface Generation in the Ultra-precision Grinding" (Paper #: 155)

16:20 ~ 16:35	Min Kuk Choi, Sangjin Park, Bo-Min Kim, Woo Jin An, Dong-Ho Ha "Prediction of critical condition of ricochet for concrete penetration projectile" (Paper #: 139)	Min-sik Lee, Jun Park, Ok-dong Lim, Hyung-yoon Seo, Chung-gil Kang "Drop-test Simulations to Investigate Collision Characteristics of Automobile Center-pillar Structures according to Partial Quenching Area" (Paper #: 146) Cancelled	Vignesh V Shanbhag, Bernard F Rolfe, Narayanan Arunachalam, Michael P Pereira "Investigation of stamping tool wear initiation at microscopic level using acoustic emission sensors" (Paper #: 142)
16:35 ~ 16:50	Namsu Park, Thomas B. Stoughton, Jeong Whan Yoon "A Novel Approach for Modeling a Fracture Criterion Considering General Anisotropy of Metal Sheets" (Paper #: 171)	Van Loi Tran, Sung-Tae Hong, Viet Tien Luu, In-Hye Kim, Kwang Seok Lee, Heung Nam Han "Springback Reduction for Metallic Glass/Aluminum Clad Sheet Using Electrically- Assisted Forming" (Paper #: 31)	Youngseon Lee, Eunyoo Yoon, Kihan Kang, Sangyong Lee "Study on the microstructural characteristics of ferrous- driven part by warm-precision- forging" (Paper #: 53) Cancelled
16:50 ~ 17:05	Jesung Yoo, Hoon Huh, Jiwon Han, Jaewoo Park "Analysis of High Speed Bending of Square Tubes for Commercial Vehicles at the Intermediate Strain Rate Considering High Speed Material Properties" (Paper #: 70)		Byung-Jin Choi, Young-Seok Oh, Seong-Hoon Kang, Ho Won Lee "Numerical Design of Extrusion Process for Manufacturing of Seamless Titanium Tube" (Paper #: 110)

Time	Activity	Location
17:05 ~ 17:20 (15 min)	Coffee Break	

Time	Activity	Location
17:20 ~ 17:40	Closing: Shihoon Choi	Emerald Room

Conference Banquet-Course Meal (19:00 ~ 22:00), Location: Diamond Hall

Thursday, December 6, 2018

Registration Opened (08:00 ~ 10:30)

Time	Activity	Location
8:30 ~ 10:00	Educational Workshop 3: T. B. Stoughton <i>"Forming Limit & Ductile Fracture"</i> Chair : Jeong Whan Yoon	Diamond Hall
10:00 ~ 10:30	<i>Coffee Break</i>	
10:30 ~ 12:00	Educational Workshop 4: R. Lebensohn <i>"Polycrystal Modeling"</i> Chair : Shihoon Choi	Diamond Hall

Lunch (12:00 ~ 13:00), Location: Crystal Room

Short Cultural Excursion with Dinner (13:30 ~ 19:30)

Friday, December 7, 2018

All Day Cultural Excursion with Lunch and Dinner (9:00 ~ 20:00)