



GOVERNANCE AND ADVISORY ROLES

Advisor, Stanford University Faculty Senate C-ACIS 2020-present**Review Panelist**, US National Science Foundation 2020-present**Advisor**, US National Academy of Sciences 2019-present**Director**, NZ Synchrotron Group Ltd 2015–2021**Director**, Geological Surveys [NZ] Ltd 2013–16**Director**, GNS Science International Ltd 2013–16**Director**, Geological Risk Ltd 2013–16**Director**, Isoscan Food Ltd 2013–16**Director**, Isoscan Ltd 2013–16**Director**, Science New Zealand Inc 2013–16**Governor**, International Continental Drilling Project 2013–2016**Advisor**, Antarctic Research Centre, Victoria Univ Wellington 2013–16**Advisor**, Geothermal Institute, University of Auckland 2013–16

LEADERSHIP ROLES

Commonwealth Scientific & Industrial Research Organisation [Australia 2008–13, 2016–2019]**Director** – *Deep Earth Imaging* Future Science Platform [2016–2019]

Leader of a geoscience research team aimed at better imaging and understanding subsurface physical properties to unlock Australia's resource potential. Deep Earth Imaging uses smart analytics and algorithms to simulate geological models and properties to enable geophysical and geochemical patterns to be identified and interpreted and imaged. The startup team is building new analytic tools founded in rock physics, predictive technology, machine learning, uncertainty analysis, forward simulation and inverse modeling.

Chief – *Division of Earth Science and Resource Engineering* [2008–2013]

Leader of geoscience research and resources engineering in CSIRO, Australia's national science organisation, in a division incorporating ~500 scientists, engineers, postdoctoral scholars, students and support staff engaged in research for exploration and production of mineral and energy resources and related social sciences.

Executive Manager – *Queensland Center for Advanced Technologies* [2008–2013]

Leader and director of a multidisciplinary resources technology precinct incorporating ~365 scientists, engineers and support staff from four CSIRO divisions, BHP Billiton, Rio Tinto, the Australian Defence Science Technology Organisation and multiple SMEs.

GNS Science [New Zealand 2013–16]**Chief Executive**

Leader of a New Zealand Crown Research Institute and the New Zealand geological survey, incorporating ~400 scientists, engineers, support staff and postdoctoral scholars engaged in research in national mapping, energy and mineral resource exploration and production, natural hazard risk and resilience (earthquakes, volcanoes, tsunamis), climate change and adaptation, hydrogeology, isotope science and materials science.

John de Laeter Centre of Isotope Research [Australia 2006–08]**Centre Director and Professor** – *Applied Physics*

Leader of a collaborative joint research venture in geochemistry and isotope science incorporating ~50 scientists from the Commonwealth Scientific and Industrial Research Organisation, Curtin University, the University of Western Australia and the State Government of Western Australia.

Stanford University [United States 1977–present]**Professor, Professor Emeritus** – *Geophysics, Geological Sciences*

Research scientist, educator, mentor and science communicator. Built internationally-recognized research programs in geophysics and isotope geoscience. Principal advisor and mentor to postgraduate students, postdoctoral scientists and undergraduates in geophysics, geochemistry and geology. Consultant to government science and funding agencies, universities, resource and technology companies, and academic publishers.

EDUCATION

BS	Physics	St Lawrence University
MSc	Geophysics	University of Toronto
PhD	Geophysics	Australian National University

PUBLICATIONS

~14,145 lifetime citations, h~63 [Google Scholar](#)