Netherlands-Japan Launch Event Quantum-Photonics-Nanotech

Webinar (newly updated agenda)
Please forward to relevant contacts in target audience (*)

June 2021

Dear Sir / Madam

The rapid digital transition requires radical high-tech solutions to keep the global social systems running in terms of security, sustainability, economy, health and others. Important parts of these solutions lie in the area of quantum technology, photonics and nanotechnology. The Netherlands and Japan are forefront runners, both in terms of contents and in terms of industry-academia collaboration.

With the purpose to share the state of the art in both countries and to create opportunities to discuss collaboration, the Netherlands Embassy in Tokyo organizes a Netherlands-Japan Launch Event on **Thursday July 8**. The agenda of this Webinar includes renowned speakers from both governments, Netherlands leading organizations QuantumDelta, PhotonDelta/PITC, Dutch Optics Center and the PIB Nanotechnology Business Cluster, and Japanese leading organizations RIKEN, IOWN, Mitsubishi Electric and Keio University. We will also introduce upcoming activities in the second half of 2021 in which you can participate and get in closer contact with each other and further discuss collaboration.

This event is linked to the TeamNL Tokyo Expo, that is organized on the occasion of the Olympic Games in Tokyo. Please click here for other events of the Expo including the Innovation Parade.

- Title: Netherlands-Japan Launch Event Quantum-Photonics-Nanotech
- Date: **Thursday 8 July 2021**
- Time: 8:30-10:30NL / 15:30-17:30JP
- Venue: Webinar (link follows registration)
- Organizer: Netherlands Embassy in Tokyo in cooperation with the Netherlands Enterprise Agency (RVO)
- Agenda outline:
  - Policy presentations by Governments from both countries
  - Leading Industrial and Academic Organizations from both countries
  - Discussion about Upcoming Activities
- (*) Target audience: Netherlands and Japanese professionals from government, industry and knowledge institutes, working in the cutting-edge forefront of quantum, photonics and nanotechnology.
- Language: English
- Registration: Click this link to register. If you cannot enter the link, visit our blog for other ways to register. After registration, you will receive a link to join online.
- Contact:
  - In Japan: Rob Stroeks, Netherlands Embassy rob[@]hollandinnovation.jp, +81-(0)90-8642-3560
  - In the Netherlands: Tong Jiang, Netherlands Enterprise Agency RVO Tong.Jiang[@]rvo.nl, +31-(0)6-1117-8711

Sincerely,

Eric van Kooij
Innovation Counsellor
Embassy of the Kingdom of the Netherlands

Concept Agenda

NL time / JP time

08:30 / 15:30 Opening by Moderators of the day
- Mrs. Freeke Heijman, Founding Director, Quantum Delta NL
- Prof. Wilfred van der Wiel, University of Twente

08:35 / 15:35 *Joint Goals and Planning*
- Mr. Eric van Kooij, Counsellor for Innovation, Science and Technology, Netherlands Embassy in Tokyo

08:45 / 15:45 Part I: Government Presentations
- Mr. Michiel Sweers, Deputy Director General for Enterprise & Innovation Ministry of Economic Affairs and Climate Policy
- Mr. Naoki Himiya, Deputy Director-General, Science and Technology Policy Bureau Ministry of Education, Culture, Sports, Science and Technology (MEXT)

08:55 / 15:55 Part II: Presentations Netherlands side

Quantum Delta NL
- Prof. Ronald Hanson, Chairman of the Supervisory Board, Quantum Delta NL

PhotonDelta
- Dr. Carol de Vries, Program and Technology Manager, Photondelta
- Dr. Erik van Geest, General Manager Photonic Integration Technology Center (PITC)

Dutch Optics Center (DOC)
- Dr. Bart Snijders, Initiator and Coordinator, DOC
- Dr. Nienke Dijkstra, Manager SME Market at TNO

PIB Consortium Nano-technology Japan
- Mr. Raoul Oostenbrink, Coordinator PIB Nanotechnology Japan, Principal at IVX4

09:25 / 16:25 Part III: Presentations Japanese side

IOWN (Innovative Optical and Wireless Network) / NTT
- Dr. Yosuke Aragane, Vice President of IOWN Development Office, NTT

RIKEN
- Prof. Yasunobu Nakamura, Director, RIKEN Center for Quantum Computing (RQC)

Mitsubishi Electric Group / Photonics and Quantum Technology for Society 5.0
- Dr. Koji Yasui, Senior Chief Technologist, Mitsubishi Electric Group

Keio University, IBM Q Network Hub
- Prof. Rodney van Meter, Vice Chair, Keio Quantum Computing Center (KQCC)

09:55 / 16:55 Part IV: *Discussion, Looking Ahead (including Q&A to speakers and mentimeter)*
- Moderator: Mrs. Freeke Heijman, Founding Director, Quantum Delta NL
- Moderator: Prof. Wilfred van der Wiel, University of Twente

10:25 / 17:25 Conclusions and closing remarks

10:30 / 17:30 End

Further reading

Netherlands:

- Roadmap Photonics 2020-2023, September 2020, by PhotonicsNL, Dutch Optics Centre, PhotonDelta, NWO, RVO and partners.
- Quantum Delta NL Awarded 615 Million Euro From Netherlands' National Growth Fund To Accelerate Quantum Technology, 12 April 2021

Japan:

- "Cross-ministerial Strategic Innovation Promotion Program (SIP) Photonics and Quantum Technology for Society 5.0 Research and Development Plan", August 8, 2019, Director General for Science, Technology, and Innovation, Cabinet Office
- Moonshot Program, Goal #6: "Realization of a fault-tolerant universal quantum computer that will revolutionize economy, industry, and security by 2050", Cabinet Office

Moderators of the Day

Mrs. Freeke Heijman

Quantum Delft & Quantum Delta NL

Founding Director

Freeke Heijman has an extensive background in tech and innovation policies at the crossroads of government, academia and industry. She embarked in the quantum field in 2013 when QuTech was founded. Her mission is to build a flourishing quantum ecoystem for Europe, both in Delft and on a national level. She is leading the Quantum Delft initiative to foster and grow the Delft ecosystem of startups, companies and research labs at the TU Delft campus. She is also the executive director of the foundation Quantum Delta NL that is responsible for the Dutch Quantum Initiative. Freeke graduated at the TU Delft Policy Analysis and Systems Engineering department in 1999 and started her career at KPN Research. Before she started at QuTech, she worked at the Ministry of Economic Affairs in different roles in the field of space and innovation policies.

About Organization

QuantumDelta

Quantum Delta NL is the public-private partnership of tech companies, government agencies, and all major quantum research centers in the Netherlands. The mission of Quantum Delta NL is to further strengthen the thriving Dutch quantum ecosystem into the most relevant for Europe.

Prof. Wilfred G. van der Wiel

University of Twente

Director of the BRAINS Center for Brain-Inspired Nano Systems

Wilfred G. van der Wiel (Gouda, 1975) holds a second professorship at the Institute of Physics of the Westfälische Wilhelms Universität Münster, Germany. His research focuses on unconventional electronics for efficient information processing. Van der Wiel is a pioneer in Material Learning at the nanoscale, realizing computational functionality and artificial intelligence in designless nanomaterial substrates through principles analogous to Machine Learning. He is author of 120 journal articles receiving 7,500 citations.

About Organization

BRAINS

BRAINS is an inter-faculty center of the University of Twente with over 10 principal investigators from the MESA+ Institute for Nanotechnology, the Digital Society Institute and the Faculty of Behavioural, Management and Social sciences. The center aims to provide coherence and visibility. With its focus and critical mass BRAINS hopes to be a valuable partner in national and international consortia.

Keynote presentations from Government

The Netherlands

Mr. Michiel Sweers

Ministry of Economic Affairs and Climate Policy (EZK)

Deputy Director General for Enterprise & Innovation (E&I) and Director Innovation & Knowledge department (I&K)

Michiel Sweers started his professional career in 1996 at the Ministry of Finance, where he had several positions, including deputy head for Budget Policy, head unit on Export Credit Insurances and Deputy Director General for Tax Policy and Legislation. As such he participated and chaired several advisory committees on Tax Reform. From 2017, Michiel Sweers is Director I&K and as such responsible for Dutch Innovation Policies. As Deputy Director General E&I he is also active in the broader area enterprise policies.

About Organization

The Innovation & Knowledge department (I&K) of EZK is responsible for Dutch innovation policies, including national innovation instruments and budgets, promoting public private partnerships with a so called Top Sector Approach, multilateral and bilateral innovation cooperation, space policy, and intellectual property policies.

Japan

Mr. Naoki Himiya

Ministry of Education, Culture, Sports, Science and Technology (MEXT)

Deputy Director-General, Science and Technology Policy Bureau

Education: Graduated from the Faculty of Law, Sophia University

2021 Jul. Deputy Director-General, Science and Technology Policy Bureau, MEXT
2020 Apr. Director, International Affairs Division, Minister's Secretariat, MEXT
2018 Apr. Vice President, Trustee, KANAZAWA University
2017 Apr. Director, Policy Division, Lifelong learning Policy Bureau, MEXT
2015 Aug. Director, National University Corporation Support Division, Higher Education Bureau, MEXT
2013 Oct. Director, Private Education Institution Department, Higher Education Bureau, MEXT
2011 Jul. Director, Off. for International Sports, Competitive Sports Division, Sports and Youth Bureau, MEXT
2010 Apr. Director, Off. for Student Exchange, Student Support and Exchange Div., Higher Education Bureau
2008 Apr. Director, Off. for International Planning, Higher Education Policy Planning Div., Higher Education Bureau
2004 Mar. First secretary, Embassy of Japan in Germany
2004 Feb. Senior Specialist, International Affairs Division, Minister's Secretariat, MEXT
2001 Apr. Deputy Director, Personnel and Pension Bureau, Ministry of Internal Affairs and Communications
1999 Apr. Director, Lifelong Learning Division, Okayama Prefectural Board of Education
1991 Apr. Joined Ministry of Education, Science, Sports and Culture (MONBUSHO)

About Organization

Science and Technology Policy Bureau is planning and designing the basic policies to promote science and technology. It intends to develop human resources in science and technology from students to lead researchers and engineers and strategically promotes international activities and the promotion of science and technology in regions. The Bureau consists of five Divisions: Policy, Planning and Evaluation, Human Resources Policy, Research and Development Infrastructure and University-Industry Collaboration and Regional R&D Division.

Netherlands Presentations

Prof. Ronald Hanson

Quantum Delta NL

Chairman of the Supervisory Board

Ronald Hanson (1976) is Distinguished Professor at Delft University of Technology and principal investigator at QuTech. He is one of the four founding professors of QuTech (2014), serving as its Scientific Director in 2016-2020. Ronald currently chairs the steering board of Quantum Delta NL, the foundation responsible for the National Agenda Quantum Technology.
Ronald's research centers on exploring and controlling quantum-entangled states with the long-term goal of exploiting these in future quantum technologies such as quantum computing and quantum internet. His work combines quantum optics, solid-state physics, nuclear magnetic resonance, quantum information theory and nanofabrication. In 2014 his group made headlines by teleporting quantum data between electrons on distant solid-state chips. In 2015 he ended a decades-long scientific quest by performing the first loo phole-free Bell test. In 2018 his group achieved the important milestone of generating quantum entanglement faster than it got lost. In the coming years he aims to build on these results to demonstrate the fundamentals of a future quantum internet, with a rudimentary network planned between several cities in the Netherlands. Ronald has received several awards for his work, among which the Nicholas Kurti European Science Prize (2012), the Huibregtsen Award for Excellence in Science and Society (2016) and the John Stewart Bell Prize (2017). In 2019 he received the Spinoza Prize, the highest scientific award in the Netherlands. He was elected as member of the Royal Holland Society of Sciences and Humanities (KHMW) and of the Dutch Royal Academy of Sciences (KNAW), and Fellow of the American Physical Society. In 2020 he was appointed as the university's 6th Distinguished Professor.

About Organization

QuantumDelta

Quantum Delta NL is the public-private partnership of tech companies, government agencies, and all major quantum research centers in the Netherlands. The mission of Quantum Delta NL is to further strengthen the thriving Dutch quantum ecosystem into the most relevant for Europe.

Mr. Carol de Vries

Photondelta

Program and technology manager

Carol has a long history in the electronics industry working in R&D and new business management in the fields of semiconductors, sensors and systems. He has worked for Philips, NXP and Sensata, and for the last 15 years in Automotive. In his previous roles, he had extensive relations with Japanese companies and organizations.

About Organization

PhotonDelta

To accelerate and reduce time to market, PhotonDelta strengthens the ecosystem from within by stimulating co-operation amongst the integrated photonic companies and knowledge institutions. We are in constant dialog with all our partners, we support each other and help overcome technological and business challenges. PhotonDelta is responsible for the common business strategy, we set goals and stimulate co-operation between partners. We amplify and scale existing companies and kickstart new ones. We are able to do so, since our partners provided significant funding, up to €236millon in the timeframe of 2019-2026. In addition to funding, we provide our partners access, knowledge and business development. Access to the National, European and International Network is realised through different partnerships.

Dr. Erik van Geest

Photonic Integration Technology Center (PITC)

General Manager

Erik van Geest is General Manager of the Photonic Integration Technology Center (PITC). He has a long history in R&D management in Semiconductors. Before the PITC he worked for Philips and NXP where he managed worldwide chip design teams targeting a variety of markets. Erik has a technical background in Electrical Engineering and holds a PhD from University of Twente on reliability and robust design. His interest in Japan goes back to his university time when he performed an industrial assignment in Tokyo.

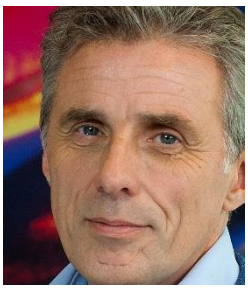
About Organization

PITC

The Photonic Integration Technology Center, or PITC, is a collaboration of TU/e, UT, TNO and PhotonDelta, and has been set up to bridge the gaps between academic inventions and industrial application. Integrated Photonics is in an exciting stage where the potential and feasibility have been shown but the technologies need to be matured before volume markets can be served. The Netherlands have a flourishing and growing ecosystem of universities and scale-up companies focusing on the core photonic technologies of InP and SiN as well as on application domains such as Quantum, Communication and (Bio-) sensing. As a technology hub PITC will accelerate the adoption of Integrated Photonics worldwide by running Shared Research Programs with our partners.

Mr. Bart Snijders

Dutch Optics Centre (DOC)



Initiator and Coordinator

Bart is Coordinator of DOC, with a focus on creating strategic partnerships. With a background in Applied Sciences he started his career as optics designer at TNO and lead international projects for development of optical instrumentation for industry and science. As a manager he lead the optics department of 40 designers and engineers. Recent activities in DOC: international networking, education, R&D, innovation, including initiation of startups.

Dr. Nienke Dijkstra

TNO

Manager SME Market

About Organization

Dutch Optics Centre (DOC)

DOC is an initiative of TNO and TU Delft aimed at boosting Dutch industry in the field of optics and optomechatronics to increase utilisation of Dutch science through joint R&D.

The Netherlands are unique in the field of optics and opto-mechatronics, with a leading position in science and industry. Within Dutch Optics Centre TU Delft, TNO and other knowledge institutes providing excellent research facilities team up with a world class manufacturing industry; producing opto-mechanical components for high-precision products like satellites, telescopes, microscopes, inspection instruments.

Mr. Raoul Oostenbrink

Coordinator PIB Nanotechnology Japan

Principal at IVX4

Raoul started his professional career in 1999 and has been active in the fields of IT Consulting, Investment Banking, Government, Medical Devices, Life Sciences and Research. His expertise lies with Business Development and Innovation. Raoul has performed various managerial and advisory roles at senior level, for companies such as Ordina, Robeco, Teleflex and TNO. He started his own consulting firm in 2014 with a focus on technology transfer (Science to Business), brokering between universities, corporates, government and start-ups.

About Organization

Assignments vary from managing an accelerator program for the Dutch nanotechnology initiative-NanoNextNL (€ 250 MIO), to laying the ground work for a Robotics Seed Investment Fund (€ 100 MIO). More recent assignments include the roles of Managing Director for MESA+ and for NanoLabNL. Raoul also manages and coaches several start-up companies.

Since 2018, Raoul coordinates the Business Cluster Nanotechnology comprising Dutch companies and knowledge institutes- and focuses on strengthening relationships between The Netherlands and Japan in the nanotechnology space.

Japanese Presentations

Dr. Yosuke Aragane

NTT / IOWN Global Forum

Vice President of IOWN Development Office, NTT
Alternate Director of IOWN Global Forum

Yosuke Aragane, CISSP has 25 years R&D professional carriers in human factors, cyber security and R&D management. He was a manager of NTT-CERT (Corporate CSIRT). His current responsibility is managing R&D of IOWN which NTT advocated for next generation communication infrastructure. NTT plans to start some IOWN compliant services in 2025. But it requires a lot of innovations in photonics and computing fields. So he designed IOWN Global Forum and established it with diverse partners such as Intel and Sony.

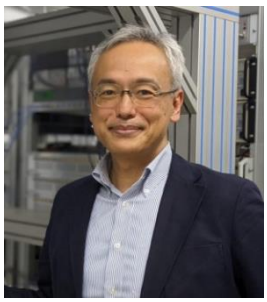
About Organization

NTT Group, NTT R&D

NTT is a global technology and business solutions provider. We help clients grow their business and improve their competitive market position by delivering fully integrated services, including global networks, cybersecurity, managed IT and applications, cloud and datacenter services combined with business consulting and deep industry expertise. NTT is also famous for its long-term R&D efforts especially in photonics technologies.

IOWN Global Forum (Innovative Optical and Wireless Network) was established in 2020 by NTT, Intel and Sony for developing next generation communications infrastructure. With full-online operations, members have actively discussed and already developed deliverables. By the end of April 2021, it has 54 member organizations. In its quarterly member meeting, over 300 participants had discussed actively.

Prof. Yasunobu Nakamura



RIKEN Center for Quantum Computing

Director

Yasu Nakamura started his research career in NEC Fundamental Research Laboratories in 1992, where he demonstrated the first coherent manipulation of a superconducting qubit in 1999 and met quantum information science. He spent a fruitful year as a Visiting Researcher in Prof. Hans Mooij's group in TU Delft from Sep 2001 to Aug 2002. Since 2012, he has been a Professor in Research Center for Advanced Science and Technology (RCAST) of the University of Tokyo. He has also been running his team in RIKEN since 2014. He is currently the director of RQC as well as the Project Leader of the MEXT Q-LEAP Flagship project on Superconducting Quantum Computing.

About Organization

RIKEN Center for Quantum Computing (RQC) was established in April 2021. It consists of 14 research teams, which explore the frontier of quantum technologies through the research and development of quantum computers as innovative information processing units based on the principles of quantum mechanics. RIKEN is also serving as the head quarter of Quantum Technology Innovation Hubs, which involves 8 research hubs on quantum technologies in Japan.

Dr. Koji Yasui

Mitsubishi Electric Corp.

Senior Chief Technologist

Dr. Yasui joined Mitsubishi Electric Corporation in 1982. He has 35 years+ in R&D and Management in Mitsubishi Electric Corporation. He had roles as Researcher, R&D Manager as well as factory manager and corporate strategic manager, providing automation solutions including industrial processing machines. He had leading roles in state-run technology projects like:

- "Photonics and Quantum Technology for Society 5.0" supported by Cabinet Office and QST
- COI program "A center for innovation using coherent photon technology" (MEXT and JST)

Dr. Yasui holds B.S. and Ph.D. degrees in applied physics from the University of Tokyo, and was a visiting scientist at Stanford University in 1989.

About Organization

Mitsubishi Electric Group, founded in 1921, contributes to the realization of a vibrant and sustainable society through continuous technological innovation and ceaseless creativity, as a leader in the manufacture and sales of electric and electronic equipment used in Energy and Electric Systems, Industrial Automation, Information and Communication Systems, Electronic Devices, and Home Appliances.
SIP Photonics and Quantum Technology for Society 5.0, supported by the Cabinet Office, has 13 programs and aims at the goal image of a new society called "Society 5.0," which is based on the new industrial revolution accelerated also by the COVID-19 pandemic.

Prof. Rodney Van Meter

Keio University, IBM Q Network Hub

Vice Chair, Keio Quantum Computing Center

Rodney Van Meter is the Vice Center Chair of the Keio Quantum Computing Center. At KQCC, his research centers on hybrid quantum-classical optimization and machine learning algorithms for use on noisy intermediate-scale quantum devices, and on methods for analyzing the performance and fidelity of such machines. Rodney Van Meter received a B.S. in engineering and applied science from the California Institute of Technology in 1986, an M.S. in computer engineering from the University of Southern California in 1991, and a Ph.D. in computer science from Keio University in 2006. His current research centers on quantum computer architecture and quantum networking. Other research interests include storage systems, networking, and post-Moore's Law computer architecture. He is a Professor of Environment and Information Studies at Keio University's Shonan Fujisawa Campus. He is the Vice Dean of the Graduate School of Media and Governance, and the Vice Center Chair of the Keio Quantum Computing Center. Dr. Van Meter is a member of AAAS, ACM and IEEE.

About Organization

IBM Q Network Hub: the IBM Q Network Hub @ Keio University is the only organization in Asia to have access to IBM's best quantum computer. It sounds exotic, but by learning just a few core ideas, anyone can begin programming this machine, and students as young as freshmen are using the computer every day. Come join Keio students, staff, and faculty, and researchers from hub member companies as we push the frontiers of technology's most exciting field!