

## DR PAULA KOELEMMEIJER – CURRICULUM VITAE

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 Born: 20<sup>th</sup> March 1986, Zaandam, The Netherlands. Nationality: Dutch, British  
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**Research Interests**

I am interested in diverse aspects of seismology ranging from global tomography and deep Earth structure to seismic noise to study human and animal behaviour. I often work across disciplines, linking seismology with geodynamics and mineral physics, as well as combining insights with zoologists. Much of my research is hypothesis driven, utilising data, forward and inverse modelling, with a strong emphasis on data uncertainties.

**Academic employment**

2022 – Present: **Tutorial Fellow in Earth Sciences**, Exeter College Oxford, UK  
 2022 – Present: **Associate Professor of Geophysics & Royal Society URF**, University of Oxford, UK  
*Maternity leave taken from Dec 2022 to Sep 2023.*  
 2019 – 2022: **Royal Society University Research Fellow & Proleptic lecturer**, Royal Holloway, UK  
*Maternity leave taken from Jul 2020 to Apr 2021, with employment at 80 % until May 2022.*  
 2018 – 2019: **Royal Society University Research Fellow (URF)**, UCL, UK  
 2015 – 2018: **Junior Research Fellow**, University College, University of Oxford, UK  
 2014 – 2015: **Postdoctoral Fellow**, ETH Zurich, Switzerland

**Education & training**

2019 – 2020: **Researchers Academy**, National Co-ordinating Centre for Public Engagement (NCCPE), UK  
 One-year programme aimed at developing public engagement skills  
 2017 – 2018: **Enhancing Teaching Programme**, University of Oxford, UK  
 National postgraduate teaching qualification to develop skills for higher education teaching  
 2010 – 2014: **PhD in Seismology**, University of Cambridge, UK  
 Thesis: “Normal mode studies of long wavelength structures in Earth’s lowermost mantle”, produced 6 publications in *Nature Comm*, *GRL*, *EPSL*, *GJI* & *G3*. Supervisor: Dr Arwen Deuss  
 2008 – 2010: **Master in Geophysics**, Utrecht University, NL. Grade: 92/100, GPA 4.0/4.0 (*cum laude*)  
 Thesis: “Normal mode study of the D” region and core-mantle boundary topography”, published in *Geophys. J. Int.* (2012). Supervisors: Prof Jeannot Trampert & Dr Arwen Deuss  
 2005 – 2008: **Bachelor in Earth Sciences**, Utrecht University, NL. Grade: 90/100, GPA 4.0/4.0 (*cum laude*)  
 Thesis: “Determination of the surface diffusivity of cleaved NaCl crystals in humid environments by impedance spectroscopy”, published in *J. Geophys. Res.* (2012).  
 Supervisors: Prof Chris Spiers & Dr Colin Peach  
 1998 – 2004: **Gymnasium**, St. Bonifatiuscollege, Utrecht, NL. Grade: 85/100 (*cum laude*)  
 Physics, Maths, Chemistry, Geography, Latin, Greek, Dutch, English, German

**Funding record (all as PI unless indicated otherwise)**

2024: **Co-I on NERC Capital Grant**. PI: Prof. Nick Rawlinson (Cambridge). Funding for seismic nodes (£646k)  
 2024: **Royal Society URF renewal**: 3 years of salary and PhD student, including research expenses (£636k)  
 2023: **Royal Society Enhanced Research Expenses**: PhD & PDRA funding and research expenses (£157k)  
 2023: **Co-I on DFG Priority Programme DeepDyn Award**. PI: Dr Bernhard Schuberth (LMU Munich). PhD student funding and research expenses (£131k)  
 2022: **Royal Society Research Grant**: Funding for seismological sensors and fieldwork (£20k)  
 2021: **Royal Society Enhanced Research Expenses**: PhD students funding and research expenses (£169k)  
 2021: **Philip Leverhulme Prize**: PhD student funding and research / equipment costs (£100k)  
 2020: **Co-I on NERC Large Grant**. PI: Prof. Huw Davies (Cardiff), total £3.3m with £164k to Royal Holloway

for 1½ year postdoc funding). I successfully represented the team at the interview

- 2018: **Royal Society Enhancement Award**: research costs and partial PhD project funding (£71k)
- 2018: **Royal Society University Research Fellowship**: 5 years of salary and research funding (£564k)
- 2015: **Junior Research Fellowship**, University College Oxford: 3 years funding (£76k + free housing)
- 2014: **ETH Zurich Postdoctoral Fellowship**: 2 year salary and research funding (£146k)
- 2010: **Nahum Scholarship in Physics**, Pembroke College Cambridge: university fees (£26k)
- 2008: **System Earth Modelling Scholarship**, Utrecht University: Graduate research project funding (£6k)

### Awards

- 2021: **Philip Leverhulme Prize** by the Leverhulme Trust, awarded to early career researchers whose work has had international impact and whose future research career is exceptionally promising
- 2021: **Outstanding Reviewer** for Geophysical Research Letters
- 2018: **Doornbos Memorial Prize** by the Committee for the Study of Earth’s Deep Interior (SEDI) for outstanding work on the Earth’s deep interior by an early career scientist

### Teaching experience

- Lecturing:
  - “Structure & Dynamics of the Earth’s mantle” (4<sup>th</sup> year seminar, Oxford, since 2024).
  - “Geophysics of the deep Earth” (3<sup>rd</sup> year module, Oxford, since 2024).
  - “Planet Earth: Seismology” (1<sup>st</sup> year module, Oxford, since 2023).
  - “Mathematics for Earth Sciences” (1<sup>st</sup> year module, Oxford, since 2023).
  - “Global seismology & Earth structure” (3<sup>rd</sup> year optional module, Oxford, 2022).
  - “Planetary Geology & Geophysics” (2<sup>nd</sup>/3<sup>rd</sup> year module, RHUL, 2022).
  - “Formation of the continental crust” (4<sup>th</sup> year module, RHUL, 2021).
- Tutoring:
  - Personal tutor for Earth Sciences students at Exeter College (Oxford, since 2022)
  - Tutor for undergraduate modules in mathematics and geophysics (Oxford, since 2022)
  - Personal tutor for 3<sup>rd</sup> year students (RHUL, 2021 – 2022)
  - Tutor for 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> year modules in mathematics and geophysics (Oxford, 2015 – 2018)

### Supervising experience

- Postdocs: Dr Franck Latallier (Oxford, 2023 – 2025): 3D finite frequency surface wave tomography and quantitative comparisons with geodynamic model predictions
- PhD students:
  - Sixtine Dromigny (Oxford, 2023 – 2027): Ambient seismic noise for detecting fluids
  - Sam Scivier (Oxford, 2022 – 2026, co-supervisor): Probabilistic seismic hazard assessment
  - Justin Leung (Oxford, 2022 – 2026, co-supervisor): Structure of the lowermost mantle
  - Adrian Mag (Oxford, 2022 – 2026): Backus-Gilbert inferences of Earth structure
  - Miguel Pinto-Ward (Oxford, 2022 – 2026): Background seismicity & seismic noise in London
  - Viktoria Trautner (Oxford, 2021 – 2025, co-supervisor): Iron spin transition in ferropericlasite
  - Federica Restelli (RHUL, 2019 – 2023): Global normal mode studies of mantle structure
  - Harriet Godwin (Oxford, 2016 – 2020, co-supervisor): Multi-scale deep mantle structure
- MSc students:
  - Alice Turner (UCL, 2019, summer project): Effect of spin transition in global tomography
  - Ana Pagu (Oxford, 2017 – 2018, 4<sup>th</sup> year): Proxies for post-perovskite phase transition
  - Judit Gonzales Santana (Oxford, 2016 – 2017, 4<sup>th</sup> year): Core-mantle boundary topography
  - Will Rees (Oxford, 2016 – 2017, 4<sup>th</sup> year, co-supervisor): Seismic signals of elephants

### Evolving track record of research dissemination

- Citations according to Google Scholar (5<sup>th</sup> May 2024): 1024, h-index of 14, i10 index of 14.
- 20 peer-reviewed publications (including 8 first author articles with one as single-author).
- 26 invited research seminars at universities (e.g. Caltech, Cambridge, Princeton, Strasbourg, UCL, Oslo)
- 14 invited conference presentations (e.g. AGU Fall meeting (2014, 2016, 2018, 2x 2019), EGU General Assembly (2018, 2020), SSA meeting (2020), UKSEDI (2021), BSM (2022))
- >30 regular oral presentations (19 as 1<sup>st</sup> author) and >60 poster presentations (>30 as 1<sup>st</sup> author)