

# Program

## Friday, December 15<sup>th</sup>


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08:50 – **Opening Ceremony**  
09:00  **Chi-Chang Chao Auditorium**

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## Friday, December 15<sup>th</sup>

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09:00 – **Keynote Speech I**  
09:40  **Chi-Chang Chao Auditorium**

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**Chair:** Prof. **Ching-Yao Chen**  
– National Chiao Tung University

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Magnetic-assisted rapid aptamer selection (MARAS) & new biomedical application horizon of aptamer

**Speaker:** Prof. **Chin-Yih Hong** – National Chung Hsing University

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## Friday, December 15<sup>th</sup>

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09:40 – **Invited Speeches I**  
10:55  **Chi-Chang Chao Auditorium**

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**Chair:** Prof. **Chuan Chieh Liao**  
– Chung Yuan Christian University

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*09:40 – 10:05*

Introduction of market applications with ferrofluid by now and toward future

Yasutake Hirota

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*10:05 – 10:30*

Dynamics of ferrofluid drops in a rotating field

Ching-Yao Chen, W.-Y. Lo, and J.-Y. Lu

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*10:30 – 10:55*

Bubble behavior in magnetic fluid and its applications

Haruhiko Yamasaki and Hiroshi Yamaguchi

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## Friday, December 15<sup>th</sup>

11:05 – **Invited Speeches II**

12:20  **Chi-Chang Chao Auditorium**

**Chair: Dr. Hiroaki Mamiya**

– National Institute of Materials Science

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*11:05 – 11:30*

Magnetic particle imaging by using array gradient pick-up coils

Shu-Hsien Liao, Jen-Jie Chieh, Heng-Er Horng, Hong-Chang Yang, and Saburo Tanaka

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*11:30 – 11:55*

Application of  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub>@Au core-shell magneto-plasmonic nanoparticles to the detection of Alzheimer's disease

Kuen-Lin Chen, Jian-Ming Chen, Yi-Hsin Lin, Lin-Wei Chou, and Chiu-Hsien Wu

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*11:55 – 12:20*

Precision processing utilizing magnetic compound fluid and evaluation of magnetic cluster behavior during processing

Hisashi Yamamoto, Hitoshi Nishida, Noboru Momose, Shinji Ikeda, and Yasushi Ido

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## Friday, December 15<sup>th</sup>

12:50 – **Oral Presentation**

13:35  **Chi-Chang Chao Auditorium**

**Chair: Prof. Kuen-Lin Chen**

– National Chung Hsing University

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*12:50 – 13:05*

Synthesis and magnetic heating of citrate coated magnetic fluids

Jing-Fung Lin, Chun-Chin Tsai, and Meng-Zhe Lee

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*13:05 – 13:20*

Cytotoxicity evaluation of magnetic fluid based on cell proliferations

Kazumitsu Sekine and Yoshinori Mitamura

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*13:20 – 13:35*

Cheerios effect controlled by magnetowetting

Yu-Chin Chien and Huei Chu Weng

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## Friday, December 15<sup>th</sup>

12:50 – **Poster Presentation**

13:50  **DAA Building – 1F Corridor**

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*TJ-ICMF2017-3-41*

Investigation of Steady-State Rheological Properties and Thermal Conductivity in Magnetic Suspensions  
Dispersing nm- and/or  $\mu\text{m}$ -size Magnetic Particles  
Syuhei Kondoh, Yuhiro Iwamoto, Yasushi Ido, Hisashi Yamamoto, Hitoshi Nishida, Haruhiko Yamasaki, and  
Hiroshi Yamaguchi

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*TJ-ICMF2017-4-38*

Numerical convection of viscoelastic magnetic flows past a backward facing step channel  
Cheng-Hsing Hsu and Shu-Yu Hu

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*TJ-ICMF2017-4-39*

Study of a ferrofluid lubricated hydrodynamic journal bearing system by the magnetic field with eight magnets  
Liao-Yong Lou, Yi-Hua Fan, Yuan Kang, Ming Chang and Ting-Yu Chen

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*TJ-ICMF2017-6-32*

Application of Ag/Fe<sub>3</sub>O<sub>4</sub> nanoparticles in water purification  
Ming Chang, Wei-Siou Lin, and Weihao Xiao //Presenter: Mr. Yi-Hsin Chiu//

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*TJ-ICMF2017-7-42*

Kinetic energy harvesting using permanent magnet elastomer with anisotropic structure  
Junya Takeuchi, Keisuke Sato, Yuhiro Iwamoto, Yasushi Ido, Tomoe Deguchi, Yasuhisa Fugii, Haruhiko  
Yamasaki, and Hiroshi Yamaguchi

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*TJ-ICMF2017-7-50*

Hyperthermia by radio frequency ablation and nanoparticles  
Y. P. Chiu, Jen-Jie Chieh, Kai-Wen Huang, Shu Hsien Liao, and Hengng-Er Horng //Presenter: Ms. Chia Yen Lu//

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## Friday, December 15<sup>th</sup>

13:50 – **Keynote Speech II**

14:30  **Chi-Chang Chao Auditorium**

**Chair:** Prof. **Yasushi Ido**  
– Nagoya Institute of Technology

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Artificial hearts met magnetic fluids: Applications of magnetic fluids to artificial circulation

**Speaker:** Prof. Yoshinori Mitamura – Hokkaido University

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## Friday, December 15<sup>th</sup>

14:30 – **Invited Speeches III**

16:10  **Chi-Chang Chao Auditorium**

**Chair:** Prof. **Yuhiro Iwamoto**

– Nagoya Institute of Technology

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14:30 – 14:55

Magnetic controllable fluid flow and heat transfer problems in continuum mechanics at the micro/nanoscale

Huei Chu Weng

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14:55 – 15:20

Magnetic field effect on heat transfer transitions of natural convection flows in a differentially heated square enclosure filled with nanofluids

Chuan Chieh Liao

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15:20 – 15:45

Electrorheological suspension flows with internal microparticle electrorotation: A parallel study to ferrofluid spin-up flows

Hsin-Fu Huang

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15:45 – 16:10

Application of forced Rayleigh scattering method to time series analysis of thermophysical property of magnetic fluid after applying magnetic field

Masaaki Motozawa, Hikari Ozaki, Masahiro Motosuke, and Mitsuhiro Fukuta

## Friday, December 15<sup>th</sup>

16:20 – **Invited Speeches IV**

18:00  **Chi-Chang Chao Auditorium**

**Chair:** Prof. **Huei Chu Weng**

– Chung Yuan Christian University

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16:20 – 16:45

Superspin orderings in magnetic nanoparticle assemblies

Hiroaki Mamiya

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16:45 – 17:10

Fundamental characteristics of ionic liquid electrospray and its application to energy and environmental technologies

Hidemasa Takana, Koyo Saegusa, and Kazuki Yamamoto

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17:10 –17:35

Fundamental study on permanent magnet elastomer and its application for kinetic energy harvesting

Yuhiro Iwamoto, Junya Takeuchi, Keisuke Sato, Yasushi Ido, Tomoe Deguchi, Yasuhisa Fujii, Haruhiko Yamasaki, and Hiroshi Yamaguchi

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17:35 –18:00

Non-invasive and fast imaging tumors by SQUID biosusceptometry and magnetic nanoparticles

Jen-Jie Chieh, Wen-Chun Wei, Kai-Wen Huang, Chih-Kuang Yeh, Shu Hsien Liao, Hong-Chang Yang, and Heng-Er Horng

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## Saturday, December 16<sup>th</sup>

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08:30 –

**Concluding Remarks**

08:40

 [Shangri-La's Far Eastern Plaza Hotel](#)

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