



The 7th Korean-Swiss Science Day



# Assistive Technologies for Ageing Society

15 November 2018, Zurich, Switzerland  
Careum Auditorium


 Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra  
Embassy of Switzerland in the Republic of Korea



Image credit: ARMin Multiplayer, ETH Zürich

## The 7<sup>th</sup> Korean-Swiss Science Day

# Assistive Technologies for Ageing Society

## Concept

The Korean-Swiss Science Days are a series of annual conferences to foster the relations between Korea and Switzerland in science and technology. They are part of the bilateral Korean-Swiss Science and Technology Programme and provide a platform for researchers to meet and establish new collaboration and to present projects in research areas of mutual interest to both countries.

The 2019 edition aims to identify the new frontiers and trends in Assistive Technologies for Ageing Society from Switzerland and Korea. Leading researchers and students from both countries will be brought together to foster future collaboration and the exchange people. Apart from scientific presentations there will be social spaces and room for discussion between the participants.

## Participants

Ca. 30 attendees from academia including senior researchers, junior researchers and students from Korea and Switzerland will attend the workshop.

## Organizers

Scientific Chairs: Aireza DARVISHY, Zurich University of Applied Sciences  
Chuck YOO, Korea University

Organization Switzerland: Elise NARDIN, ETH Zurich  
Lucia ARPAGAU, ETH Zurich  
Jihyun LIM, Science and Technology Office, Embassy of Switzerland Seoul

Organization Korea: Seon Ah LEE, National Research Foundation of Korea

## Funding

The Korean-Swiss Science Days are part of the bilateral Korean-Swiss Science and Technology Programme funded by the Swiss State Secretariat for Education, Research and Innovation (SERI) and the Korean Ministry of Science and ICT (MSIT). Travel for Korean participants is born by the Korean side through the National Research Foundation of Korea. All organizational costs and expenses for Swiss participants are covered by the funds provided from SERI administered by ETH Zurich as the Swiss Leading House. The Science Days are generally supported by the Science and Technology Office of the Swiss Embassy in Seoul.

# Workshop Programme

## Thursday 15 November 2018, Careum Auditorium

- 9:00-9:10 **Welcome addresses**  
Elise NARDIN (Programme Manager, ETH Zurich)  
**Congratulatory remarks**  
Kyung Hee SONG (Director General, Ministry of Science and ICT)
- 9:10-10:50 **Session 1: Sensory System: Vision and Hearing Related**  
*(15 minutes presentation+10 minutes Q&A each)*  
Chaired by Alireza DARVISHY, Zurich University of Applied Sciences  
  
Tobi DELBRUCK (UZH-ETH Zurich)  
"Neuromorphic AI"  
Seong-Woo KIM (Korea University College of Medicine)  
"Retinal degeneration model in mid to large size animal and retinal prosthesis development"  
Jae Hoon SIM (UniSpital ZH)  
"Middle-ear functions: Impact on age-dependent hearing loss"  
Sang-beom JUN (Ewha Womans University)  
"Development of Next-Generation Cochlear Implant in Korea"
- 10:50-11:10 **Coffee Break, outside of auditorium**
- 11:10-12:50 **Session 2: Smart Health Technologies**  
*(15 minutes presentation+10 minutes Q&A each)*  
Chaired by Chuck YOO, Korea University  
  
Luciano BOESEL (EMPA)  
"Smart textiles for continuous health monitoring"  
Chang-Mo HWANG (Asan Medical Center)  
"Artificial lung device and corneal tissue regeneration"  
Giuseppino FORTUNATO (EMPA)  
"Surface integrated nanofiber networks for endothelialized stretchable blood-material interfaces"  
Cheol Min GHIM (Ulsan National University of Science and Technology)  
"Organ Mimetic Research for Drug Discovery"
- 12:50-13:50 **Lunch Break, outside of auditorium**
- 13:50-14:20 **Information on Funding Opportunities**  
  
Andrea LANDOLT (Swiss National Science Foundation)  
Jong-Deok KIM (Director, National Research Foundation of Korea)
- 14:20-16:00 **Session 3: Mobility: How Robots Can Help Elderly People**  
*(15 minutes presentation+10 minutes Q&A each)*  
Chaired by Robert RIENER, ETH Zurich/University of Zurich

Roger GASSERT (ETH Zurich)

“Towards Minimally-Supervised, Technology-Assisted Neurorehabilitation in the Clinic and at Home”

Mun-Sang KIM (Gwangju Institute of Science and Technology)

“Health care robot technology in the age of aging”

Robert RIENER (ETH Zurich/University of Zurich)

“Rehabilitation Robots for Training and Assistance”

Sang-Heon LEE (Korea University Anam Hospital)

“The 4th industrial revolution and medical big data through hospital information system”

16:00-16:20 **Coffee Break, outside of auditorium**

16:20-18:00 **Session 4: Digital Health and Data Management**  
(15 minutes presentation+10 minutes Q&A each)

Chaired by Chuck YOO, Korea University

Walter KARLEN (ETH Zurich)

“Home monitoring and closed-loop stimulation of sleep for healthy aging”

Si Young SONG (Yonsei University College of Medicine)

“Global innovative cooperation for the successful healthcare R&BD”

Marcello IENCA (ETH Zurich)

“Digital Health Ethics in the Ageing World: Connecting Devices, Data and People”

Jin-Wook CHOI (Seoul National University)

“When Genetics becomes a part of treatment”

18:15- 18:30 Transfer to restaurant (invitation only)