



JSTP International Seminar on Precision Forging (7th ISPF)

9-12 March 2015

Mielparque Nagoya, Nagoya, Japan

Seminar Program (detail)

March 8, 2015

17:00-19:00

Registration

March 9, 2015

9:00-09:30

Registration

9:30-09:45

Opening Ceremony

9:45-10:30	Lecture by 2014 JSTP International Prize Winner-1 Chair: <i>Prof. Isogawa, S., Daido University</i> Utilizing Stress Superposition in Metal Forming <i>Prof. Tekkaya, A. E., Technische Universität Dortmund</i>
10:30-12:00	Keynote Lectures-1 Chair: <i>Prof. Isogawa, S., Daido University</i>
10:30-11:00	Residual Stresses and Distortions in Heat Treated Rolled Ring <i>Prof. Altan, T., Ohio State University</i>
11:00-11:30	Light-Weight Vehicles by Aluminum Application <i>Dr. Fujikawa, S., Nissan Motor Co., Ltd.</i>
11:30-12:00	Piercing Extrusion for Long Hollow Component <i>Dr. Murai, E., Nichidai Corp.</i>
12:00-13:00	Lunch
13:00-15:00	Keynote Lectures-2 Chair: <i>Prof. Kitamura, K., Nagoya Institute of Technology</i>
13:00-13:30	Influence of Elastic Deformation and Thermal Contraction on Accuracy of Cold Forged Product <i>Prof. Ishikawa, T., Nagoya University</i>
13:30-14:00	FEM Analysis on Precision Forming of Dissimilar Materials <i>Dr. Lee, Y. S., Korea Institute of Materials Science</i>
14:00-14:30	Cold Forging Process Using AC Servo Press <i>Mr. Kawamoto, K., Komatsu Industries Corp.</i>
14:30-15:00	Special Steels for Forging Applications <i>Dr. Nagashima, T., Daido Steel Co., Ltd.</i>
15:00-15:20	Coffee Break
15:20-16:20	Oral Presentations of Young Invited Researchers/Engineers-1 Chair: <i>Prof. Matsumoto, R, Osaka University</i>
15:20-15:35	Forging Process Layout Using Design of Experiments Combined with a Response Surface Model <i>Mr. Dierdorf, J., RWTH Aachen University</i>
15:35-15:50	Analysis of Ingot Forging Damage Evolution Using Different

- Simulation Methods
Dr. Christiansen, P., Technical University of Denmark
- 15:50-16:05 Novel Extrusion Punch Design for Improved Punch Ejection
Mr. Lowrie, J., North Carolina State University
- 16:05-16:20 Enhanced Stretch Formability of Magnesium Alloy Sheet at Room Temperature by Texture Modification
Mr. Kim, S.J., Korea Institute of Materials Science

16:20-16:30 Break

16:30-17:30	Oral Presentations of Young Invited Researchers/Engineers-2 Chair: <i>Prof. Hayakawa, K., Shizuoka University</i>
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- 16:30-16:45 Influence of Forging Temperature on Solid Lubricants Behaviour in Cold Forging
Dr. Medea, F., University of Padova
- 16:45-17:00 Improvement of Seizure Resistance in Cold Extrusion of Aluminium Alloy Billet Using Die Having Heterogeneous Surface
Mr. Daodon, W., Toyohashi University of Technology
- 17:00-17:15 Effect of Divided Flow Method on Cold Forging of Cylindrical Gears
Mr. Narumiya, H., Nippon Steel & Sumitomo Metal Corp.
- 17:15-17:30 Numerical and Experimental Study of Hydro-forging of a Water Pump Component
Dr. Xu, Y., Chinese Academy of Sciences

18:00-20:00 Gala dinner (Banquet)

March 10, 2015

9:00-09:45	Lecture by 2014 JSTP International Prize Winner-2
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Chair: *Prof. Wang, Z. G., Gifu University*

Development of New Forming Processes

Prof. Mori, K., Toyohashi Institute of Technology

9:45-11:15	Keynote Lectures-3
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Chair: *Prof. Yoshida, Y., Gifu University*

- 9:45-10:15 Tribology for Precision Forging
Prof. Kitamura, K., Nagoya Institute of Technology
- 10:15-10:45 Current State of Controlled Forging Processes
Prof. Isogawa, S., Daido University
- 10:45-11:15 Current State of Plate Forging
Prof. Wang, Z. G., Gifu University

11:15-11:20 Break

11:20-11:50	Oral Presentations of Young Invited Researchers/Engineers-3
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Chair: *Prof. Terano, M., Tokyo Institute of Technology*

- 11:20-11:35 Developments in Composite Extrusion
Mr. Dahnke, C., Technische Universität Dortmund
- 11:35-11:50 Characterization of the Elastic Spring Back Reduction Due to High Speed Loading Under Magnetic Pulse Forming by Means of Finite Elements Analysis
Mr. Alves, J. R., PSL – Research University

11:50-12:00 **Group Photograph**

12:00-13:00 **Lunch, (Preparing poster)**

13:00-14:00 **Poster Session of Young Invited Researchers/Engineers**

Measurement of Friction Coefficient by Backward Extrusion with Rotating Tool

Mr. Kamiyama, M., Toyota central R&D

Simulation and Optimization the Hot Forging Process of IN718 Turbine Disk

Dr. Zhang, H., Ningbo University of Technology

Study of an incremental forging process for a screwed pipe

Dr. Jin, J. S., Huazhong University of Science & Technology

Hollow Lateral Extrusion without Lateral Mandrel

Mr. Napierala, O., Technische Universität Dortmund

Successive forging of tailored blank having thickness distribution for hot stamping

Ms. Tajul, L., Toyohashi University of Technology

Cold punching of high strength die-quenched steel sheets

Mr. Jaafar, H., Toyohashi University of Technology

Light weight forging crankshaft process development

Mr. Miura, D., Honda Engineering Co., Ltd.

Surface Finishing Process and Fatigue Life of Carbide Tool Alloy

Mr. Taniguchi, M., Dijet Industrial Co., Ltd.

The Reversion Process Applied to a Plastic Working for High Strength Aluminum Alloys

Mr. Kato, K., UACJ Corporation

14:00-14:15 **Break**

14:15-15:15 **Oral Presentations of Young Invited Researchers/Engineers-3**

Chair: *Prof. Terano, M., Tokyo Institute of Technology*

14:15-14:30 A Study of Efficient Fabrication Method of Metal Dot Array Using the Micro Metal Forming by a Polymer Mold

Mr. Potejanasak, P., Tokyo Institute of Technology

14:30-14:45 Achievable Geometries in Flexible Radial Profile Ring Rolling

Mr. Cleaver, C. J., University of Cambridge

14:45-15:00 Surface Defect Inspection of Forged Products Using Image Processing

Dr. Liu, H., Nissan Motor Co., Ltd.

15:00-15:15 Anisotropy and Fracture Modes I and III in a Flange Test Specimen

Dr. Nielsen, C. V., Technical University of Denmark

15:15-15:35 **Coffee Break**

15:35-16:20 **Keynote Lectures-4**

Chair: *Prof. Kitamura, K., Nagoya Institute of Technology*

15:35-16:20 A Brief View Into the Future of Precision Cold Forging

Dr. Haensel, M., ThyssenKrupp AG

16:20-18:30 **Discussion on Precision Forging**

Moderator: *Prof. Kitamura, K., Nagoya Institute of Technology*

18:30-20:00 **Dinner**

March 11, 2015:

8:00-16:30	Plant tour
8:00	Departure
9:00-11:00	Toyota Motor Co., Ltd., Kinuura plant
11:00-13:30	Transfer & Lunch
13:30-15:30	Nippon Steel & Sumikin Precision Forge, Inc.
15:30-16:30	Return to the Hotel

March 12, 2015:

8:00-21:00	Plant tour and Visit to Nichidai Corporation
(Check out if leaving Nagoya on March 12)	
8:00	Departure
9:00-11:00	Aisin AW, Co., Ltd.
11:00-14:30	Transfer & Lunch
14:30-19:00	Nichidai Corporation (plant tour, farewell party)
19:00-21:00	Return to the Hotel