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<th>Time</th>
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<td>Registration open</td>
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**Instruction to Oral Presentations**

Please bring your own laptop computers. Connectors to HDMI and VGA (D-Sub 15 pins) are available.

- Plenary lecture and Plenary talk: 25 min (20 min presentation and 5 min discussion)
- Invited talk and Lecture: 20 min (15 min presentation and 5 min discussion)
- Other oral presentation: 15 min (12 min presentation and 3 min discussion)

**Instructions to Poster Presentations**

Each poster should be fit within a 120 cm TALL by 90 cm WIDE board. Push pins and magnets are available, which are supplied by the workshop organizer.

All post must be set up no later than 12:30 on Nov. 5th Monday, and removed between 12:30 and 16:00PM on Nov. 6th Tuesday.

**Poster award will be announced at the Closing Session on Nov. 6th, Tuesday.**

**Registration**

We only accept On-site registration. Registration fee must be paid by cash (Japanese Yen) at the conference desk.

Registration Fee includes technical sessions, coffee breaks, Abstract booklet, and Banquet.

For international participants: it may be good to exchange to Japanese Yen at the airport.

- Full Conference Participant: ¥20,000
- Student Participant: ¥15,000

**Access to “Education and Culture Hall” of Yokohama National University and accommodation**

1. **Access to the venue: “Education and Culture Hall” (S1-2) of Yokohama National University**

The venue is close from the Main Entrance of Yokohama National University.

http://www.ynu.ac.jp/english/access/map_campus.html

You may walk from Mitsuzawa-kamicho Station of Yokohama Municipal Subway for 15 min.

http://www.ynu.ac.jp/english/access/train_front.html

2. **Accommodation**

It would be convenient if you book your hotel at area of: Yokohama Station, Kannai Station, or Sakuragicho Station. You may reach to Mitsuzawa-kamicho Station from these stations by Yokohama Municipal Subway for 5-10 min.

Staying at Shi-Yokohama Station is NOT nice for banquet and other activities.

**Conference Proceedings**

The authors are recommended to submit their manuscripts to *Journal of the Magnetics Society of Japan* (JMSJ), a peer-review online journal with open access. Payment of publication charge is necessary for accepted papers.


**WiFi**

eduroam is available in the campus Yokohama National University.
November 5th, Monday

9:45-10:30  Registration
10:30-10:35  Opening Address

**Plenary Session and Session 1: Particle Imaging**  Chair: S. Tanaka

10:35-11:00  PL-1  **Plenary Lecture**  
Parameters Affecting Signal Strength and Spatial Resolution in Magnetic Particle Imaging  
Keiji Enpuku, Kyushu University, Japan

11:00-11:25  PT-1  **Plenary Talk**  
Magnetic Particles' Susceptibility Imaging  
Shiqiang Pi, Wenzhong Liu, Shuai Wang, Tao Jiang, Huazhong University of Science and Technology, China

11:25-11:45  I1-1  **Invited Talk**  
Novel spin dynamics of magnetic nanoparticles for bio-imaging and hyperthermia applications  
Sang-Koog Kim, Seoul National University, Korea

11:45-12:00  O1-1  **Invited Talk**  
Improvement of Spatial Resolution in Magnetic Particle Imaging Using Fractionated Magnetic Particles  
T. Yoshida, T. Nakamura, O. Higashi, and K. Enpuku, Kyushu University, Japan

12:00-13:00  Lunch

**Session 2: Therapy**  Chair: W. Liu

13:00-13:20  L2-1  **Lecture**  
Principles and applications of transcranial magnetic stimulation  
Masaki Sekino, The University of Tokyo, Japan

13:20-13:40  I2-1  **Invited Talk**  
Assembled Magnetic Nanomaterials for Mechanotransduction of Cancer Treatment  
Yu Cheng, Tongji University, China

13:40-14:00  I2-2  **Invited Talk**  
Magnetic ablation  
W. C. Wei¹, M.H. Chiang², S.H. Liao¹, Y. B. Liu¹, Kuo-Ti Peng³, J. J. Chieh¹  
¹National Taiwan Normal University, Taiwan, ²National Taiwan University, Taiwan, ³National Taiwan University Hospital and National Taiwan University, Taiwan, ⁴Chang Gung Memorial Hospital, Taiwan, ⁵Chang-Gung University, Taiwan

14:00-14:20  I2-3  **Invited Talk**  
Multifunctional Magnetic Nanocomposite Biomaterials for Cancer Multimodality Treatment and Image  
Wang Dan¹, Xie Wensheng¹, Liaw Bor-shuang¹, Gao Fei², Guo Zhenhu¹, Zhao Lingyun¹  
¹Tsinghua University, China, ²Northwest University, China

14:20-14:30  Coffee Break

14:30-16:30  **Poster Presentation**  (see list on the next page)  Chair: T. Sasayama and S. Ota

17:00-19:00  Banquet
**Poster Presentations**  Chair: T. Sasayama and S. Ota

**P-1** Three Dimensional Imaging of Magnetic Nanoparticles Utilizing Field Free Line and Multiple Pickup Coils  
S. Hamanaga, T. Sasayama, T. Yoshida and K. Enpuku, Kyushu University, Japan  

**P-2** High speed 2D-MPI by AC Scanning Field  
K. Nakashima, Y. Sanada and S. Tanaka, Toyohashi University of Technology, Japan  

**P-3** Evaluation of Third Harmonic Signals from Mobile and Immobilized Magnetic Nanoparticles for MPI  
Takuru Nakamura, Oji Higashi, Takashi Yoshida, and Keiji Enpuku, Kyushu University, Japan  

**P-4** Dependence of harmonic signal intensity on particle size in magnetic particle imaging  
Yu Ichikawa, Tsutomu Yamada, Satoshi Ota, Yasushi Takemura, Yokohama National University, Japan  

**P-5** A Magnetic Nanoparticle Concentration Measurement based on NMR Para-Shift  
Silin Guo, Wenzhong Liu, Huazhong University of Science and Technology, China  

**P-6** Peak to Peak Voltage Detector Type MI Gradiometer for Magnetoencephalogram Measurement  
Jiaju Ma, and Tsuyoshi Uchiyama, Nagoya University, Japan  

**P-7** Wash Free Detection of Biological Target Utilizing Magnetic Markers and MR Sensor  
K. Irie, K. Akiyoshi, T. Yoshida, T. Sasayama, and K. Enpuku, Kyushu University, Japan  

**P-8** Low Temperature Measurement of Magnetic Nanoparticles  
Shuai Wang, Wenzhong Liu, Silin Guo, Huazhong University of Science and Technology, China  

**P-9** Frequency dependence of wireless power transmission using Wiegand wire for implantable medical devices  
Katsuki Takahashi, Tsutomu Yamada, Yasushi Takemura, Yokohama National University, Japan  

**P-10** Co-Zn ferrite nanoparticles modified with PEG and magnetic hyperthermia effect  
Y. Takahashia, A. Oshimaa, K. Fujiwaraa, T. Ideb, K. Kanda, T. Hashimotob, D. Aiharam, 
Y.Sahashia, Y.Itoa, Y. Ichyanagib, aYokohama National University, Japan, bOsaka University, Japan  

**P-11** Development of Wireless Temperature and Position Monitoring for Magnetic Hyperthermia using Pickup Coils  
Loi Tonthat, Yoshiyuki Yamamoto, Fumitaka Aki, Hajime Saito, and Kazutaka Mitobe,  
1Akita University, Japan, 2Iwate Medical University, Japan  

**P-12** High intrinsic loss power of multi-core magnetic nanoparticles for hyperthermia  
Kizuku Nishimoto, Suko Bagus Trisnanto, Tsutomu Yamada, Satoshi Ota, Yasushi Takemura, Yokohama National University, Japan  

**P-13** Specific loss power of biocompatible magnetic nanoparticles for hyperthermia  
Guannan Shi, Suko Bagus Trisnanto, Tsutomu Yamada, Satoshi Ota, Yasushi Takemura, Yokohama National University, Japan  

**P-14** Analysis of microRNA expression profiles in cancer cells exposed to iron oxide nanoparticles  
Sanai Takahashi, Shungo Saito, Kazutoshi Iijima, Hiroshi Itagaki, Masatoshi Watanabe*, 
Yokohama National University, Japan, *Mie University, Japan
November 6th, Tuesday

9:30    Registration

Session 3: Sensing 1  Chair: K. Enpuku
9:45-10:05  I3-1  Invited Talk
The in-situ Detection of Magnetic Nanoparticles for Cell Sorting Device Using Magnetic Susceptibility Reduction
Mean-Jue Tung, Industrial Technology Research Institute, Taiwan

10:05-10:25  I3-2  Invited Talk
A SQUID Biomagnetic Measurement System and Its Clinical Applications
Y. Adachi1 and S. Kawabata2, 1Kanazawa Institute of Technology, Japan, 2Tokyo Medical and Dental University, Japan

10:25-10:40  O3-1  Flow Measurement of Magnetic Nanoparticles by HTS Three Channel-SQUID Array
Saburo Tanaka, Moriki Kabasawa, Ryugo Ito, Toyohashi University of Technology, Japan

10:40-10:55  O3-2  Quantification of SPIONs by view line sequence in MRI
Shuang Liu1, Wenci Qiu1, Gabriel Maggiora Della2, Akihiro Kuwahata1, Moriaki Kusakabe1, Pablo Irrazaval2, Masaki Sekino1
1The University of Tokyo, Japan, 2Pontifical Catholic University of Chile, Chile

10:55-11:10  Special Session
11:10-12:00  Group photo, Poster Viewing with Coffee Break
12:00-12:45  Lunch

Session 4: Sensing 2  Chair: T. Uchiyama and S. Yabukami
12:45-13:05  L4-1  Lecture
High-sensitive magnetic sensor for biomedical applications
Tusyoshi Uchiyama, Nagoya University, Japan

13:05-13:25  I4-1  Invited Talk
All-in-one Spin Hall Magnetic Sensor
Yihong Wu, Yanjun Xu, Yumeng Yang, Mengzhen Zhang, and Ziyi Luo,
National University of Singapore, Singapore

13:25-13:45  I4-2  Invited Talk
Biomedical applications of magnetic particles: From immunoassay to imaging
Shu-Hsien Liao, Yuan-Fu Tong, Yun-Hsuan Chen, Chia-Yu Wu, Mu-Hsiu Tsai,
Chun-Ming Wang, Yu-Kai Su, Heng-er Horng, Hong-Chang Yang
National Taiwan Normal University, Taiwan

13:45-14:00  O4-1  Evaluation of bacteria using switching magnetic field
S. Yabukami1,2, H. Onodera2, Y. Sato2, K. Miyachi2, G. Endo2, M. Furuya1, H. Kanetaka1, Y. Miura1, H. Takahashi3, T. Kodama3, 1Tohoku University, Japan,
2Tohoku Gakuin University, Japan, 3JNS Co., Ltd., Japan

14:00-14:15  O4-2  Effect of Viscosity on Harmonic Signals of Magnetic Nanoparticles for Temperature Measurement
A. L. Elrefai, T. Sasayama, T. Yoshida and K. Enpuku, Kyushu University, Japan

14:15-14:30  Coffee Break
Session 5: Hyperthermia  Chair: T. Yoshida

14:30-14:50  IL-1  Invited Lecture
Hyperthermia in cancer therapy: current status and future prospects
Masatoshi Watanabe, Mie University, Japan

14:50-15:10  I5-1  Invited Talk
Magnetic Delivery Technology for the Application of Magnetotactic Bacteria on Hyperthermia
Changyou Chen¹,²,³, Chuanfang Chen¹,³, Linjie Chen¹,²,³, Pingping Wang¹,³,
Long-Fei Wu¹,⁴, Tao Song¹,²,³, ¹Institute of Electrical Engineering, CAS, China,
²Graduate University of Chinese Academy of Sciences, China, ³France-China
Bio-Mineralization and Nano-Structures Laboratory, China, ⁴Aix Marseille
University, France

15:10-15:30  I5-2  Invited Talk
Large magnetic Fe₃O₄ nanoparticles and their applications
Jun Ding, National University of Singapore, Singapore

15:30-15:45  O5-1  Analysis on magnetization dynamics of magnetic nanoparticles for hyperthermia
Satoshi Ota¹ and Yasushi Takeura², ¹Shizuoka University, Japan, ²Yokohama
National University, Japan

15:45-16:00  Closing and Poster Award Ceremony