

# Curriculum Vitae

## Personal

Scientia Professor Sven Rogge  
*address* 225 Lawrence Hargrave Drive  
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*Citizenship* Australian and German

## Education

1997 Ph.D. in Physics, Stanford University, California, USA  
Thesis: *Low temperature dielectric response of amorphous solids* with Prof Osheroff

## Employment

2022- Dean, Faculty of Science at the University of New South Wales, Australia  
2021-2022 Pro Vice-Chancellor Research at the University of New South Wales, Australia  
2014-2019 Head of School of Physics at the University of New South Wales, Australia  
2011-2014 ARC Future Fellow, Professorial Level 3  
2011- Professor of Physics at the University of New South Wales, Australia  
2003-2014 Faculty Member Kavli Institute of NanoScience, Delft University of Technology  
2000-2005 Royal Netherlands Academy Fellow, Delft University of Technology

## Selected publications

- B. Voisin, J. Salfi, D. D. St Médar, B.C. Johnson, J.C. McCallum, M.Y. Simmons, S. Rogge, "A solid-state quantum microscope for wavefunction control of an atom-based quantum dot device in silicon," *Nature Electronics* 6, 409–416 (2023)
- T. Kobayashi, J. Salfi, C. Chua, J. vd Heijden, M. G. House, D. Culcer, W. D. Hutchison, B. C. Johnson, J. C. McCallum, H. Riemann, N. V. Abrosimov, P. Becker, H. J. Pohl, M. Y. Simmons, S. Rogge, "Engineering long spin coherence times of spin-orbit qubits in silicon," *Nature Materials* (2), 38–42 (2021)
- B. Voisin, J. Bocquel, A. Tankasala, M. Usman, J. Salfi, R. Rahman, M. Y. Simmons, L. C. L. Hollenberg, S. Rogge, "Valley interference and spin exchange at the atomic scale in silicon," *Nature Communications* (11), 6124 (2020)
- J. van der Heijden, T. Kobayashi, M. G. House, J. Salfi, S. Barraud, R. Lavieville, M. Y. Simmons, S. Rogge, "Readout and control of the spin-orbit states of two coupled acceptor atoms in a silicon transistor," *Science Advances* 4 (12), eaat9199 (2018)
- J. Salfi, B. Voisin, A. Tankasala, J. Bocquel, M. Usman, M. Y. Simmons, L. C. L. Hollenberg, R. Rahman, S. Rogge, "Valley Filtering in Spatial Maps of Coupling between Silicon Donors and Quantum Dots," *Physical Review X* (8), 031049 (2018)
- J. Salfi, J. A. Mol, R. Rahman, G. Klimeck, M. Y. Simmons, L. C. L. Hollenberg, S. Rogge, "Quantum simulation of the Hubbard model with dopant atoms in silicon" *Nature Communications* (7), 11342 (2016)
- J. Salfi, J. A. Mol, R. Rahman, G. Klimeck, M. Y. Simmons, L. C. L. Hollenberg, S. Rogge, "Spatially resolving valley quantum interference of a donor in silicon" *Nature Materials* (13), 605 (2014)
- C. Yin, M. Rancic, G. G. de Boo, N. Stavrias, J. C. McCallum, M. J. Sellars, S. Rogge, "Optical addressing of an individual erbium ion in silicon", *Nature* (497), 91 (2013)
- G. P. Lansbergen G.P., R. Rahman, C. J. Wellard, J. Caro, N. Collaert, S. Biesemans, I. Woo, G. Klimeck, L. C. L. Hollenberg, S. Rogge, "Quantum confinement and symmetry transition of a single gated donor electron in silicon", *Nature Physics* (4), 656 (2008)

## Organisational tasks

2022-present	Dean of Science, University of New South Wales, Australia
2021-2022	Pro Vice-Chancellor Research, University of New South Wales, Australia
2021-2022	President of the Australian Institute of Physics
2021-present	Editor-in-Chief of Nature Quantum Information (npj)
2021-2022	Board member NSW Smart Sensing Network
2021-2022	Board member Future Food Systems CRC
2019-2022	National Committee for Physics of the Australian Academy of Science
2021	Facilitator "Men as Allies" Panel, International Conference on Women in Physics
2020/2	Chair of the International Conference on the Physics of Semiconductors in Sydney
2019-2020	Vice President of the Australian Institute of Physics
2019-2021	Chair of the CQC2T Equity, Diversity, and Inclusion Committee
2017	Chair of the Australian Institute of Physics National Summer Meeting (Sydney)
2014-2019	Head of School of Physics at UNSW
2013-2014	Research Director School of Physics & Member of the School Executive
2013	Chair and Organiser of the Nano-electronics Session at ICONN2014
2011-present	Program Manager, ARC Centre of Excellence CQC2T
2006-2010	Member of the Executive, Kavli Institute of Nanoscience Delft (Netherlands)

## External grants *Total apportioned M\$31, M\$26.4 since 2010 of which M\$11.3 Category I*

2022	ARC LE22 "Atomic Scale Control over Quantum Materials" \$1,173k lead CI Rogge
2021	ARC DP21 "Enlightening single rare-earth atoms in scanning-tunnelling microscopy" \$599k lead CI Rogge
2020	CRC-P "Zero-Spin Silicon via Laser Isotope Separation for Quantum Computer Chips" \$3M over 5 years, academic lead Rogge
2018	ARC DP18 "Engineering quantum matter atom-by-atom" \$372k lead CI Rogge
2017	ARC CE17 "Centre of Excellence for Quantum Computation and Communication (CQC2T)", \$33.7M co-CI Rogge
2017	ARO "Solid-State QC in Silicon" \$550k CI Rogge
2014	ARC LE15 "Probe and engineer interactions in atomic-scale devices with a LT STM", \$1.1M (760k ARC) lead CI Rogge
2014	ARC DP15 "Atomistic anatomy of a nano transistor", \$360k lead CI Rogge
2013	ARO "Solid-State QC in Silicon" \$550k CI Rogge
2012	ARC DP12 "Controlled atomic chaos", \$370k over 3y, lead CI
2011	ARC CE11 "Centre of Excellence for Quantum Computation and Communication Technology (CQC2T)", \$28M co-CI Rogge
2010	ARC FT10 "Performance bottlenecks in ultra-scaled field-effect transistors", \$930k

## Prizes, Awards, Fellowships

2016	Fellow of the American Physical Society (FAPS)
2015	Fellow Royal Society of New South Wales (FRSN)
2015	Fellow Australian Institute of Physics (FAIP)
2015	Distinguished Professorship (Scientia Professor) UNSW
2011-2014	ARC Future Fellow, Professorial Level 3
2000-2005	Royal Netherlands Academy Fellow, Delft University of Technology

## Other academic activities

- referee for grants & thesis in Canada, Germany, France, Netherlands, Switzerland, USA, UK, and EU
- referee for Nature family, Physical Review, Applied Physics Let., Nano Let., IEEE Device Letters

## Publication metrics August 2023

Google 7200+ citations, 43 h-index, i10 index 105, >600 cites pa