



## KINKEN-KIST joint seminar

### “Future electronic materials and devices beyond Si”

*Venue: Tohoku University IMR auditorium*

*October 24 (Mon)-25(Tue), 2016*

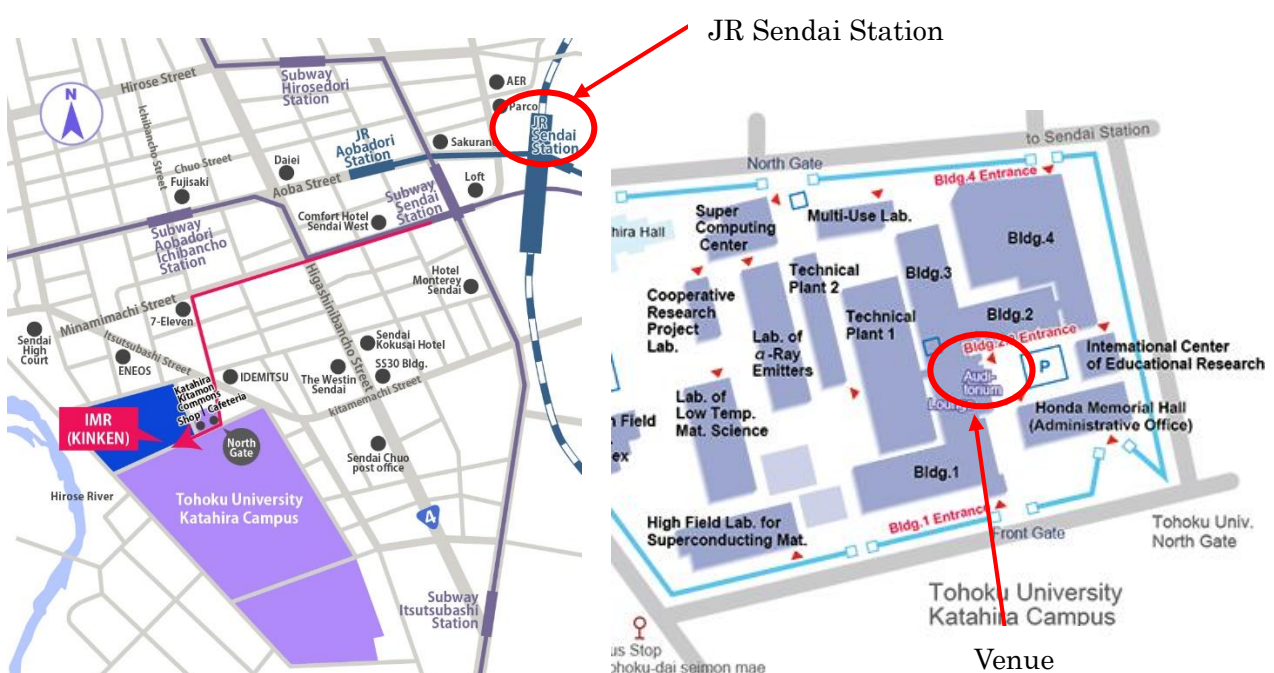
#### October 24 (Mon)

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|-------------|---|
| 9:30-10:00  | Reception time  |
| 10:00-10:25 | Greeting & Introduction of IMR KINKEN at Tohoku University<br>Prof. Koki Takanashi, Director of IMR, Tohoku University  |
| 10:25-10:50 | Greeting & Introduction of Post-silicon Semiconductor Institute (PSI)<br>at KIST<br>Dr. Joonyeon Chang, Director-General of the Institute Post-Silicon<br>Semiconductor Institute of KIST                         |
| 10:50-11:15 | Dr. Mathias Kläui “Materials for spintronics – from ferromagnetic<br>oxides to graphene” (Guest speaker)<br>Institute of Physics, Johannes Gutenberg-University Mainz/Tohoku<br>University IMR visiting professor |
| 11:15-11:40 | Dr. Hi-Jung Kim “History of Materials Technology Exchange between<br>IMR and KIST”  |
| 13:00-13:25 | Dr. Eiji Saitoh “Spin current generators”   |
| 13:25-13:50 | Dr. Byoung-Chul Min “All-electrical measurement of interfacial<br>Dzyaloshinskii-Moriya interaction using collective spin-wave<br>dynamics”   |
| 13:50-14:15 | Dr. Hitoshi Miyasaka “Porous Molecular Magnets”   |
| 14:15-14:40 | Dr. Seong Keun Kim “Principle and applications of atomic layer<br>deposition for electronic devices”  |
| 14:40-15:05 | Dr. Rafael Ramos “Spin based thermoelectric generation in<br>[Fe <sub>3</sub> O <sub>4</sub> /Pt] <sub>n</sub> multilayers”   |
| 15:05-15:30 | Dr. Hyunjung Yi “Biomimetic electronic layer for wearable biomedical<br>sensors”  |
| 15:30-15:50 | break   |

- 15:50-16:15 Dr. Kentaro Nomura “Weyl semimetals for spintronics”
- 16:15-16:40 Dr. Gyung-Min Choi “Optical-helicity-driven magnetization dynamics in metallic ferromagnets”
- 16:40-17:05 Dr. Zhenchao Wen “Large current-perpendicular-to-plane giant magnetoresistance in magnetic nanojunctions using half-metallic  $\text{Co}_2\text{Fe}_{0.4}\text{Mn}_{0.6}\text{Si}$  ferromagnetic electrodes and dual Ag-Mg spacers”
- 17:05-17:30 Dr. Tae Park “Spin transport in single crystal semiconductor nanowires”
- 17:30-17:55 Dr. Oleg Tretiakov “Antiferromagnetic Skyrmions”

***October 25 (Tue)***

- 9:00-9:25 Dr. Takashi Matsuoka “Current status and future prospects of nitride semiconductors”
- 9:25-9:50 Dr. Jindong Song “MBE Growth of III-V Materials and its Applications to 2D/1D/0D Nano-structured Devices”
- 9:50-10:15 Dr. Tsutomu Nojima “Novel two dimensional quantum state in electric-field-induced superconductors”
- 10:15-10:40 Dr. Doo-Seok Jeong “Leaky integrate-and-fire neuron circuit based on floating-gate integrator”
- 10:40-11:05 Dr. Dazhi Hou “Tuneable sign change of spin Hall magnetoresistance”
- 11:05-11:30 Dr. Oukjae Lee “Enhancement of spin-orbit torque efficiency by engineering interfaces or structural phases”
- 11:30-11:55 Dr. Takeshi Seki “Spin dynamics in ordered alloy systems and its application to spintronic devices”
- 11:55-12:05 Closing remarks



(Access Map) <http://www.imr.tohoku.ac.jp/en/access.html>