

Workshop on Superconductivity under Extreme Conditions

July 5 (Mon) - 6 (Tue), 2021, Pohang, South Korea

Scope of the Workshop

The workshop on Superconductivity under Extreme Conditions is designed to provide a focused venue to discuss recent progress in superconducting materials and mechanism under extreme conditions. Topics that will be discussed in the workshop include, but not limited to new SC materials, hydrogen-based compounds, high-Tc superconductors, superconductivity in low-dimensional compounds, theory...

Committee

- **Organizers**
Tuson Park (Sungkyunkwan University)
Jaeyong Kim (Hanyang University)
Kee Hoon Kim (Seoul National University)
- **Advisory Committee**
Yunkyu Bang (POSTECH)
Han-Yong Choi (Sungkyunkwan University)
Joonhyung Cho (Hanyang University)
Cheolhong Park (Pusan National University)
- **Scientific Committee**
Jungseek Hwang (Sungkyunkwan University)
Younjung Jo (Kyungpook National University)
Duckyoung Kim (HPSTAR)
Jeehoon Kim (POSTECH)
Ji Hoon Shim (POSTECH)

Time table

Time	July 5 (Mon)	July 6 (Tue)
Morning Session		Tue 1 (09:20-10:20) Han-Yong Choi Jun Sung Kim Kwan-Woo Lee
		Tue 2 (10:40-11:40) Ji Hoon Shim Tuson Park Hyun-Yong Lee
	Registration	Closing (by Han-Yong Choi) & Organizer Meeting 2 (11:40-14:00)
Afternoon	Mon 1 (13:50-15:20)	

Session	Opening by Yunkyu Bang Duck Young Kim Jungseek Hwang Chul-Hong Park Yongjae Lee
	Mon 2 (15:40-17:00) Changyoung Kim Sooran Kim Younjung Jo Heung-Sik Kim
	Mon 3 (17:20-18:20) Kee Hoon Kim Jun-Hyung Cho Jaeyong Kim
	Organizer Meeting 1 (18:30-20:00)

Session Details

Mon1 (13:50~15:20)

Session Chair : Jun-Hyung Cho (Hanyang Univ.)

Duck Young Kim (HPSTAR)

Novel materials discovery under extremely high pressure

Jungseek Hwang (Sungkyunkwan University)

Study on superconductivity under ultrahigh pressure using infrared spectroscopy

Chul-Hong Park (Pusan National University)

Prediction of atomic structure of high pressure hydrides

Yongjae Lee (Yonsei University)

Volatile journey to the Earths deep interior

Mon 2 (15:40-17:00)

Session Chair : Jeehoon Kim (POSTECH)

Changyoung Kim (Seoul National University)

B1g phonon anomaly driven by Fermi surface instability at intermediate temperature in YBa2Cu3O7- δ

Sooran Kim (Kyungpook National University)

Machine-Learning-Guided Prediction Models for Critical Temperature of Cuprates

Younjung Jo (Kyungpook National University)

Enhanced activation energy of FeSe in a possible hidden antiferromagnetic phase under pressure

Heung-Sik Kim (Kangwon National University)

First-Principles Computational Studies on Correlated Magnetic Chalcogenides Under Pressure

Mon 3 (17:20-18:20)

Session Chair : Tuson Park (SKKU)

Kee Hoon Kim (Seoul National University)

Pressure-induced large anomalous Hall effects and creation of superconductivity in van der Waals ferromagnets

Jun-Hyung Cho (Hanyang University)

Emergence of new horizons in high-Tc superconductivity

Jaeyong Kim (Hanyang University)

Current and future research environments for high pressure studies

Tue 1 (09:20-10:20)

Session Chair : Chul-Hong Park (PNU)

Han-Yong Choi (Sungkyunkwan University)

The maximal Tc for phonon mediated superconductors

Jun Sung Kim (POSTECH)

Pressure-induced phase transition in van der Waals magnets

Kwan-Woo Lee (Korea University)

Recent Progress on Superconducting Nickelates

Tue 2 (10:40-11:40)

Session Chair : Duck Yong Kim (HPSTAR)

Ji Hoon Shim (POSTECH)

DMFT and its application to correlated materials

Tuson Park (Sungkyunkwan University)

Spectroscopic Study of Megabar Superconductors

Hyun-Yong Lee (Korea University)

Field-induced Bose-Einstein condensation and supersolid in the Kondo necklace



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