



International Conference on Science and
Technology for Sustainability 2025
Tokyo, 11-12 February 2026

**Strengthening Early-Career Researchers
through International Mobility**
Lessons from Long-Term Japan–Europe Collaboration

Wilfred G. van der Wiel
University of Twente (NL) and University of Münster (D)



NTT Basic Research Labs.
1999, 2000, 2001

Why ECR mobility matters?

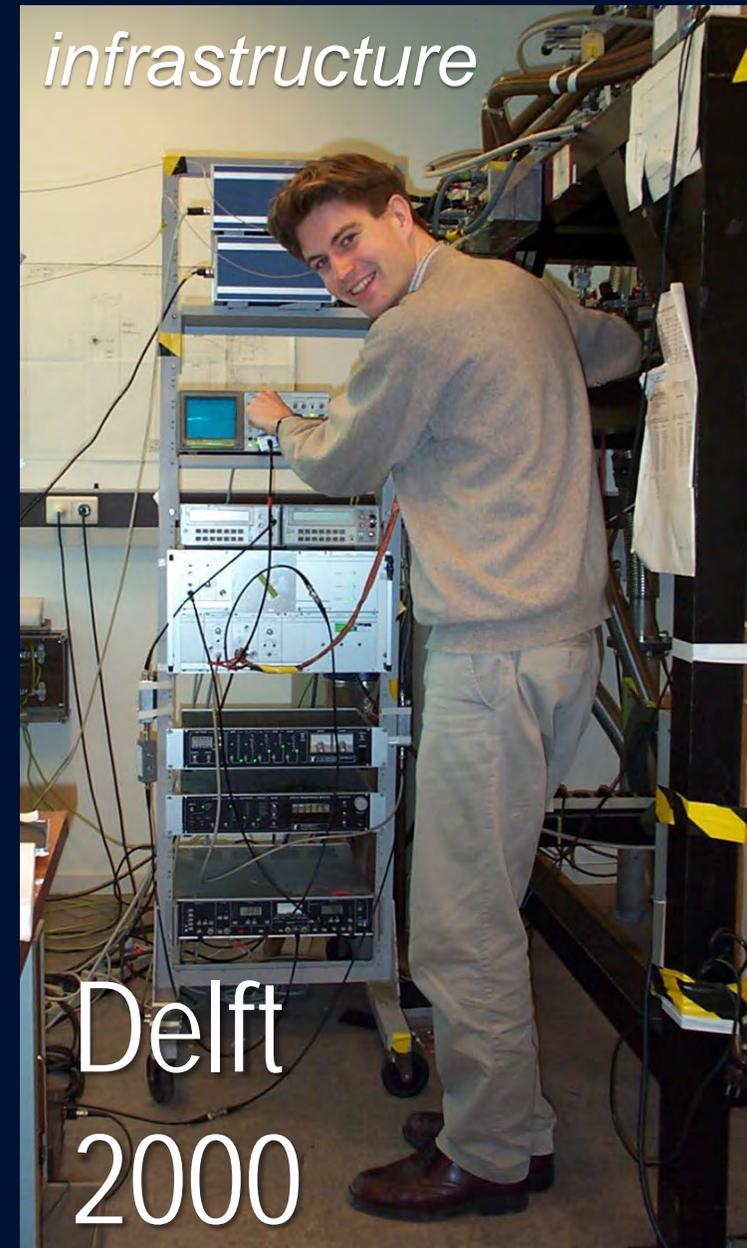
- Early-career researchers are the future
- Mobility is strategic necessity
- **People, trust, and long-term relationships**



What truly strengthens early-career researchers?

Not just funding!

- Early independence
- Strong mentorship
- Access to infrastructure
- International exposure
- **Human relationships**



Strong mentorship



Delft, 2000

International exposure



Atsugi, 2001



CIM2001, NTT BRL – “mata Kondo”



国立研究開発法人
科学技術振興機構
Japan Science and Technology Agency



University of Tokyo 2002-2005



International exposure



Nihon Butsuri Gakkai
Ritsumeikan University
25 March 2002



2002

Kondo-sensei

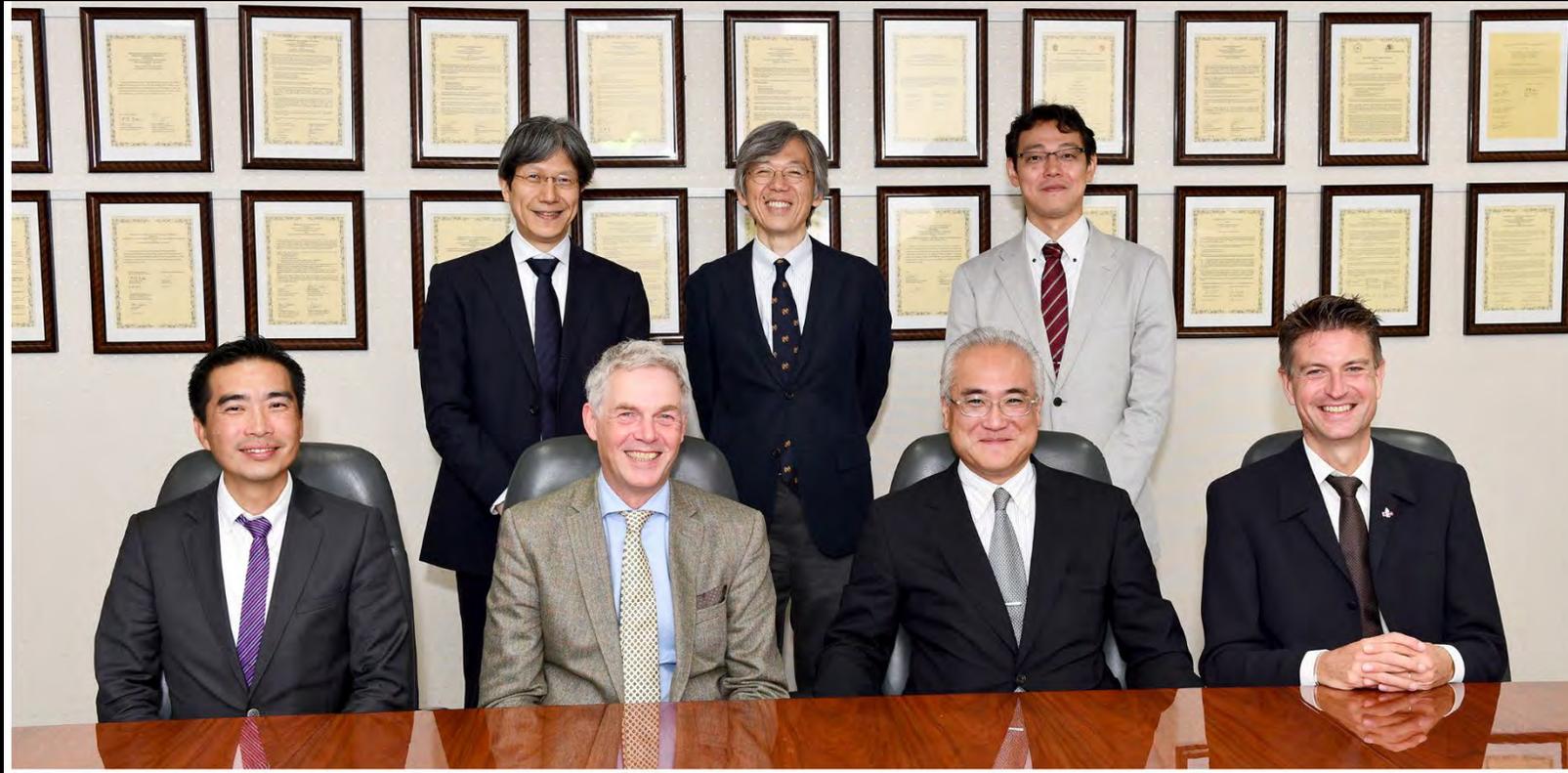
Human relationships



Atsugi, 2002

John Clarke
Nobel Prize 2025

Stimulating early-career researchers



2018

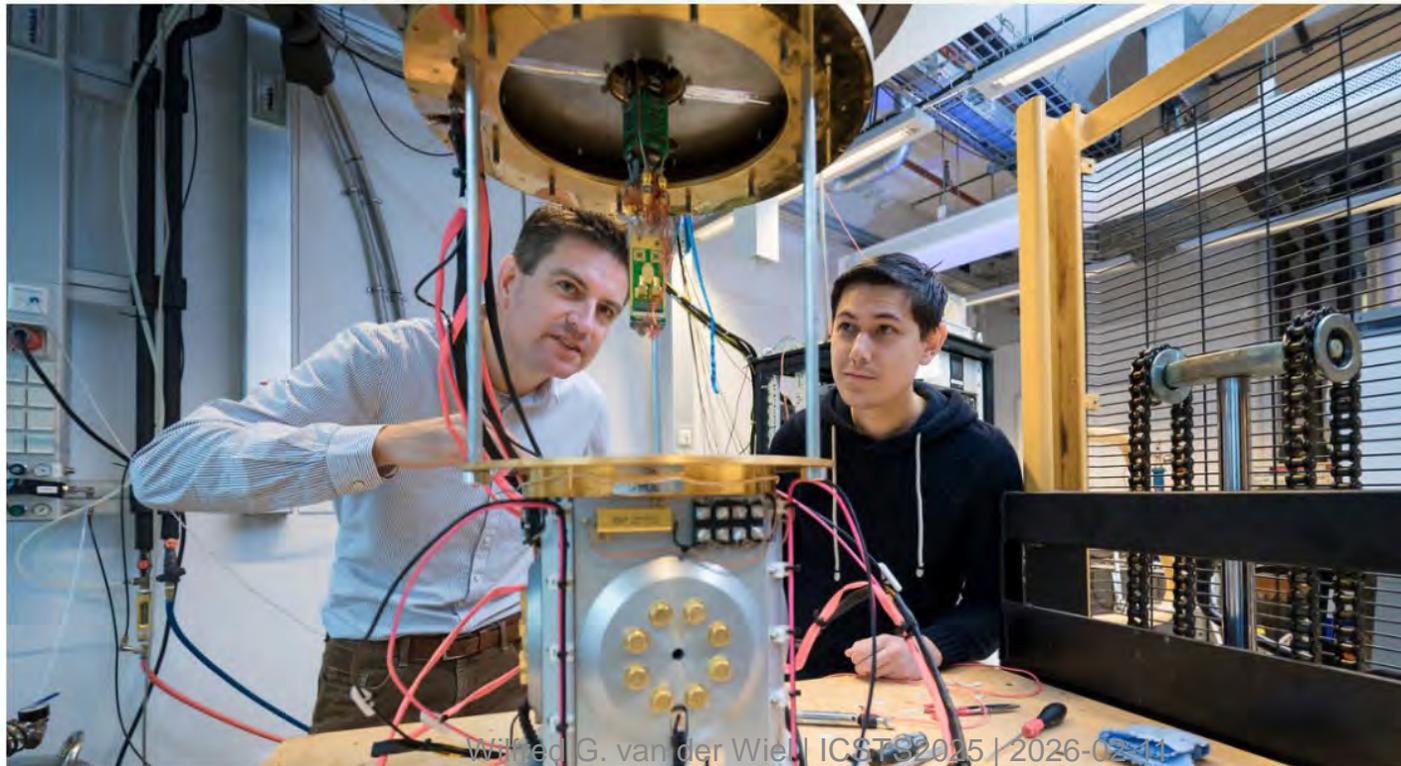
29 January 2019



Fully funded PhD research in Japan

07 / 03 / 2019 | [Michaela Nesvarova](#)

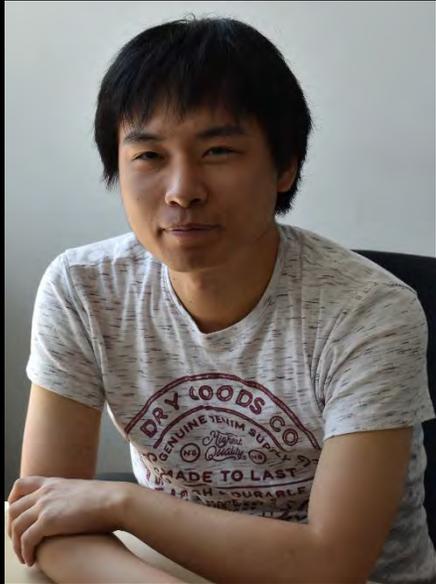
The UT is the first Dutch university to start an International Cooperative Graduate Programme with the National Institute for Materials Science (NIMS) in Japan. This will allow PhD candidates from the UT to spend up to one year at NIMS, which will fully fund their stay there.



Some University of Twente students I sent to Japan..



Students and researchers from Japan coming to Twente



Yuki Usami, Osaka University

Qiao Li, NIMS (MANA)

Kazuya Sugimura (Toyota Technological Institute)

Ya Zhang (IIS – University of Tokyo)

Hadiyawarman (Kyushu Institute of Technology)

How does
international mobility
create stronger science?

Synergy!

- Science is global
- Expand scientific horizons
- Complementarity
- **Human relationships**

Amano-sensei
Nobel Prize 2014



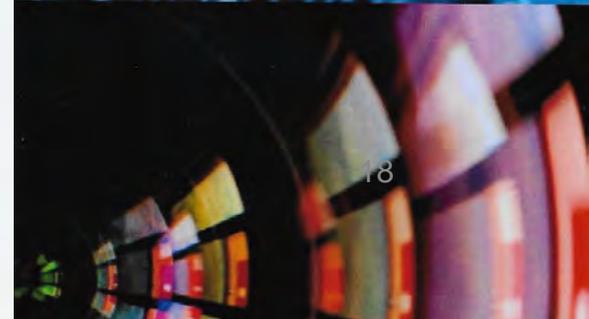
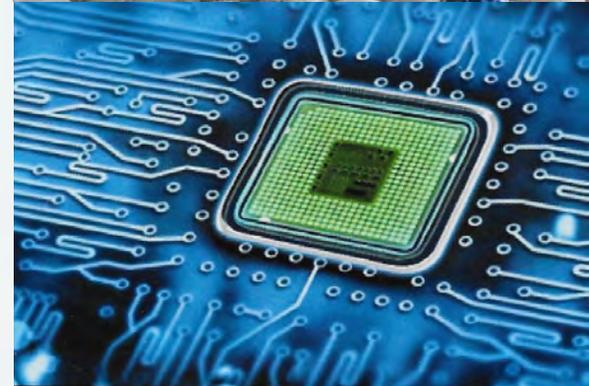
Nagoya,
6 September 2023



Rijksdienst voor Ondernemend
Nederland

Convenant Partners for International Business

Nanotechnology Japan 2018 – 2020



Netherlands Embassy, Tokyo, 5 October 2018



Nanotech Tokyo 2019



Osaka, June 2017



Stay at University of Twente
2018

宇佐美 雄生
USAMI Yuki



Enschede, July 2018

Adv. Mater. 2021, 33, 2102688

In-Materio Reservoir Computing in a Sulfonated Polyaniline Network

Yuki Usami, Bram van de Ven, Dilu G. Mathew, Tao Chen, Takumi Kotooka, Yuya Kawashima, Yuichiro Tanaka, Yoichi Otsuka, Hiroshi Ohoyama, Hakaru Tamukoh, Hirofumi Tanaka,* Wilfred G. van der Wiel,* and Takuya Matsumoto*



Stay at University of Twente
2018

宇佐美 雄生
USAMI Yuki





➤ Kyutech student won the student award at the ICSPM-14&ICSPM26.



松本先生 60歳の誕生日



IIS-MESA+ Workshop 1-2 October 2019

IIS-MESA+ MoU 5 October 2020



IIS-MESA+ Workshop 24-25 March 2021



Yukiko MATSUNAGA



Séverine Le Gac



Willem Vos



Armagan



Ad Lagendijk



Kaz Hirakawa



Satoshi Iwamoto



w.g.vanderwiel@utwente...



albert



Hiroshi Toshiyoshi



Beomjoon Kim



Agnès Tixier-Mita



Serge Lemay



Pepijn



Pep Canyelles Pericas



Hans-Christian Ruiz Euler



Tsuyoshi MINAMI



Tetsu Tatsuma



Tihomir Knezevic - U...

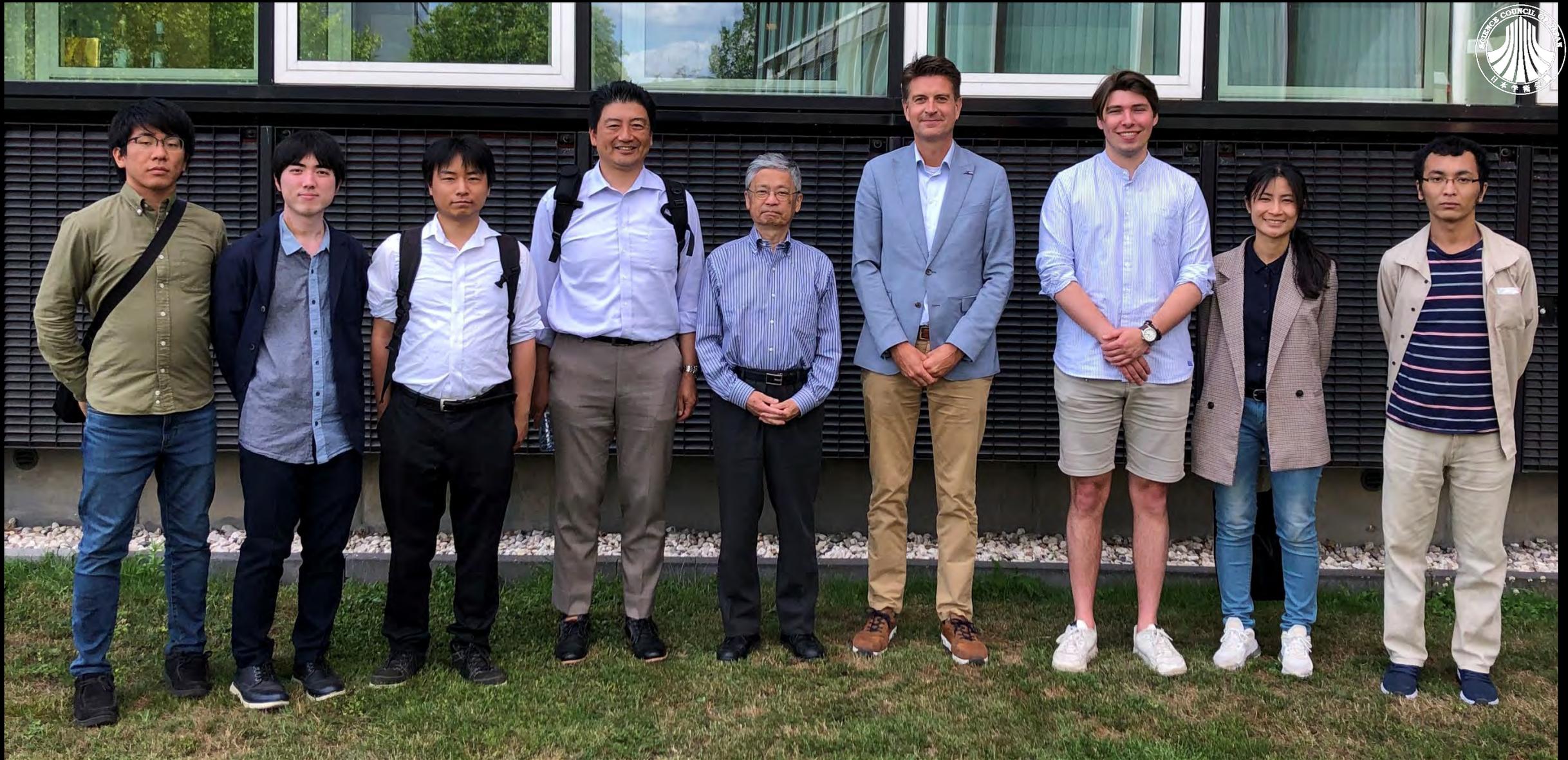


Gilgueng Hwang



These tulips have been presented by the
MESA+ INSTITUTE FOR NANOTECHNOLOGY
to the Institute of Industrial Science on the
occasion of the signing of the MoU on
October 5th 2020

UNIVERSITY OF TWENTE MESA+ INSTITUTE

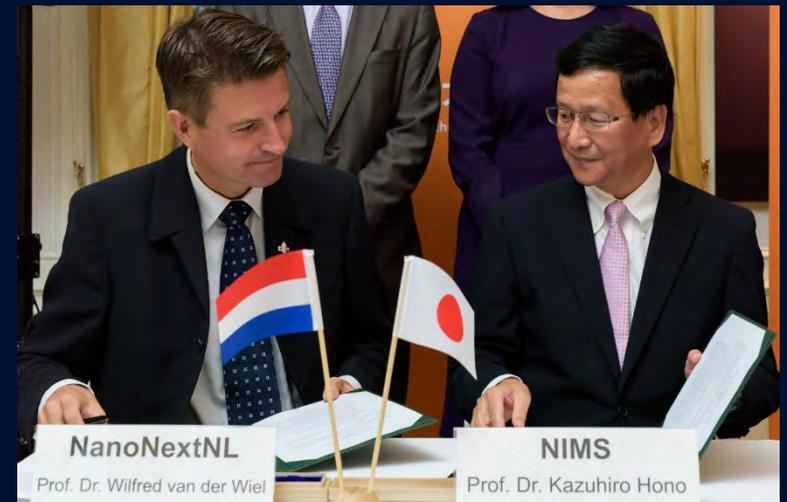


JSPS Core to Core Program "Material Intelligence"
Kickoff meeting
University of Twente, 16 June 2022

What concrete
mechanisms enable
lasting collaboration?

Combination of bottom-up and top-down

- Mobility of students and staff
- Reciprocal advisory and mentoring roles
- Joint international funding programs
- **Human relationships**



Mentoring



SSS 超スマート社会卓越教育院
Tokyo Tech Academy for Super Smart Society

WISE Program for Super Smart Society

Program Coordinator
Kei Sakaguchi

Global Leadership Committee Chair
Jun-ichi Takada

Chief Operation Officer
Akinori Nishihara



Program Members from Collaborative Institutions



Special: 4, International: 17, Industry: 14, Gov.: 2, Research Inst.: 5

External Evaluation Special Advisors

- Prof. P. Khargonekar
Vice Chancellor for Research of UC Irvine
Former NSF Assistant Director for Engineering
- Dr. M. Ando
Director, KOSEN National Institute of Technology
Ex-president, IEICE
- Dr. K. Kyuma
President, National Agriculture and Food Research Organization
Ex-executive member, CSTI
- Prof. H. Hibino
Tokyo University of Science
IFIP WG5.7 Full Member

International Advisors

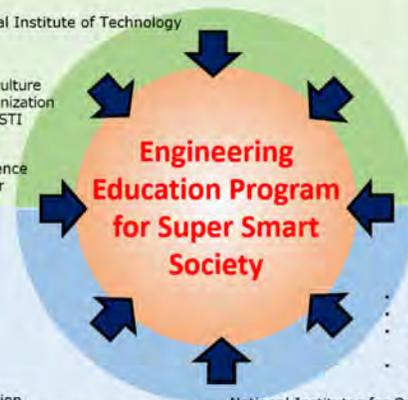
- Dr. M. Bacchiani (Google Japan)
- Dr. A. Sadri (SoLiD)
- Dr. E. C. Strinati (CEA Leti)
- Prof. M. Egerstedt (Georgia Tech)
- Prof. S. Lee (WPI)
- Prof. W.G. van der Wiel (U. Twente)
- Prof. G. Sgarbi (U. Roma 7)
- Prof. Vergata)
- Prof. C.-H. Menq (The Ohio State U.)
- Prof. T. Chaisomphob (Thammasat U.)
- Prof. I. Watson (U. Glasgow)
- Prof. S. Hirche (Technical U. Munich)
- Dr. T. Haustein (Fraunhofer Heinrich-Hertz-Institute)
- Prof. B. Vucetic (U. Sydney)
- Prof. S. Sun (Infocomm Research)
- Prof. S.S. Varvayanis (Cornell U.)
- Mr. Masaaki Maeda (Asurion)
- Prof. Seong-Lyun Kim (Yonsei U.)

Private Companies

- KDDI CORPORATION
- SoftBank Corp.
- Kodan Electronics Co., Ltd.
- NEC Corporation
- Azbil Corporation
- JTEKT CORPORATION
- DENSO Corporation
- NSK Ltd.
- Yokogawa Electric Corporation
- Hitachi Industrial Equipment Systems Co., Ltd.
- YASKAWA Electric Corporation
- SHO-BOND CORPORATION
- Digital Transformation Division, Mitsubishi UFJ Financial Group, Inc.

Public Research Institutes/ Local Governments

- Ota City
- Kawasaki City
- Japan Agency for Marine-Earth Science and Technology (JAMSTEC)
- Center for Advanced Intelligence Project, RIKEN
- National Institutes for Quantum and Radiological Science and Technology (QST)
- The Wireless Networks Research Center, National Institute of Information and Communications Technology (NICT)
- Information Technology and Human Factors, National Institute of Advanced Industrial Science and Technology (AIST)
- National Agriculture and Food Research Organization (NARO)





Joint international funding program (2025)

Unconventional Information Processing
Technologies: Cooperation Japan-The
Netherlands

Call for proposals



Reunion after 25 years



2024

Ottawa, Canada

Lessons

- People and trust form the foundation of science
- Mobility builds vibrant international research ecosystems
- Balanced bottom-up and top-down approach enables impact



学
遊

learn

play

explore!