



JSTP International Seminar on Precision Forging (8th ISPF)

5-8 March, 2018

Nagoya Institute of Technology (NITech), Nagoya, Japan

General Info.: <https://www.nitech.ac.jp/eng/index.html>

Access and Campus map: <https://www.nitech.ac.jp/eng/access/index.html>

Organized by Japan Society for Technology of Plasticity (JSTP)

(Directed by the Forging committee of JSTP)

<http://www.jstp-ispf.com/>

Schedule

March 4, 2018

17:00-19:00

Registration at Hotel Mielparque Nagoya

(the accommodation of the Seminar,

<https://www.mielparque.jp/nagoya/en/>)

March 5, 2018: Seminar at NITech, 4th Bldg., 1st Floor “Hall”

08:30-09:00

Transfer from the accommodations to NITech

09:00-09:15

Registration

09:15-09:30

Opening Ceremony

09:30-10:15

Keynote Lecture by 2017 JSTP International Prize Winner - 1

Cold Forging of High-Precision Inner Spline Gears

Prof. Takashi Ishikawa

10:15-10:25

Break

10:25-12:10

Lectures 1 – 3

10:25-11:00

Lubricants for Precision Forging

Prof. Kazuhiko Kitamura

11:00-11:35

Fine Blanking Technology in Precision Forging

Prof. Zhen Zhao

11:35-12:10

Damage in Metal Forming

Prof. A. Erman Tekkaya

12:10-13:30

Lunch

13:30-14:40

Lectures 4, 5

13:30-14:05

Temperature Effects on Material Behaviour in Metalforming

Prof. Andrea Ghiotti

14:05-14:40

Numerical Simulations for Designing for Bulk Forming Processes

Prof. Kunio Hayakawa

14:40-14:50

Break

14:50-15:25

Lecture 6

Forming of Light-Weight Parts by Plate Forging

Prof. Zhigang Wang

15:25-16:45	Oral Presentations of Young Invited Researchers / Engineers -1
15:25-15:45	Systematic Approach to Analyse Critical Tribological Parameters in an Industrial Case Study of Progressive Die Sequence Production <i>Ms. Esmeray Üstünyagiz</i>
15:45-16:05	Tool Condition Monitoring in Strip Reduction Testing Using Acoustic Emission <i>Mr. Marcel Moghadam</i>
16:05-16:25	Influence of Friction Towards Material Flow in Thread Rolling <i>Mr. Philipp Kramer</i>
16:25-16:45	Development and Testing of Tailored Tool Surfaces for Sheet Metal Forming <i>Dr. Mohd H. Sulaiman</i>
16:45-16:55	Break
16:55-18:15	Oral Presentations of Young Invited Researchers / Engineers - 2
16:55-17:15	Influence of the Bauschinger Effect on the Product Properties of Cold Forged Parts <i>Mr. Felix Kolpak</i>
17:15-17:35	Softening Behavior by Strain Recovery During Hot Forging of Alloy 718 and Influence of Precipitated Delta Phase <i>Mr. Takuji Otake</i>
17:35-17:55	Influence of Tensile Pre-Strain on Material Formability of 6061 Sheet <i>Mr. Wen Zhang</i>
17:55-18:15	Distortion of Thin-Wall Hot Forged Components in Stainless Steel <i>Mr. Enrico Simonetto</i>
18:45-20:30	Welcome Party at NITech
20:30-21:00	Transfer from NITech to the accommodations

March 6, 2018: Seminar at NITech, 4th Bldg., 1st Floor “Hall”

08:30-09:00 **Transfer from the accommodations to NITech**

09:00-09:45 **Keynote Lecture by 2017 JSTP International Prize Winner - 2**

Mechanical Properties of CFRP/Metal Hybrid Composites and Precision Forming Technology

Prof. Chung-Gil Kang

09:45-10:25 **Lecture 7**

Hard Coating of Tools for Precision Forging

Prof. Yoshinari Tsuchiya

10:25-10:35 **Break**

10:35-11:55 **Oral Presentations of Young Invited Researchers / Engineers - 3**

10:35-10:55 Near-Net Shape Open-Die Forging of Complex Workpieces Through Superimposed Manipulator Displacements

Mr. Martin C. Wolfgarten

10:55-11:15 Tool Design and Materials for Electro Sinter Forging (ESF)

Mr. Emanuele Cannella

11:15-11:35 An Error Compensation Method of High Precision Gear Design with Near-Net Shaped Forging

Ms. Wan-Ling Chen

11:35-11:55 Shot-Peening and Fatigue Life of Carbide Tool for Cold Forging

Mr. Makoto Takemoto

11:55-13:00 **Lunch**

13:00-14:10 **Lectures 8, 9**

13:00-13:35 Analytical Approach for Improvement of Forging Die Life

Dr. Shinichiro Fujikawa

13:35-14:10 Die Technology for Precision Forging

Dr. Eisuke Murai

14:10-14:20 **Group photograph, (Preparing poster)**

14:20-15:20 **Poster Presentation of Young Invited Researchers / Engineers**

- Analysing Damage Evolution in Cold Forging by means of Triaxiality and Lode Parameter

Mr. Oliver Hering

- Control of Steady-State Thickness and Length of Transient Region in Successive Forging of Tailored Blank for Hot Stamping of Ultra-High Strength Steel Parts

Mr. Yuki Nakagawa

- An Experimental Study of Forward and Backward Toolpasses in Conventional Spinning

Mr. Iacopo M. Russo

- Effect of Forging Force on Formation and Mechanical Performance of Fiction Self-Piercing Riveting High Strength Aluminum Alloy Sheets

Mr. Yunwu Ma

- On the Formability of a Deposited Aluminum Alloy Using Wire Arc Additive Manufacturing

Dr. Ivo M. F. de Bragança

- Development of Die Forging Technique for Thixomolded AZX912
Mr. Makoto Tanaka
- Study on High Accuracy of Cold Forging Simulation by Consideration the Baushinger Effect
Mr. Shinobu Narita
- Fracture Prediction for Steel Sheet Subjected to Draw-Bending Using Forming Limit Stress Criterion
Dr. Chiharu Sekiguchi
- Strategies of Manufacturing Gear-Shaped Parts with Floating Die
Dr. Xincun Zhuang
- Development of Material Modeling Methods Based on Biaxial Tensile Test and Texture Observation Using Neutron Diffraction
Dr. Tomoyuki Hakoyama
- Increasing the performance of cold forging tools by micro blasting
Mr. Andrea Caflisch
- Trial of compression of oil-filled hollow workpiece for preforming of gear
Mr. Yoshiki Tatematsu

15:20-16:40 Oral Presentations of Young Invited Researchers / Engineers - 4

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| 15:20-15:40 | Development of a Differential Heating Based Forging Process for Hollow Axle and Pinion Gear Shafts
<i>Mr. Hao Pang</i> |
| 15:40-16:00 | Joining by Forming of Sheets by Sheet-Bulk Forming
<i>Dr. Carlos M. A. da Silva</i> |
| 16:00-16:20 | Development of Double Cup Forming in Plate Forging
<i>Mr. Kazuya Takeshita</i> |
| 16:20-16:40 | Damage Value Estimation for Inclined Rotary Forming
<i>Mr. Atsuo Watanabe</i> |

16:40-17:40 Break

17:40-20:10 Discussion on Precision Forging

Facilitators: *Prof. T. Altan, Prof. K. Osakada, Prof. T. Nakamura and Prof. K. Kitamura*

20:10-20:40 Transfer from NITech to the accommodations

March 7, 2018: Plant tour -1, TOYOTA MOTOR and Asahi Sunac

08:00	Departure from Hotel Mielparque Nagoya
09:00-11:00	TOYOTA MOTOR Corp. , Kinuura plant
11:15-13:15	Lunch
14:30-16:30	Asahi Sunac Corp.
17:30	Arrive at Hotel Mielparque Nagoya

March 8, 2018: Plant tour - 2, GOHSYU and NICHIDAI

08:00	Departure from Hotel Mielparque Nagoya
10:00-12:00	GOHSYU Corp.
12:45-14:00	Lunch
14:30-16:30	NICHIDAI Corp.
16:30-18:30	Farewell Party at NICHIDAI Corp.
20:45	Arrive at Hotel Mielparque Nagoya