

3D Exchange **L a b Symposium** 21-23 September 2016

Domus Comeliana - Pisa (Italy)

**Interaction of Nano-Biotechnology,
Chemical and Medical Biology and Robotics**

Partners

Waseda University

Universität Bonn

**Istituto Italiano di
Tecnologia**

**National University
of Singapore**

**Michael Hoch
Shuji Hashimoto
Atsuo Takanishi
Shinji Takeoka
Paolo Dario**

Keynote speakers



Registration is free



DAY 1 - 21 September 2016

9:00	Registration	
9:20	Opening	Barbara Mazzolai (IIT-CMBR)
	<i>Keynote Session</i>	<i>Chair: Barbara Mazzolai</i>
9:30	Keynote speech 1	Shuji Hashimoto (Vice Director of Waseda University) <i>"Waseda Goes Global - Education and Research Driven by Brain Circulation"</i>
10:00	Keynote speech 2	Shinji Takeoka (Waseda) <i>"Ratiometric fluorescent temperature sensing for mitochondria and muscle"</i>
10:30	Coffee Break	
	<i>Robotics Session</i>	<i>Chair: Atsuo Takanishi</i>
10:50	Robotics 1	Edoardo Sinibaldi (IIT-CMBR) <i>"Biorobotics and modeling for the central nervous system"</i>
11:10	Robotics 2	Lucia Beccai (IIT-CMBR) <i>"Soft mechanosensing for soft robotics and wearable systems"</i>
11:30	Robotics 3	Hiroyuki Ishii (Waseda) <i>"Robotic applications to enhance safety of individuals"</i>
11:50	Robotics 4	Claudio Semini (IIT-ADVR) - <i>"Animal-inspired versatile legged robots: An introduction to IIT's quadruped robots"</i>
12:10	Robotics 5	Giorgio Metta (IIT-iCub) <i>"From iCub to R1: your personal humanoid"</i>
12:30	Robotics 6	Barbara Mazzolai (IIT-CMBR) <i>"Plant-inspired growing robots"</i>
12:50	Lunch	
	<i>Cell Session</i>	<i>Chair: Michael Hoch</i>
14:40	Cell 1	Madoka Suzuki (WABIOS) <i>"In vivo microthermography and the microstructures of insect flight muscles "</i>
15:00	Cell 2	Waldemar Kolanus (Bonn) <i>"Temporal and spatial sensing in leukocyte migration"</i>
15:20	Cell 3	Sung-Jin Park (A*STAR) <i>"Development of in vivo imaging probes by diversity oriented fluorescent library"</i>
15:40	Cell 4	Masamitsu Sato (Waseda) <i>"How microtubule cytoskeleton is reorganized during the cell cycle"</i>
16:00	Coffee Break	
	<i>Cell Session</i>	<i>Chair: Sung-Jin Park</i>
16:20	Cell 5	Naoya Takeda (Waseda) - <i>"High-performance microfiber scaffolds for cellular and tissue engineering applications"</i>
16:40	Cell 6	Satoshi Arai (WABIOS) - <i>"RGB-color intensimetric indicators to visualize spatiotemporal dynamics of ATP in living organisms"</i>
	<i>Teaser Session</i>	<i>Chair: Francesco Greco</i>
17:00	Teaser Posters Part I (5 min x 16)	
18:20	Poster Session I + Aperitif	
19:30	Dinner in loco	

POSTER SESSION DAY 1 - 21 September 2016

- Yuki Shimizu (Waseda University, Ohshima lab): *Regenerative neurogenesis from radial glia after the stab injury in adult zebrafish optic tectum*
- Koshiro Hashimoto (Waseda University, Goda lab): *Mechanism of body size control via Sima/HIF1 α signaling in *Drosophila**
- Miyabi Fukuzawa (Waseda University, Shibata lab): *Ingestion timing effect of indigestible dextrin and green tee epigallocatechin gallate on blood glucose in mice*
- Yutaro Nishimura (Waseda University, Shibata lab): *Mouse model of Social jetlag syndrome in circadian rhythm*
- Yuko Nirei (Waseda University, Inoue lab): *Protein interaction observed by fluorescence cross-correlation spectroscopy*
- Chihiro Adachi (Waseda University, Inoue lab): *Calcium dynamics induced by Sonic Hedgehog*
- Yanyan Hou (Waseda University, WABIOS) *Subcellular pH mapping during heat production in brown adipocytes*
- Lucía Torres (University of Bonn, Kolanus Lab): *The Trim71/let-7 axis in the control of cell proliferation and differentiation*
- Felix Eppler (University of Bonn, Kolanus Lab): *Dynamin2 regulates Rap1-dependent lymphocyte adhesion*
- Dr. Giada G. Genchi (IIT-CMBR): *Cerium oxide nanoparticles as smart catalysts in biological environments*
- Dr. Eugenio Redolfi Riva (IIT-CMBR): *Plasmonic/magnetic nano-assembly as multifunctional vector for nanomedicine*
- Dr. Francesca Tramacere (IIT-CMBR): *Innovative suction cups inspired by anatomy, morphology and mechanics of the octopus suckers*
- Dr. Andrea Degl'Innocenti: *Chlorophyll Derivatives Enhance Planarian Vision*
- Dr. Massimo Totaro (IIT-CMBR): *Integrating mechanical sensing in soft robots*
- Dr. Silvia Taccola (IIT-CMBR) : *Soft multifunctional conducting polymer actuators driven by humidity*
- Dr. Ali Sadeghi (IIT-CMBR): *Bio Inspired Manufacturing of Soft Robots and Growing Robots*

DAY 2 - 22 September 2016

	<i>Keynote Session II</i>	<i>Chair: Shuji Hashimoto</i>
9:30	Keynote speech 4	Paolo Dario (SSSA) <i>"Capsule Endoscopy: from Science Fiction to Clinics"</i>
10:00	Keynote speech 5	Atsuo Takanishi (Waseda) <i>"Humanoid Robotics Researches and Its Applications"</i>
10:30	Keynote speech 6	Michael Hoch (Bonn) - <i>"Ohgata, the single Drosophila ortholog of human Cereblon, regulates insulin signaling-dependent organismic growth"</i>
11:00	Coffee Break	
	<i>Robotics Session II</i>	<i>Chair: Atsuo Takanishi</i>
11:20	Robotics 7	Cecilia Laschi (SSSA) <i>"Soft Robotics: multidisciplinary challenges and robotic applications"</i>
	<i>Neuro Session</i>	<i>Chair: Haruko Takeyama</i>
11:40	Neuro 1	Takafumi Inoue (Waseda) <i>"Molecular dynamics revealed by fluorescence correlation spectroscopy"</i>
12:00	Neuro 2	Toshio Ohshima (Waseda) <i>"CRMPs in neural development and disease"</i>
	<i>Bio-Med Session</i>	<i>Chair: Takafumi Inoue</i>
12:20	Bio-Med 1	Haruko Takeyama (Waseda) - <i>"Analysis of marine invertebrate holobionts and supporting single-cell analysis technologies "</i>
12:40	Bio-Med 2	Shigenobu Shibata (Waseda) <i>"Chrono-biological research on sarcopenia and osteoporosis model mouse"</i>
13:00	Lunch	
	<i>Mat-Chem Session</i>	<i>Chair: Shinji Takeoka</i>
14:40	Mat-Chem 1	Hiroyuki Nishide (Waseda) <i>"Organic-based Flexible Batteries"</i>
15:00	Mat-Chem 2	Keitaru Sou (Wabios) <i>"Thermosensitive liposomes for controlled release with near-infrared light"</i>
15:20	Mat-Chem 3	Virgilio Mattoli (IIT- CMBR) <i>"Ultra-conformable systems & bio-mimetic nano-structured surfaces"</i>
15:40	Mat-Chem 4	Toru Asahi (Waseda) - <i>"Chiroptical Study of Photomechanical Salicyli-denephenylethylamine Crystals Using High-Accuracy Universal Polarimeter"</i>
16:00	Coffee Break	
	<i>Nano-Int Session</i>	<i>Chair: Toru Asahi</i>
16:20	Nano-Int 1	Francesco Greco (IIT-CMBR & Waseda) <i>"Conducting Polymer for Conformable Electronics & micro-wrinkled surfaces"</i>
16:40	Nano-Int 2	Gianni Ciofani (IIT-CMBR & PoliTO) <i>"Smart Bio-Nanomaterials "</i>
17:00	Nano-Int 3	Toshinori Fujie (Waseda) <i>"Ultra-conformable polymer nanosheets for advancing living electronics"</i>
17:20	Nano-Int 4	Hirota Sato (NTU) <i>"Biological Machine: remote radio control of insect flight and walking"</i>
	<i>Teaser Session II</i>	<i>Chair: Virgilio Mattoli</i>
17:40	Teaser Posters Part II (5 min x 8)	
18:20	Poster Session II	
19:20	End of conference	
20:00	Dinner - by Invitation Only	

POSTER SESSION DAY 2 - 22 September 2016

- Kento Yamagishi (Waseda University, Takeoka lab) : *Inkjet-printing-based fully-integrated nanosheet multielectrodes for skin-contact applications*
- Marin Okamoto (Waseda University, Takeoka lab): *Ultra-conformable electronic circuits laden elastomeric nanosheets*
- Arihiro Hasebe (Waseda University, Takeoka lab): *Development of bio-hybrid actuators consisting of microgrooved thin films and skeletal muscle cells*
- Takuya Taniguchi (Waseda University, Asahi Lab): *Photomechanical motion of azobenzene crystals*
- Dr. Omar Tricinci (IIT-CMBR): *Biomimetic functional surface via direct laser lithography*
- Dr. Sudha(IIT-CMBR): *Tattoo multi-electrode array for bioelectric signals recording on skin*
- Attilio Marino (IIT-CMBR): *Nanoparticles and nanostructured surfaces as smart solutions for the modulation of cellular functions*
- Dr. Irene Bernardeschi (IIT-CMBR): *Three-Dimensional Soft Material Micropatterning via Direct Laser Lithography*

DAY 3 - 23 September 2016

9:30	Bus to Pontedera
10:00	Lab Visit - Pontedera
13:00	Lunch
14:30	Bus to Pisa
15:30	Guided Tour to Pisa
17:30	End of Tour

VENUE: DOMUS COMELIANA



Address: Via Cardinale P. Maffi, 48 PISA (ITALY)

Website: <http://www.domuscomeliana.com/>

Location:



How to reach

Domus Comeliana is located just next to the Leaning Tower of Pisa.

By train:

Directions, Timetables, Tickets, Info on **Italian Railways FS Trenitalia** - <http://www.trenitalia.com>

From Pisa Central Railway Station

Bus: **LAM ROSSA** to Tower stop (Piazza Manin); **Line N. 4** to the stop of Largo Parlascio 1; **Line N. 21** – (night) to Tower stop (Piazza Manin).

Walk: Leaving the main door of the station, head towards Piazza Vittorio Emanuele, placed in front, and then in Via Crispi, proceeding straight to the Ponte Solferino. After crossing the bridge continue along Via Roma up to the “Piazza dei Miracoli” and the Leaning Tower. Time: about 25 minutes.

From Pisa San Rossore Railway Station

Walk: Exit through the underpass Piazza Fancelli. Continue straight until you reach Via Andrea Pisano. Turn left and continue straight until you come to the Square of Miracles and the Leaning Tower. Time: 5 minutes.

By plane:

Arriving at Pisa G. Galilei Airport (<http://www.pisa-airport.com/>)

Pisa airport terminal is linked to Pisa Central Railway Station (Pisa Centrale, 15 minutes) and to the city center by Bus. Another option is to reach Pisa Centrale or the Leaning Tower by taxi.

Bus: **LAM ROSSA** to the Tower stop (Piazza Manin); **Line N. 21** – (night) to Tower stop (Piazza Manin).

Arriving at Florence A. Vespucci Airport (<http://www.aeroporto.firenze.it>)

Take a taxi (20 to 30 min., 20 €) or bus (every 30 min., 20-min. trip, 4,50 €) to Florence main railway station, named Firenze SMN.

Then take a train bound to Pisa or Livorno, reaching Pisa Centrale in about 1h.

See previous section “By train”.

Reaching Pisa from Florence airport by taxi is about 1h and 120 €.

By car:

- Motorway A12 - Genova / Rosignano - exit Pisa Nord
 - Motorway A12 - Rosignano / Genova – exit Pisa Centro
 - Motorway A11 - Florence / Pisa - exit Pisa Nord
 - Freeway SGC FI-PI-LI from Florence to Pisa – exit Pisa Aeroporto
- follow the directions towards “Center”, “Piazza dei Miracoli”, “Torre” and nearby parking areas.

ZTL

The Domus Comeliana is located within the ZTL North (Limited Traffic Zone). The hourly or daily access permit can be purchased at the Pisamo (Via Cesare Battisti, 71) or online at www.pisamo.it

PARKING

Several parking lots are available, outside the ZTL:

Pay parking Via Piave , 200 m from the Domus Comeliana

Free Parking exchanger Via Pietrasantina - 1.2 km from Domus (available shuttle TORRE)

Free Parking controviale Via U. Rindi - 600 m from the Domus

Free Parking controviale Via Lucchese - 800 meters from the Domus

ACCOMODATION: HOTELS NEARBY

A list of hotels within walking distance from the Symposium venue is provided.

- **Hotel Relais dell’Orologio** (★★★★★) – Via della Faggiola, 12 www.hotelrelaisorologio.com
- **Grand Hotel Duomo Pisa** (★★★★) – Via S. Maria, 94 www.grandhotelduomo.it
- **Hotel Novecento Pisa** (★★★) – Via Roma, 37 www.hotelnovecento.pisa.it
- **Hotel Di Stefano** (★★★) – Via Santa Apollonia, 35 www.hoteldistefano.it
- **Hotel Francesco** (★★★) – Via S. Maria, 129 www.hotelfrancescopisa.com
- **Hotel Villa Kinzica** (★★★) – Piazza dell’Arcivescovado, 2 www.hotelvillakinzica.com
- **7 Rooms B&B** – Via S. Maria, 83 www.7roomspisa.it