

2016 BOSI EDU NANJING CONFERENCE SCHEDULE

**2016 3rd International Conference on Mechanical
Structures and Smart Materials
(3rd ICMSSM2016)**

**The 3rd Annual International Conference on
Mechanical Manufacturing, Modeling and Materials
(3rd AC4M2016)**

**2016 3rd Annual International Conference on
Intelligent Materials, Power and Energy
(AIMPE2016 Autumn)**



NANJING

October 22-23, 2016

<http://www.icmssm.org/>

<http://www.ac4m.org/>

<http://www.aimpe.org/>

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Simple Version of the Schedule

October 22
p.m.

Sign In at Novotel Nanjing
Central (13:30-15:30)

October 23
a.m.

• Plenary Speech (9:00-9:40)

• Photo&Coffee Break (9:40-10:00)

• Main Session (10:00-12:00)

• Lunch (12:00-13:00)

Committees

Editorial Chair

ASSOC. PROF. Zulkifli Ahmad, School of material and Mineral Resources, USM, Malaysia

Conference Secretary

Jenny Ji, BOSI Education & Consultancy, China

Committees of ICMSSM2016

Dr. Nik Hisyamudin Muhd Nor, Universiti Tun Hussein Onn Malaysia, Malaysia

Prof. Ka-Veng YUEN, University of Macau, Macau, China

Assistant Prof. Dr. M. Shahria Alam, The University of British Columbia, Canada

Dr. Ching Yern Chee University of Malaya, , Malaysia

Prof. Pak Kin WONG, University of Macau, Macau, China

Prof. Dr. Ahmad Mujahid Ahmad Zaidi, National Defense University of Malaysia, Malaysia

Venue

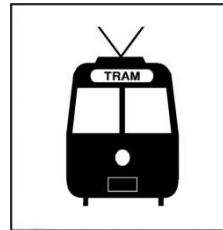
Conference venue: Novotel Nanjing Central
(南京新街口苏宁诺富特酒店)

Address: No.68, Huaihai Road, Qinhuai District, Nanjing City

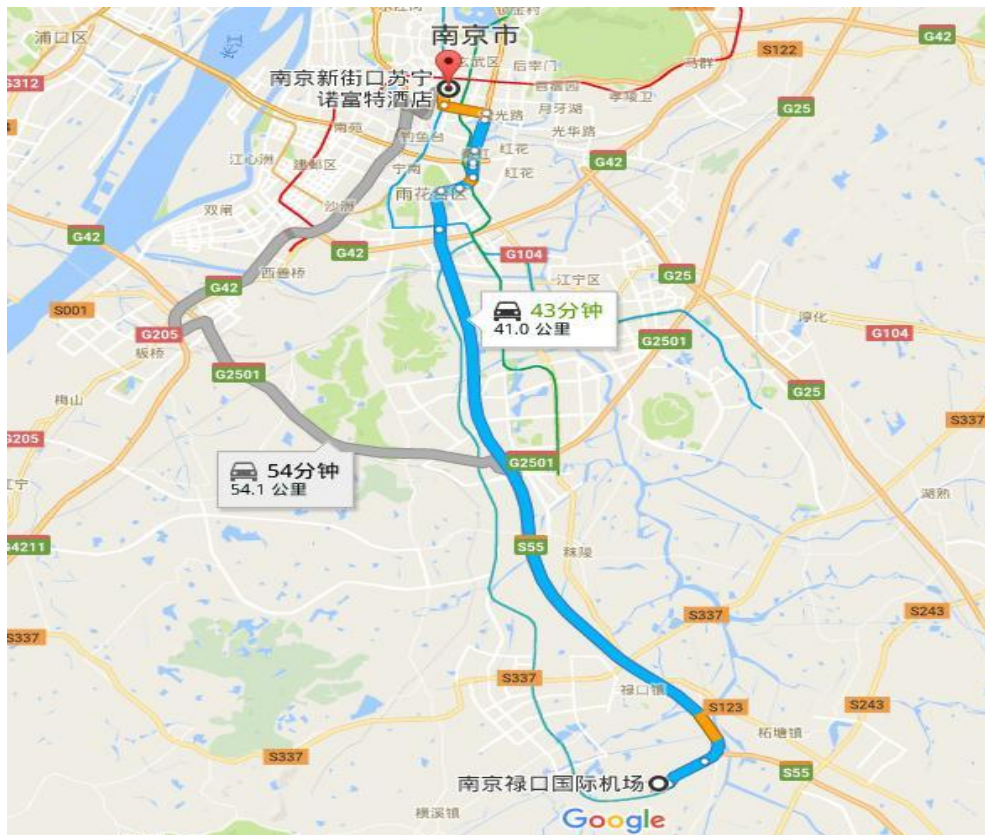
Distance from the airport to the hotel
Nanjing Lukou International Airport



Taxi
45mins
About 100RMB



Subway
About 1.5h
8RMB



2016 BOSI EDU Nanjing CONFERENCE

ICMSSM&AC4M&AIMPE Autumn will be held on Novotel Nanjing Central.
This schedule is subject to change. Please visit conference website often for the most current schedule.

CONFERENCE SCHEDULE as of 13/10/2016

October 22, 2016 (Saturday)

Novotel Nanjing Central

13:30--15:30	Sign In
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October 23, 2016 (Sunday)

Novotel Nanjing Central

09:00--09:40	Plenary Speech
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09:40--10:00	Photos&Coffee Break
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10:00—12:00	Main Session
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12:00--13:00	Lunch
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Note:

1. All the participants are strongly advised to arrive before **8:50, October 23, 2016**.
2. Certificate of Participation can be collected at the registration counter.
3. Please copy PPT files of your presentation to the secretary when registration.
4. The organizer doesn't provide accommodation, and we suggest you make an early reservation.
5. If you want to deliver oral presentation but your paper is not in the session list, please contact us by Email: cfp@icmssm.org(for ICMSSM2016)contact@ac4m.org(forAC4M2016)cfp@aimpe.org(for AIMPE Autumn)

Instruction about Oral Presentation

Devices Provided by the Conference Organizer:

Laptops

Projectors & Screen

Laser Sticks

Materials Provided by the Presenters:

PowerPoint or PDF files

Duration of each Presentation:

Regular Oral Session: about 10-15 Minutes of Presentation and 5 Minutes of Q&A

Plenary Speech

Plenary Speech 9:00-9:40



Dong W. Jung

**Jeju National University
School of Mechanical Engineering**

Professor Dong W. Jung is a full professor from Jeju National University, which is one of Ten National Universities in Korea.

Professor Dong W. Jung works in School of Mechanical Engineering, he has rich experience in his researching field. He is a professional reviewer of plenty Journals, such as KSME(Korean Society of Mechanical Engineers), KSPE(Korean Society for Precision Engineering), KSTP(Korean Society for Technology of Plasticity), KSAE(Korean Society for Automobile Engineers), Journal of Ocean Engineering and Technology, Journal of Korea Society for Power System Engineering, The Korean Journal of CAE...He also has lot of publications and academic conference experience.



09:40-10:00

Photo and Coffee Break

Main Session List

October 23, 2016 (10:00-12:00)

1-Paper ID: 24

Title: Effect of spot-weld line orientation on formability for patchwork blank

Authors: Kwang Young Ye, Jae Hong Kim, Byung Min Kim

Abstract: In recent years, in order to achieve weight reduction and crashworthiness, automotive part was manufactured using patchwork blanks. The smaller patches were welded on a main sheet to achieve a local reinforcement, which is called the patchwork. In this study, the effect of the spot-weld line orientation on the formability of patchwork blanks for high-strength low alloy(HSLA) steel was investigated in uni-axial tension mode by limiting dome height(LDH) test. A FE-analysis and experiment was performed to gain a better understanding of the formability for limiting dome height and strain distribution. As a result of the LDH test and FE-analysis, differences in the dome heights and forming limits were observed patchwork blanks with spot-weld line orientation of 0° , 45° , and 90° , respectively. For the 0° and 45° patchwork blanks, the dome heights was lower than those of 90° patchwork blanks because of the stress concentration in the pole side.

2-Paper ID: 25

Title: Hardness Prediction of Tailor Rolled Blank in Hot Press Forming Using Quench Factor Analysis

Authors: Jae-Hong Kim, Dae-Cheol Ko, Byung-Min Kim

Abstract: This paper aims to predict the hardness of hot formed part for tailor rolled blank (TRB) by the FE-simulation coupled with quenching factor analysis (QFA). Dilatometry test of boron steel is performed at various range of cooling rates from 0.2 to 100°C/s using the dilatometer with forced air cooling system. The dilatometry test provides a hardness data according to cooling curves which are used to determine the material constants (K1~K5) of QFA and the time-temperature-property (TTP) diagram of boron steel. Then, FE-simulation of hot press forming is conducted to predict the cooling curves of hot formed TRB part with a thickness combination of thicker 1.6mm and thinner 1.2mm which is called as rear side member of automotive component. The cooling curves of FE-simulation are applied to predict the hardness of hot formed rear side member using the QFA. Also, experiment of hot press forming is performed to verify the predicted results and to examine the effect of cooling curves on the hardness..

3-Paper ID: MS612

Title: EFFECT OF RICE HUSK ASH BASED SILICON DIOXIDE ON THE PROPERTIES OF SUZ-4 ZEOLITE

Authors: Thitipob Sirisoontornpanid, Atichat Wongkoblaph, Supunnee Junpirom

Abstract: SUZ-4 zeolite was synthesized by the sol-gel technique, followed by hydrothermal process. The effect of the molar ratio of rice husk ash based silicon dioxide to silica solution was investigated. The synthesized zeolite was characterized by XRD, SEM, N₂ adsorption and temperature programmed desorption. The results show that the SUZ-4 zeolite was formed for all investigated conditions. However, the formation of MER zeolite occurred as an impurity for the content of rice husk ash higher than 75%. A needle shape crystal with mainly microporous

structure is the feature of synthesized SUZ-4 zeolite. The result of temperature programmed desorption indicated that the chemical surface property of obtained SUZ-4 zeolite was weak acid sites.

4-Paper ID: MS625

Title: Morphological and Thermal Characterization of Nafion/CNT/PVA Nanocomposite Membranes

Authors: Young Ho Kim, Yeon Kyung Lee, Bong Keun Kang, Hee Jin Kim, Sang-June Choi

Abstract: Nafion membranes were reinforced by adding functionalized carbon nanotubes (CNTs) such as oxidized CNTs (ox-CNTs). To enhance the ox-CNTs' miscibility in the Nafion membrane, a small amount of polyvinyl alcohol (PVA) was introduced during the fabrication of some of the nanocomposite membranes. Nafion, a sulfonated tetrafluoroethylene-based fluoropolymer-copolymer, can be used as an ion-exchange membrane in various nanobio-devices. However, some physical properties of Nafion membranes, including the thermal stability, need to be enhanced by adding rigid inorganic nanomaterials such as CNTs or silicates.

In this study, PVA-reinforced Nafion membranes with either pristine CNTs (p-CNTs) or ox-CNTs (Nafion/CNT/PVA) were prepared by solution casting. The prepared Nafion/CNT/PVA nanocomposite membranes were approximately 90 μm thick, and their morphologies were characterized by microscopy. Their thermal properties were investigated by differential scanning calorimetry and thermogravimetric analysis.

5-Paper ID: MS640

Title: Effects of cold rolling on microstructure and anomalous thermal expansion behaviors of Ti-35Nb-2Zr-0.3O alloy

Authors: Chunbo LAN, Yu WU, Feng CHEN

Abstract: Ti-35Nb-2Zr-0.3O (wt.%) alloy was melted under high-purity argon atmosphere in an electric arc furnace, followed by cold rolling. The effects of deformation process on microstructures and thermal expansion behaviors were investigated by OM, XRD and TMA. Results showed that the stress-induced α'' martensitic transformation occurs after cold rolling. The solution treated sample exhibits normal thermal expansion along the

rolling direction, and the thermal expansion rate increases with the increase of temperature. After cold rolling, thermal expansion behavior is polarized (negative thermal expansion occurs along rolling direction and normal thermal expansion higher than solution treated sample occurs along transverse direction). The thermal expansion rate along rolling direction decreases with the increase of reduction. The 40% cold deformed sample along rolling direction possesses Invar effect in a temperature range from 25°C to 350°C. The anomalous thermal expansion behaviors of cold rolled samples possibly relate to stress-induced α'' martensitic transformation and β $\langle 110 \rangle$ texture evolution.

12:00-13:00	Lunch
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Note: If you would like to deliver oral presentation but your paper is not in the session list, please contact us by Email: cfp@icmssm.org (for ICMSSM2016); contact@ac4m.org (for AC4M2016); cfp@aimpe.org (for AIMPE2016) ASAP. Thanks again for all your great attention and kind support to ICMSSM2016, AC4M2016 and AIMPE2016.

Thank you for all of your contributions!