

Registration Information

Regular participant: 50,000 yen
Student: 20,000 yen

Further information for registration and payment will be announced on the symposium website.

Call for Papers

The oral sessions at this symposium will only consist of invited review talks, and the contributed papers will be presented at the poster session. Each registered participant may submit one contributed paper. The invited speakers can submit one contributed paper in addition to the invited paper. The official language at the symposium will be English. A 200-word abstract should be submitted via e-mail to the symposium office (ISSS2009@ams.eng.osaka-u.ac.jp) for the presentation no later than April 30th, 2009. A notification of acceptance will be sent after the abstract is reviewed by the organizing committee. An author who is accepted for the presentation should submit a 4-page manuscript for the proceeding book again via e-mail to the same address. All the papers will undergo a peer-review by the reviewing committee. The proceeding book of the symposium will be published from ISIJ and sent to the participants after the symposium.

Formats for the abstract and paper can be downloaded from the symposium website. (<http://www.steelscience.org/>)



Important Dates - Tentative -

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|----------------------------------|---------------------|
| Abstract Submission Due: | April 30, 2009 |
| Acceptance Notification: | May 15, 2009 |
| Early Registration Due: | July 15, 2009 |
| Program Notification: | August 1, 2009 |
| Paper Manuscript Submission Due: | October 22, 2009 |
| The 2nd ISSS 2009: | October 21-24, 2009 |

Conference Venue

The 2nd ISSS 2009 will be held at the Kansai Seminar House in Kyoto, Japan. It is located at the foot of Mt. Hiei in a peaceful scenic natural setting. The Kansai Seminar House also has a stage for Japanese authentic play (Noh), a tea house and a Japanese style house surrounded by a Japanese Garden. Many gardens and temples are located within walking distances. You can enjoy a traditional Japanese atmosphere. For more details, contact the seminar house or visit their website.

Kansai Seminar House

23 Takenouchi-cho, Ichijoji, Sakyo-ku, Kyoto 606-8134 JAPAN
Phone: +81-75-711-2115, Fax: +81-75-701-5256
Website: <http://www.academy-kansai.com/english/>

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www.steelscience.org

First Circular

Strength, Plasticity and Fracture in Steels
- Fundamentals and Novel Approaches
for New Demands -

October 21(wed) - 24(sat), 2009
Kansai Seminar House, Kyoto, Japan

The 2nd International Symposium on Steel Science

<http://www.steelscience.org>

The IRON AND STEEL INSTITUTE OF JAPAN



Scope & Topic

Can we find SCIENCE and FRONTIER in steel research ? We do say "YES". Steels have huge potential and possibilities, but we have not yet brought out them. There are so many interesting research subjects on steels, which will give us deeper understanding of materials science as well as further advancement of technology for our environmentally responsible life. We believe that steel is the most important structural material in our sustainable society from the past to the future. A new frontier of steel science is waiting for us.

The Iron and Steel Institute of Japan (ISIJ) is now offering a series of the international symposium on steel science. One of the main purposes of this symposium series is to present and discuss the frontier research in the materials science of steels and related technologies. The topic of each symposium is carefully selected to bring the best balance between current industrial needs and academic seeds. The size of symposium is kept to be compact so that all participants can communicate to each other. The attendees with common professional interests will have an opportunity to participate in concentrated discussions and to examine the most advanced aspects of the topic in this one-session family-atmosphere symposium. Another goal of this activity is to educate young steel researchers and engineers for the next generations. We believe that a series of above symposium will provide a valuable means of spreading information and ideas in the way that cannot be achieved in large-scale conferences.

The 1st symposium concerning 'Fundamentals of Martensite and Bainite toward Future Steels with High Performance' was successfully held with 82 participants from 9 different countries during May 16-19, 2007, in Kyoto, Japan. We are now planning to have the 2nd symposium of which main theme is 'Strength, Plasticity and Fracture in Steels ~Fundamentals and Novel Approaches for New Demands~', on Oct. 21-24, 2009, in Kyoto again. Mechanical property is the most important aspect of steels. Recent demands require higher and higher mechanical performances for steels, so that we need to understand the essentials of mechanical properties, such as yield strength, strain-hardening, ductility, formability, toughness, etc., from fundamental viewpoints in order to develop advanced steels practically. One of the most important keywords of the symposium is to manage both strength and ductility (or toughness). How can we realize such difficult demands ? We have had dislocation theory and fracture mechanics for understanding strength and fracture of metals fundamentally, but can we get additional new tools ? The symposium covers following topics, and the research results concerning the topics will be presented and discussed from both fundamental and practical points of view.

- 1) Formability and Ductility
- 2) Crash-worthiness and High Speed Deformation
- 3) Toughness and Fracture
- 4) Cyclic Deformation and Fatigue
- 5) Hydrogen Embrittlement
- 6) Yield Strength Control
- 7) Strain-hardening and Crystal Plasticity
- 8) Mechanisms Based on Dislocation Theory and Fracture Mechanics
- 9) Modeling and Simulation
- 10) Characterization of Deformation and Microstructure

Program Schedule -Tentative plan-

- Oct.21 Afternoon --- Registration & Tea Ceremony
(wed) Evening --- Welcome drink
- Oct.22 Morning --- Registration
(thu) Opening Remark
Oral Session (including plenary)
Afternoon --- Poster short presentation
Poster Session
Evening --- Discussion Session
- Oct.23 Morning --- Oral Session
(fri) Afternoon --- Oral Session
Evening --- Dinner Party
- Oct.24 Morning --- Oral Session & Closing Remark
(sat)

Plenary, Keynote & Invited Lecturers - Tentative list -

- Plenary
Prof. H.Mughrabi (Universitaet Erlangen-Nuernberg, Germany)
- Keynote
Prof. I.Robertson (University of Illinois, U.S.)
Prof. H.M.Zbib (Washington State University, U.S.)
- Invited
Prof. D.Raabe (Max-Planck Institute for Iron & Steel Research, Germany)
Dr. O. Bouaziz (ArcelorMittal Maizieres, France)
Dr. F.G. Caballero (National Center for Metallurgical Research, Spain)
Prof. P.Ferreira (University of Texas, U.S.)
Prof. Y.Tomota (Ibaraki University, Japan)
Prof. K.Higashida (Kyushu University, Japan)

Organizing Committee

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- K.Ameyama (Ritsumeikan University)
T.Furuhara (Tohoku Iniversity)
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H.Nakashima (Kyushu University)
T.Ohashi (Kitami Inst. Tech.)
H.Ohtsuka (National Inst. for Materials Science)
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N.Tsuchida (Hyogo Pref. Univ.)
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