

# 2024 ICFG Plenary Meeting

22-25 September 2024

at the Westin Chosun Hotel – Busan – South Korea

Day 1 – 22.09.24 – Sunday			
16:00	19:00	Registration	Registration Desk (2F)
15:00	18:00	Advisory Board Meeting	Rose (2F)
19:30	21:00	Welcome Cocktail	Peony (2F) + Terras(2F)

Day 2 – 23.09.2024 – Monday			
08:00	09:00	Registration	Registration Desk (1F)
09:00	10:30	Opening of 57 <sup>th</sup> ICFG Plenary Meeting & Presentations	Grand ballroom (1F)
10:30	11:00	Coffee Break	Foyer Area (1F)
11:00	13:00	Subgroup Meeting: <i>Computational Cold Forging</i>	Rose (2F)
		Subgroup Meeting: <i>Smart Data</i>	Tulip (2F)
13:00	14:00	Lunch Break	Grand ballroom (1F)
14:00	16:00	Subgroup Meeting: <i>Lubrication</i>	Rose (2F)
		Subgroup Meeting: <i>Tool Life and Tool Quality</i>	Tulip (2F)
16:00	16:30	Coffee Break	Foyer Area (1F)
16:30	17:30	Joined Session	Grand ballroom (1F)
17:30	18:00	2023 Young Scientist Exchange Prize Report Karl Grötzingler – Institute for Metal Forming Technology – Germany	Grand ballroom (1F)
19:00	21:00	Gala Dinner	Grand ballroom (1F)

Day 3 (Tour A) – 24.09.24 – Tuesday			
07:45	08:00	Preparation & Organization of Plant Tours	Gathering at Hotel lobby
08:00	10:00	Plant tour - Taelim Industry	Taelim Co., Ltd.
10:00	11:30	Plant tour – SeAH Changwon Integrated Special Steel	SeAH Changwon Integrated Special Steel Co., Ltd.
12:00	13:30	Lunch Break	Korean Institute of Materials Science
13:30	15:30	Plant tour – Korea Aerospace Industries (KAI)	Korean Aerospace Industry
18:30	21:00	Social Event	Gathering at Hotel lobby

Day 3 (Tour B) – 24.09.24 – Tuesday			
08:15	08:30	Preparation & Organization of Plant Tours	Gathering at Hotel lobby
08:30	11:00	Plant tour – Bugok Stainless	Bugok Stainless Co, Ltd
11:30	13:00	Lunch Break	Korean Institute of Materials Science
13:00	16:00	Plant tour – Daehan Metal	Daehan Metal Co., Ltd.
18:30	21:00	Social Event	Gathering at Hotel lobby

Day 4 – 25.09.24 – Wednesday			
09:00	09:30	Keynote Talk <b>Innovation of lightweight technology in net shape manufacturing</b> Prof. Emeritus Dr. Dong-Yol Yang Korea Advanced Institute of Science and Technology – South Korea	Grand ballroom (1F)  Session Chairman: Prof. Yoshinori Yoshida
		Keynote Talk <b>Development of die breakage detection and automatic dimensional adjustment system in transfer forging line</b> Dr. Masayuki Aoyama - Tokai Rika Co., Ltd. – Japan	
		Keynote Talk <b>Development of Manufacturing and Application Technologies for Ultra High Strength Fasteners</b> Dr. You-Hwan Lee - Taeyang Metal Industrial Co., Ltd. – South Korea	
10:30	11:00	Coffee Break	Foyer Area (1F)

11:00	11:30	<i>Keynote Talk</i> <b>Sustainability in Cold Forging Requires New Solutions Through Digitalization</b> Prof. Dr. Mathias Liewald - Institute for Metal Forming Technology – Germany	Grand ballroom (1F)
11:30	12:00	<i>Keynote Talk</i> <b>Engineering collaboration with production data in automotive steering components</b> Dr. Kyungjin Oh - Taelim Industrial Co., Ltd. – South Korea	Session Chairman: Dr. Young-Seon Lee
12:00	13:00	<i>Lunch</i>	Grand ballroom (1F)
13:00	14:30	<b>General Assembly &amp; ICFG Paper Prize</b>	
14:30	14:50	<i>Paper Presentation</i> <b>Surface Processing of Forging Die by Shot Polishing</b> Eisuke Murai – Nichidai Corporation - Japan	Grand ballroom (1F)
14:50	15:10	<i>Paper Presentation</i> <b>Analyses of bulk forming of aluminium sheet metal parts considering the YLD2004–18p yield function</b> Prof. Dr. Tomaž Pepelnjak – University of Ljubljana - Slovenia	Session Chairman: Prof. Mathias Liewald
15:10	15:30	<i>Paper Presentation</i> <b>Effect of process parameters on rotary swaging of a motor shaft</b> Yutong Guo – Shanghai Jiao Tong University - China	
15:30	15:50	<i>Coffee Break</i>	Foyer Area (1F)
15:50	16:10	<i>Paper Presentation</i> <b>Supervised learning methods for the monitoring and prediction of the part quality of multi-stage cold forging processes</b> Papdo Tchasse – Institute for Metal Forming Technology - Germany	
16:10	16:30	<i>Paper Presentation</i> <b>A new compression + sliding tribotester for the characterization of friction behavior for sheet bulk metal forming applications</b> Prof. Dr. Lander Galdos – Mondragon University - Spain	
16:30	16:50	<i>Paper Presentation</i> <b>Advanced Friction Modelling in Cold Forging Using Machine Learning</b> Stefan Volz - Institute for Production Engineering and Forming Machines - Germany	Grand ballroom (1F)
16:50	17:10	<i>Paper Presentation</i> <b>Parameters Identification and Verification Based on Inverse Optimization Method of Constitutive Model for SWRCH10A Alloy Steel</b> Shiqi Zhao – Lorca Precision Industries Ltd. - China	Session Chairman: Prof. Thomas Herlan
17:10	17:30	Closing of the 57 <sup>th</sup> ICFG Plenary Meeting & Outlook ICFG 2025	

## Subgroups Agenda

<b>Subgroup Meeting – Computational Cold Forging – 23.09.2024</b>			
11:00	13:00	Opening Remarks	Rose (2F)
		An Anisotropic Damage Model for Prediction of Ductile Fracture during Cold Forging <i>Atsuo Watanabe - Nissan Motor Co. Ltd. - Japan</i>	
		Automatic optimization of forming condition with auto-pilot numerical simulation: minimization of forming load in trimming process <i>Lander Galdos - Mondragon University - Spain</i>	
		Collaborative Activity; Damage Prediction Introduction of the damage onset prediction during upset <i>Masanobu Murata - Nagoya Municipal Industrial Research Institute - Japan</i> <i>Presenter: Yoshinori Yoshida – Gifu Iniversity - Japan</i>	
		Collaborative Activity; Damage Prediction Disclosure of the prediction results and discussion	
		Discussion and closing remarks – Future activities	

<b>Subgroup Meeting – Smart Data – 23.09.2024</b>			
11:00	13:00	Smart Data Applications for Sensors	Lilac (2F)
		Forming Tools and Smart Data	
		Forming Workpieces with Smart Data	
		Quality and Smart Data	
		Pre Forging and Smart Data	
		Post Forging and Smart Data	
		Heat treatment of workpieces/tools	
		Best Practice to Smart Data	
		Smart Data in Sustainability – Environmental by means of Smart data	
		Smart Data in Sustainability – KPI's for Smart Data	

<b>Subgroup Meeting – Lubrication – 23.09.2024</b>			
14:00	16:00	Welcome and Introduction	Rose (2F)
		Tribology in multi stage process – Background and Challenges	
		Tribology in multi stage process – Multi stage reference process	
		Tribology in multi stage process – Tribometers and Results	
		Tribology in multi stage process – Future Steps	
		Discussion	

<b>Subgroup Meeting – Tool Life &amp; Tool Quality – 23.09.2024</b>			
14:00	16:00	Welcome and Introduction by Mr. Klaus Truetsch & Dr. Soo-Young Kim	Lilac (2F)
		Aims and review of the subgroup activities and status of current documentation	
		Summary of the last Subgroup Meeting held in Ankara	
		Part Quality & Tool Life improvement in mass production parts <i>Amit Shah – Fastenex Pvt. Ltd. – India</i>	
		Datarization of Tool Stress using Semiconductor Strain Sensor with Soft Sensing Technique and Application to Tool Life Improvement <i>Soo-Young Kim – Yamanaka Eng. Co. - Japan</i>	
		Summary and discussion	