

# CURRICULUM VITAE – TWO PAGE

## ANYA M. READING



**Employer:** University of Tasmania  
School of Natural Sciences (Physics)  
Hobart, TASMANIA, Australia

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### History of Employment

2017- **University of Tasmania**, Professor of Geophysics (Physics)  
2007-2016 **University of Tasmania**, Assist/Assoc Professor of Geophysics (Earth Sciences)  
2000-2006 **Australian National University**, Research Fellow/Fellow  
1998-2000 **University of Edinburgh**, Lecturer in Geophysics  
1994-1998 **British Antarctic Survey**, Higher Scientific Officer

### Degrees

1997-1998 **Diploma of Music, Open University**, Distance Learning (part-time study)  
1991-1994 **Ph.D. University of Leeds**, Seismology and Computational Geophysics  
1987-1991 **B.Sc. (Hons), University of Edinburgh**, Geophysics with Astrophysics

### Research Experience

Professor Anya Reading Ph.D, leads the 'Compute Antarctic' research group in the School of Natural Sciences (Physics), University of Tasmania. Her innovative approaches to computational geophysics build on a foundation of field seismology in challenging regions such as Antarctica and outback Australia. From 2010, members of her research group have pioneered the use of machine learning and multivariate statistical techniques for spatial data. These approaches, in tandem with geophysical modelling techniques, have attracted interest as industry-relevant solutions, and most recently, have been applied to the robust inference of subglacial geothermal heat flow for Antarctica with carefully considered uncertainty metrics.

Reading has led over 20 major remote-area instrument deployments, and thus progressed the understanding of the tectonic structure, neotectonic processes and deep Earth properties beneath continents of the southern hemisphere. She co-leads the Circum-Antarctic and East Antarctic program within the Australian Centre for Excellence in Antarctic Science (2021-present) and is Chair of the International Lithosphere Program Coordinating Committee for East Antarctica (2021-2025). She continues research into tectonics and continental structure, and is active in developing techniques for environmental seismology including the detection of changes in the ocean wave climate, and the major outlet glaciers of the East Antarctic ice sheets.

As the academic lead of a working group on Research Culture within the above research Centre, Reading drives change in the way that our research communities operate, towards greater inclusion and diversity. She is an experienced mentor to other researchers, and a dedicated graduate student advisor and coordinator. In addition to service, strategy and policy development contributions at institute, state, national and international level, Reading is especially interested in promoting scientific curiosity in young adults in the wider community, and is an energetic Board Member of the Tasmanian Science Festival 'Beaker Street'.

## Key Publications

- Stål, T., Reading, A.M., Halpin, J.A. & Whittaker, J.M., 2021. Antarctic Geothermal Heat Flow Model: Aq1, *Geochemistry, Geophysics, Geosystems*, e2020GC009428.
- Stål, T., Reading, A.M., Halpin, J.A. & Whittaker, J.M., 2019. A Multivariate Approach for Mapping Lithospheric Domain Boundaries in East Antarctica, *Geophysical Research Letters*, 46, 10404-10416.
- Morse, P.E., Reading, A.M. & Stål, T., 2019. Well-posed geoscientific visualization through interactive color mapping, *Frontiers in Earth Science*, 7, 1-17.
- Gal, M., Reading, A.M., Rawlinson, N. & Schulte-Pelkum, V., 2018. Matched Field Processing of Three-Component Seismic Array Data Applied to Rayleigh and Love Microseisms, *Journal of Geophysical Research-Solid Earth*, 123, 6871-6889.
- Cracknell, M.J. & Reading, A.M., 2014. Geological mapping using remote sensing data: A comparison of five machine learning algorithms, their response to variations in the spatial distribution of training data and the use of explicit spatial information, *Computers & Geosciences*, 63, 22-33.
- Gal, M., Reading, A.M., Ellingsen, S.P., Koper, K.D., Gibbons, S.J. & Nasholm, S.P., 2014. Improved implementation of the fk and Capon methods for array analysis of seismic noise, *Geophysical Journal International*, 198, 1045-1054.
- Reading, A.M., Tkalcic, H., Kennett, B.L.N., Johnson, S.P. & Sheppard, S., 2012. Seismic structure of the crust and uppermost mantle of the Capricorn and Paterson Orogens and adjacent cratons, Western Australia, from passive seismic transects, *Precambrian Research*, 196, 295-308.
- Reading, A.M. & Heintz, M., 2008. Seismic anisotropy of East Antarctica from shear-wave splitting: Spatially varying contributions from lithospheric structural fabric and mantle flow?, *Earth and Planetary Science Letters*, 268, 433-443.
- Reading, A.M., Stein, S. & Mazzotti, S., 2007. The seismicity of the Antarctic plate, *Continental Intraplate Earthquakes: Science, Hazard, and Policy Issues*, 425, 285-298.
- Rawlinson, N., Reading, A. & Kennett, B., 2006. Lithospheric structure of Tasmania from a novel form of teleseismic tomography, *Journal of Geophysical Research-Solid Earth*, 111.
- Reading, A.M., 2006. The seismic structure of Precambrian and Early Palaeozoic terranes in the Lambert Glacier region, East Antarctica, *Earth and Planetary Science Letters*, 244, 44-57.
- Fishwick, S., Kennett, B. & Reading, A., 2005. Contrasts in lithospheric structure within the Australian Craton - insights from surface wave tomography, *Earth and Planetary Science Letters*, 231, 163-176.
- Reading, A., Kennett, B. & Sambridge, M., 2003. Improved inversion for seismic structure using transformed, S-wavevector receiver functions: Removing the effect of the free surface, *Geophysical Research Letters*, 30.
- Reading, A., Mao, W. & Gubbins, D., 2001b. Polarization filtering for automatic picking of seismic data and improved converted phase detection, *Geophysical Journal International*, 147, 227-234.

## Honours

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| 2021 | <b>Research Award (Medal), College of Sciences and Engineering, UTAS</b>         |
| 2019 | <b>Vice Chancellor's Leadership Award (Medal), UTAS</b>                          |
| 2017 | <b>Susan Jones Award for Outstanding Leadership in Science, UTAS SET Faculty</b> |
| 2016 | <b>Fulbright Senior Scholarship, Australian-American Fulbright Commission</b>    |
| 2014 | <b>A.B. Edwards Medal, Geological Society of Australia, award as co-author</b>   |

## Professional Societies

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| <b>International</b> | American Geophysical Union (1992-)<br>Royal Astronomical Society (1995-)<br>Institute of Physics (2007-)<br>Society of Exploration Geophysicists (2007-)<br>Geochemical Society (2007)<br>Fulbright Alumni Association (2018-)   |
| <b>Australia</b>     | Geological Society of Australia (2001-), Office Bearer/Committee Member 2007-2020<br>Australian Soc. of Exploration Geophysicists (2010- ), Office Bearer 2013-2016<br>Australian Institute of Physics (2014-)<br>Royal Society of Tasmania (2016-)<br>Tasmanian Leaders Network (2015-) |