

## 2nd 【ImPACT】 International Symposium on Spintronic Memory, Circuit and Storage

Date : September 30, 2016

Place : Tsukuba International Congress Center EPOCHAL TSUKUBA

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|--------------|--|---|---|
| <b>9:00</b>  | <b>Opening Remarks</b>   | ImPACT Program Manager (Tohoku University)  | Prof. Masashi SAHASHI   |
| <b>9:10</b>  | <b>Greeting</b>  | Council Member for Science, Technology and Innovation,<br>Cabinet Office, Government of Japan<br>Counselor to President of JST<br>(Former President)<br>President of AIST | Dr. Kazuo KYUMA<br>Dr. Michiharu NAKAMURA<br>Dr. Ryoji CHUBACHI |
| <b>9:30</b>  | <b>1st Topic [MRAM starts to put on the market]</b>  |   |   |
|              | Chair : Dr. Shinji YUASA / Dr. Shinobu FUJITA  |   |   |
| 9:30         | Embedded MRAM for Now and the Future: Innovating Ultra Low Energy Systems<br>Dr. Seung H. Kang, QUALCOMM, USA  |   |   |
| 10:00        | Perpendicular STT-MRAM for Embedded Applications<br>Dr. Po-Kang Wang, TDK / Headway, USA   |   |   |
| 10:30        | MRAM : Bringing Benefits to Applications Today<br>Mr. Joe. O'Hare, Everspin, USA   |   |   |
| 11:00        | pMTJ based STT-MRAM Technology and Manufacturing<br>Dr. Yiming Huai, Avalanche Technology, USA   |   |   |
| 11:30        | Near-future STT-MRAM applications from IoT to Cloud<br>and their respective memory hierarchies<br>Dr. Shinobu FUJITA , Toshiba, Japan                                    |   |   |
| 12:00        | Short summary  |   |   |
| <b>12:30</b> | <b>Lunch</b>   |   |   |
| <b>14:00</b> | <b>2nd Topic [Actual Market for New Class Non-Volatile Memories; IoT / AI / Automobile]</b>  |   |   |
|              | Chair : Prof. Hideo OHNO / Prof. Ken TAKEUCHI  |   |   |
| 14:00        | The integration of IoT and Machine Learning will bring out the Autonomous Driving<br>and trigger the restructuring of many industries.<br>Dr. Tsuguo NOBE , Intel, Japan |   |   |
| 14:30        | NanoBridge-FPGA for IoT era<br>Dr. Toshitsugu SAKAMOTO, NEC, Japan   |   |   |
| 15:00        | Storage Class Memory/NAND Flash Hybrid Storage System<br>Prof. Ken TAKEUCHI, Chuo University, Japan  |   |   |

**15:30 Coffee Break**

**16:00 3rd Topic [Next Challenge toward much higher speed and integration]**

Chair: Prof. Masashi SAHASHI / Dr. Eiichi SUZUKI

16:00 Electric-field-controlled MRAM: Device and Circuit Considerations

Prof. P. Khalili Amiri, UCLA, Inston Inc., USA

16:30 Nanoscale Two- and Three Terminal Spintronics Devices for VLSI

Prof. Hideo OHNO, Tohoku University, Japan

17:00 Emerging Three-Terminal Magnetic Memory Devices

Prof. Kyung-Jin Lee, Korea University, Korea

17:30 Voltage-induced anisotropy change for voltage-driven MRAM

Dr. Shinji YUASA, AIST, Japan

18:00 Short summary

**18:30 Discussion and Poster Session with welcome reception**

**21:00 Closing Remarks**