

A/P Dr Jeroen Anton van Kan (phyjavk@nus.edu.sg) CV (short)



Education

1992-1996 Ph.D (experimental physics), Vrije Universiteit Amsterdam, The Netherlands.
1988-1992 Masters degree (experimental physics), Universiteit van Amsterdam, The Netherlands.

Professional Experience

2013-present Associate Professor of physics, National University of Singapore (NUS).
2007-2012 Assistant Professor of physics, NUS.
2014 - 2016 Vice President of the Microscopy Society Singapore.
2012 - 2014 President of the Microscopy Society Singapore.
Jan 2012 - present Member of the editorial board of Microelectronic Engineering.
July 2011 -present Faculty of Science coordinator for the Engineering Science Programme (under graduate programme in the engineering Faculty NUS).
2006-2007 Senior research fellow Centre for Ion Beam Applications, Dept of Physics NUS.
1997-2006 Research fellow Centre for Ion Beam Applications, Dept of Physics, NUS

Interests:

Ion source development, proton beam writing, nanoscience and technology, molecular electronics and devices, nanofluidics and DNA lab on chip devices, nanolithography, nanoimprinting, 3D printing.

Awards:

Institute of Physics Singapore, Omicron Nanotechnology Award 2007.
Faculty of Engineering Innovative Teaching Award 2007/2008.

Grants Awarded:

2016-2021 Collaborator in NRF grant on Oxide Electronics Beyond Moore (NRF2015NRF-CRP001-015) (S\$ 7,960k)
2015-2020 **Co-PI** in NRF grant on "Micro-fabricated Ring Carbon Nanotube electron/ion sources" (S\$ 6,886k).
2015-2020 **Co-PI** in NRF grant on "Nanofluidics with two-dimensional materials" (S\$ 9,420k)
2015-2018 **Co-PI** in MOE grant on "DNA Nanoarraying: Gene Profiling on an array of nanochannels" (S\$ 755.7k)
2014-2017 **Collaborator** in NUS grant on "Epigenetic profiling on an array of nanochannels" (S\$ 180k)
2015-2016 **Co-PI** in NRF Create grant "Singapore Berkeley Research Initiative for Sustainable Energy" (SinBeRISE) (S\$35M).
2013-2016 **PI** in NUS grant on "Diffusion studies in Polymer nanofluidic channel systems" (S\$ 180k)
2010-2013: **PI** in a grant from the US-Air force on Ion source development for a compact PBW system (US\$ 424.5k).
2010-2013: **PI** in NUS grant on "Ultimate beam focusing for MeV protons, the quest for sub 10 nm beam spot size" (S\$ 138.5k).
2010-2013: **Collaborator** in a MOE grant on "Nanofluidic studies of DNA compaction by condensing ligands and architectural protein" (S\$ 770k)
2009-2012: **PI** in an A-Star grant on "Development of novel methods of fabricating metallic nano injection molds for lab on chip biomedical sample preparation and DNA analysis applications" (S\$ 585k)
2008-2011: **Collaborator** in A-Star grant on "The development of fluorescence and structural imaging of cells and tissue at sub 50nm resolutions" (S\$ 994k)
2007-2010: **PI** in a start-up grant awarded by the faculty of Science, NUS on "Nanowire Integration through controlled template fabrication using proton beam writing" (S\$ 180k)
2007-2010: **PI** in a grant from the US-Air Force to develop a next generation lens system for PBW worth US\$ 225k
2006-2009: **Co-PI** in ASTAR grant on Polymer and Molecular Electronics and Devices (PMED) - S\$1.3M.
2003-2006: **PI** in 3 grants awarded by the US-Air Force for development of proton beam writing (US\$ 119k).

Conferences, seminars and talks:

- 31 *invited* oral presentations at international conferences, including:
 - International Conference on Nuclear Microprobe Technology and applications (July 2014 Padua, Italy). Here I have presented the most recent achievement in MeV proton beam focusing down to 9.3 nm.
 - American Physical Society, March 2009 meeting (Boston, USA)
 - 25th Conference of Photopolymer Science and Technology Photopolymer Conference, Chiba, Japan, June 2008.
 - International Conference on Micro- and Nano-Engineering (MNE), Vienna Austria 2005.
- 36 *invited* lectures in the USA, Europe and China, including:
 - UC Berkeley, Materials Science and Engineering, California, USA September 2015.
 - Lawrence Berkeley Lab, California, USA September 2015.
 - Chemistry department, Cambridge December 2008, expenses paid in Europe.
 - Accelerator and Fusion Research labs, Berkeley, February 2008 & 2015
 - Nanofabrication lab, Massachusetts Institute of Technology, Boston, USA, April 2006
- Chair of symposium BB in ICMAT, Singapore, June 2011, chair of a session at CAARI August 2012 Texas, USA.
- Organizing committee member of the MNE conference 2008-2015 and the 10th & 14th ICNMTA conference (2006 & 2014).
- 19 oral & 26 contributed poster presentations at International conferences.

Research papers: 150 scientific publications, **H index 31 (Google Scholar)**, **H index 26 (Web of Science)**.

Author of one chapter and two boxes in, the book "Ion Beams in Nanoscience and Technology" Springer, 2009.