

August 13, 2018

Opening Address (9:20 – 9:30)

Stefan Blügel

9:30 – 10:00: Session 1 [Chaired by: Stefan Blügel (PGI-1/IAS-1, FZJ)]

Abigail Morrison, INM-6/IAS-6, Forschungszentrum Jülich

“Neuromorphic Computing: A Neuroscience Perspective”

10:00 – 10:30: Discussion 1

10:30 – 11:00: Coffee Break

11:00 – 11:30: Session 2 [chaired by: Hisazumi Akai (ISSP, Uni. of Tokyo)]

William Andrew Borders, Tohoku University

“Antiferromagnet/Ferromagnet Based Spin-Orbit Torque Devices for Hopfield Network Applications”

11:30 – 12:00: Discussion 2

12:00 – 14:00: Lunch (Seecasino)

14:00 – 14:30: Session 3 [chaired by: Marjana Ležaić (PGI-1, FZJ)]

Dirk Wouters, RWTH-Aachen University

“(ReRAM) memristive devices for neuromorphic applications”

14:30 – 15:00: Discussion 3

15:00 – 15:30: Coffee Break

August 14, 2018

9:30 – 10:00: Session 4 [chaired by: Masaaki Tanaka (CSRN, Univ. of Tokyo)]

Yasushi Hotta, Hyogo University

“Novel type of neuromorphic control system using stochastic resonance”

10:00 – 10:30: Discussion 4

10:30 – 11:00: Coffee Break

11:00 – 11:30: Session 5 [Chaired by: Yuriy Mokrousov (IAS-1, FZJ)]

Daniele Pinna (JGU University Mainz)

“Reservoir Computing with Random Skyrmion Fabrics”

11:30 – 12:00: Discussion 5

12:00 – 14:00: Lunch (Seecasino)

14:00 – 14:30: Session 6 [Chaired by: Stefan Blügel (PGI-1/IAS-1, FZJ)]

Minori Goto, Osaka University

“Diffusion of the skyrmion and its application to the Brownian computing”

14:30 – 15:00: Discussion 6

15:00 – 15:30: Coffee Break

18:00 – 21:00: Conference Dinner, Burg Obbendorf

August 15, 2018

9:30 – 10:00: Session 7 [Chaired by: Shinobu Ohya (CSRN, Univ. of Tokyo)]

Masaaki Tanaka, University of Tokyo

“Ferromagnetic semiconductors and heterostructures: Recent progress and future prospects”

10:00 – 10:30: Discussions 7

10:30 – 11:00: Coffee Break

11:00 – 11:30: Session 8 [Chaired by: William Andrew Borders (Tohoku Univ.)]

Ashim Chakravarty, Radboud University Nijmegen

“Towards Brain Inspired Self Learning Opto-Magnetic Materials”

11:30 – 12:00: Discussion 8

12:00 – 14:00 Lunch (Seecasino)

14:00 – 14:30: Session 9 [Chaired by: Tetsuya Fukushima (Osaka University)]

Hikaru Nomura, Osaka University

“Echo state network with nanomagnets”

14:30 – 15:00: Discussion 9

15:00 – 15:30: Coffee Break

15:30 – 16:00: **Summary by Discussion Leaders and Closing Remarks**

Hiroshi Katayama-Yoshida (University of Tokyo)