

HPSP-17 & WHS

The 17th International Conference on High Pressure in Semiconductor Physics (HPSP-17)
& Workshop on High-pressure Study on Superconductors (WHS)



Tokyo, Japan, Aug.7th - Aug.11th, 2016



Welcome The Seventeenth International Conference on High Pressure in Semiconductor Physics (HPSP-17) and the Workshop on High-pressure Studies of Superconductors (WHS) is a satellite conference of the International Conference on the Physics of Semiconductors (ICPS 2016) to be held in Beijing (China) during first week of August. The Workshop on High-pressure Studies of Superconductors (WHS) joins HPSP-17 for the first time. HPSP-17 & WHS will take place in Tokyo, one of the most attractive cities in the world. The aim of HPSP-17 and WHS is to allow young and experienced researchers from different fields to meet together during a single-session conference to present and discuss their latest results in the field of application of high pressure and other forms of stress to the study of both semiconductors and superconductors. Presentations on both traditional bulk and low-dimensional systems are welcomed. HPSP-17 will review, in particular, the latest advances and developments in the study of nanostructured semiconductor materials and devices using high pressure techniques. WHS will review the latest experimental and theoretical advances on the effects of high pressure on superconducting systems, including advances in pressure-induced superconductivity, design of high pressure apparatus, and other related. We will have an opportunity to have a bird-eye view bridging the juncture of these two fields, and thus a new stimulus in both areas. The conference is supported by Institute for Solid State Physics, The University of Tokyo.

Conference venue Sanjyo Conference Hall, The University of Tokyo, The Hongo Campus, JAPAN; <http://www.u-tokyo.ac.jp/content/400020145.pdf>: the conference hall is referred to the number two in the square in the map. The Hongo campus is in the center of Tokyo and can be reached in 50 min from Haneda International Airport and 90 min from Narita International Airport; <http://www.u-tokyo.ac.jp/en/about/about.html>.

Chronicle of HPSP HPSP is a biennial meeting with a long standing tradition. The first two meetings took place in Poland (1985) and Montpellier (1986) as a Polish-French Meeting on High Pressure Applications in Semiconductors. The success of these early conferences made it clear that the topic area of high-pressure semiconductor physics had wide interest. Consequently, in 1988 the series was convened under its present name and has been organized as a satellite meeting of the traditional International Conference on the Physics of Semiconductors. HPSP conferences were held in :

- Tomazów, Poland (1988)
- Thessaloniki, Greece (1998)
- Fortaleza, Brazil (2008)
- Porto Caras, Greece (1990)
- Sapporo, Japan (2000)
- Changchun, China (2010)
- Kyoto, Japan (1992)
- Guildford, UK (2002)
- Montpellier, France (2012)
- Vancouver, Canada (1994)
- Berkeley, USA (2004)
- Mexico City, Mexico (2014)
- Schwäbisch, Germany (1996)
- Barcelona, Spain (2006)

Aim and Topics The aim of this joint conference is to gather at the same time researchers in both semiconductor physics and superconductivity, linked by their interest and studies of high pressure effects in the two fields. The goal is to allow promising young scientists and internationally recognized leaders from these different fields to share advances and ideas in a single-session conference. During the meeting recent progress on a wide range of topics will be reviewed, as indicated in the list below. Submissions of original work on topics including, but not limited to the following list, are solicited:

Semiconductor Physics

- Electronic structure, X-ray absorption
- Mechanical properties including vibrational, elastic and piezoelectric properties
- Thermal properties including thermoelectric behaviors
- Optical properties

- Electrical transport phenomena
- Defect states
- Structural studies including phase transitions
- Spin dependent properties
- Carbon related semiconductors (clusters, nanotubes, graphene)
- Low-dimensional semiconductor structures
- Novel materials, structures and devices
- State of the art computation of material properties under high pressure
- New experimental and computational techniques

Superconductivity topics

- Superconductivity
- Correlated phenomena
- Superconductors, related materials, and devices

Schedule

Deadline for abstract submission: April 1, 2016

The following is a tentative schedule of the conference. Some of the invited talks are planned so as to include reviews of recent developments, and talks of shorter duration will also be arranged. There will be ample opportunities for discussions involving the speakers and the participants.

- Aug 7 (Sun) Registration
- Aug 8 (Mon) Morning: Opening session
- Aug 8 (Mon)- Aug 11 (Thu) Technical sessions
- Aug 10 (Wed) Afternoon: Excursion & Banquet
- Aug 11 (Thu) Closing session

International Advisory Committee

- Alf R. ADAMS, University of Surrey, UK
- Vadim V. BRAZHKIN, Russian Academy of Sciences, Russia
- Meera CHANDRASEKHAR, University of Missouri, USA
- In-Hwan CHOI, Chung-Ang University, Korea
- Antonio G. DE SOUZA FILHO, Federal University of Ceara, Brazil
- Jesús GONZÁLEZ University of Los Andes, Venezuela
- Alejandro GOÑI, ICREA-ICMAB, Spain
- Michael HANFLAND, ESRF, France
- Isaac HERNÁNDEZ-CALDERÓN, Cinvestav, Mexico
- Agata KAMINSKA, Polish Academy of Sciences, Poland
- Leszek KONCZEWICZ, University of Montpellier, France
- Yanming MA, State Key Lab of Superhard Materials, China
- Alfonso MUÑOZ, University of La Laguna, Spain
- Paul Chu, University of Houston, USA
- Alain POLIAN, Université P. et M. Curie, France
- Michael PRAVICA, University of Nevada, USA
- Alfonso SAN-MIGUEL, University of Lyon, France
- Alfredo SEGURA, University of Valencia, Spain
- Bertil SUNDQVIST, Umeå University, Sweden
- Stephen SWEENEY, University of Surrey, UK
- Karl SYASSEN, Max Planck Institute - Stuttgart, Germany
- Kenichi TAKARABE, Okayama University of Science, Japan
- Sotirios VES, Aristotle University of Thessaloniki, Greece
- Bernard A. WEINSTEIN, SUNY at Buffalo, USA
- Peter Y. YU, University of California, USA
- Yoshiya Uwatoko, University of Tokyo, Japan
- Jim Schilling, Washington University, USA
- Marvin L. Cohen, University of California, USA

Organizing Committee (to be extended)

Co-chairs	K.Takarabe, Okayama University of Science, Japan Y.Uwatoko, University of Tokyo, Japan
Publication chairs	A.Goñi, ICREA-ICMAB, Spain K.Matsuishi, University of Tsukuba, Japan
Secretariat	Y.Mori, Okayama University of Science, Japan