



# The 1st Workshop on Active Matter for Soft Robotics

March 12 Tue 2019

Please register in advance for participation Registration form is available from the following site or QR code



https://www.waseda.jp/inst/sgu/news-en/2019/02/28/4871/



Conference Room No.2, 55N Building, Nishi-Waseda Campus, Waseda University

# [ Host Organization ]

The Unit for Energy and Nanomaterials, Top Global University Project, Waseda University

## [ Co-host Organization ]

The Unit for Frontier of Embodiment Informatics: ICT and Robotics, Top Global University Project, Waseda University Leading Graduate Program in Science and Engineering: Energy · Next, Waseda University

Graduate Program for Embodiment Informatics: System Next, Waseda University

Research Project on the Energy · Next, Waseda Research Institute for Science and Engineering, Waseda University

Research Project on the Energy and Nanomaterials, Waseda Research Institute for Science and Engineering, Waseda University

Research Organization for Nano & Life Innovation, Waseda University

Global Biomedical Green Science Institute, Organization for Regional and Inter-regional Studies, Waseda University

# **Program**

# [ $Session\ I$ ] Chairperson: Prof. Toru Asahi

(Research Project Leader of the Energy · Next and Energy and Nanomaterials/Program Coordinator of Leading Graduate Program in Science and Engineering, Waseda Univ.)

10:00-10:05	Opening Address	Prof. Hideko Koshima (Research Organization for Nano & Life Innovation, Waseda Univ.)
10:05-10:15	"Introduction of TGU Project and the Unit for Energy and Nanomaterials"	Prof. Takayuki Homma (Dean of Academic Affairs Division/Unit Leader of Energy and Nanomaterials, TGU Program, Waseda Univ.)
10:15-10:55	Invited Lecture "Tunable Stiffness Mechanisms and Swelling Soft Actuator in Soft Microrobotics"	Prof. Pierre Lambert (TIPs, Université libre de Bruxelles)
10:55-11:25	"A Shape-memory Alloy Wire and Its Physical Properties as Soft Actuators and Sensors"	Prof. Hideyuki Sawada (Dept. of Appl. Phys., Waseda Univ.)
11:25-12:05	Invited Lecture "Hierarchical Chemo-Mechanical Encoding of Multi-Responsive Hydrogel Actuators via 3D printing"	Prof. Jean-Marie Raquez (Center for Innovation and Research in Materials and Polymers, Université de Mons)
12:05-12:45	Special Lecture "Recent and Future Al Engineering and Its Applications to Robotics"	Prof. Tetsuya Ogata (Associate Dean of Research Promotion Division / Dept. of Intermedia Art & Sci., Waseda Univ.)
12:45-14:00	Lunch Break	

# [ Session II ] Chairperson: Prof. Pierre Lambert (Université libre de Bruxelles)

14:00-14:30	"Design of Photoresponsive Siloxane-based Hybrid Nanomaterials"	Prof. Atsushi Shimojima (Dept. of Appl. Chem., Waseda Univ.)
14:30-15:00	"Self-sustained Motility of BZ Gels"	Assoc. Prof. Shingo Maeda (Dept. of Eng. Sci. and Mechan., Shibaura Inst. of Tech.)
15:00-15:30	"Printed Nanofilms for Bio-integrated System"	Assoc. Prof. Toshinori Fujie (Sch. of Life Sci. Tech., Tokyo Tech.)
15:30-16:00	"Paper Mechatronics: Activating Papers by Printing Components"	Assist. Prof. Hiroki Shigemune (Dept. of App. Phys., Waseda Univ.)
16:00-16:20	Break	

### [ Session III ] Chairperson: Prof. Hideyuki Sawada (Waseda Uinv.)

16:20-16:35	"Mechanically Responsive Crystals induced by Light and Heat"	Mr. Takuya Taniguchi (Dept. of Advanced Sci. and Eng., Waseda Univ.)
16:35-16:50	"An Information Display on Face Using Micro-vibration Patterns Generated by SMA Wires"	Mr. Chunhao Song (Dept. of Appl. Phys., Waseda Univ.)
16:50-17:05	"Thermal Phase Transition and Mechanical Motion of a Photo-chromic Salicylideneaniline Crystal"	Mr. Yuki Hagiwara (Dept. of Life Sci. and Medical Biosci., Waseda Univ.)
17:05-17:20	"Deformable and Soft Motor"	Mr. Ayato Minaminosono (Dept. of Eng. Sci. and Mechan., Shibaura Inst. of Tech.)
17:20-17:35	"Design for Applying Soft Materials to Mechanical Systems"	Mr. Shota Miyake (Dept. of Modern Mechan. Eng., Waseda Univ.)
17:35-18:35	Networking with Poster Viewing	
18:35-18:40	Closing Address	Prof. Shigeki Sugano (Dean of Faculty of Creative Sci. & Eng./Unit Leader of Frontier of Embodiment Informatics, TGU Program/Program Coordinator of Graduate Program for Embodiment Informatics, Waseda Univ.)