Dr. habil. Kathryn Fitzsimmons

Biography

Kathryn Fitzsimmons presently leads the luminescence dating laboratory at the Department of Human Evolution, Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany. She is a geochronologist and Quaternary geologist. Her research interests focus on the reconstruction of records of human-environmental interaction and environmental change throughout the Pleistocene. To understand the response of humans to their environment and thresholds for landscape change, she applies the techniques of luminescence dating, geomorphology, stratigraphy and sedimentology. In her present position, Kathryn is investigating human responses to long term landscape and climate change in the semi-arid regions of Australia and southern Africa, and the Eurasian loess belt. She was awarded the national Albert Maucher Prize from the German Research Council in 2014 for her flexible and dynamic engagement with the Quaternary geosciences.

Prior to arriving at MPI-EVA, Kathryn was a postdoctoral fellow at the Research School of Earth Sciences, Australian National University. During this time she began her work on to the interaction between humans and their environment in the Willandra Lakes, as well as investigating trajectories for desertification and drought in southeastern Australia. Kathryn obtained her PhD in 2007 at the Australian National University on the late Quaternary history of aridity in the central Australian desert dunefields, and this year completed a Habilitation at the University of Leipzig with the theme of human-environmental interactions in dryland regions.

From 2017, Kathryn will establish a new Max Planck Research Group in terrestrial palaeoclimates at the MPI for Chemistry in Mainz, Germany, focussing on the Central Asian loess steppe.

QUALIFICATIONS

2016	**Habilitation, Physical Geography, University of Leipzig** *Dissertation title: Addressing the challenge of reconstructing palaeoenvironments in studies of human-environmental interactions*
2003-2007	**PhD, Quaternary Geology**, **Australian National University (ANU)** *Thesis title: The late Quaternary history of aridity in the Strzelecki and Tirari Desert dunefields, South Australia*
1998-2002	**Bachelor of Science (Honours)**, **University of Melbourne**
1998-2001	**Diploma of Modern Languages (German)**, **University of Melbourne**

RESEARCH INTERESTS

Reconstructing records of Quaternary palaeoenvironmental change and human-environmental interaction in drylands using luminescence dating, geomorphology, and stratigraphy, .

EMPLOYMENT

2017 -	**Max Planck Research Group Leader** Max Planck Institute for Chemistry, Mainz, Germany
2010-2016	**Junior Researcher/ Luminescence dating group leader** Department of Human Evolution, MPI for Evolutionary Anthropology
Sept 2007-Jan 2010	**Postdoctoral Fellow/ Luminescence Dating Laboratory Manager** Research School of Earth Sciences, Australian National University (ANU)
2006-2007	**Research Assistant** Research School of Earth Sciences, ANU
2004	**Full time volunteer** Sunseed Desert Technology, Almería, Spain

PRIZES

2014	**Albert Maucher-Preis für Geowissenschaften,** DFG. *EUR 10 000.* This prize is awarded every 3 years to the best early career geoscientist in Germany.

2007 **Director's Prize for Scientific Communication,** ANU

2007 **Student Travel Prize**
Australasian Quaternary Association

2006 **Student Award**
Cooperative Research Centre for Landscape Environments & Mineral Exploration

RESEARCH GRANTS AND FUNDING

Total funding awarded: EUR >1 080 000.

- *Australian Research Council* – 2 grants as PI. AUD 766 000.
- *National Science Foundation (USA)* – 2 grants as Senior Scientist. USD 380 000.
- *German Federal Ministry of Education and Research (BMBF)* - as PI. EUR 103 000.
- *International Quaternary Association* – Steering committee member, 2 focus groups. EUR 15000.
- *German Research Council (DFG)* – 1 grant as PI, International Cooperation. EUR 8300.

INSTITUTIONAL VISITS

2011 University of Cologne, Germany
2009 Max Planck Institute for Evolutionary Anthropology, Germany
University of New South Wales, Australia
2008 Aberystwyth University, United Kingdom
Scottish Universities' Environmental Research Centre, UK

GRADUATE STUDENT SUPERVISION

2011- **PhD advisor** to Nina Dörschner (MPI/University of Leiden)
Topic: Chronology and environmental context of archaeological sites, Morocco

2010-2012 **PhD advisor** to Anja Guhl (MPI/University of Leipzig – Cum Laude)
Topic: Addressing the challenges of dating archaeological sites, Jonzac, France

2008-2010 **PhD advisor** to Tegan Smith (ANU)
Topic: Palaeoenvironment and landscape evolution at Lake Mulurulu, NSW

TEACHING

University of Leipzig, Germany (2 courses, 5 semesters, 2012-2016)
Max Planck Research School of Human Origins (1 course, 4 semesters, 2010-2015)
University of Cologne (1 course, 1 semester, 2013)
Australian National University (5 courses, 6 semesters, 2005-2009)

LEADERSHIP AND ADMINISTRATION

2014- **Steering Committee Member**
INTIMATE: Integrating Ice Core, Marine and Terrestrial Records

2014-2015 **Scientific Committee Member**
Aeolian deposits in Earth history Conference, Beijing, October 2015

2007-2015 **Executive Committee Member**
Australasian Quaternary Association

2009-2012 **Regional coordinator**
OZ-INTIMATE: Australasian Integration of Ice Core, Marine and Terrestrial records (International Union for Quaternary Research core program)

PUBLICATIONS

47 journal articles; 7 book chapters; 13 other articles

760 citations

h-index 16; i10-index 26

Selected publications:

Fitzsimmons, K.E., et al. (in press) Loess accumulation in the Tian Shan piedmont: implications for palaeoenvironmental change in arid Central Asia. *Quaternary International.*

Fitzsimmons, K.E., et al. (2015) The Mungo mega-lake event, semi-arid Australia: non-linear descent into the last ice age, implications for human behavior. *PLOS ONE* 10(6), e0127008.

Fitzsimmons, K.E., Hambach, U. (2014) Loess accumulation during the last glacial maximum: evidence from Urluia, southeastern Romania. *Quaternary International* 334-335, 74-85.

Fitzsimmons, K.E., et al. (2014) Depositional history and archaeology of the central Lake Mungo lunette, Willandra Lakes, southeast Australia. *Journal of Archaeological Science* 41, 349-364.

Fitzsimmons, K.E., et al. (2013) The Campanian Ignimbrite eruption: new data on volcanic ash dispersal and its potential impact on human evolution. *PLOS ONE* 8, e65839.

Fitzsimmons, K.E., et al. (2013) Late Quaternary palaeoenvironmental change in the Australian drylands: a synthesis. *Quaternary Science Reviews* 74, 78-96.

Fitzsimmons, K.E., et al. (2012) Pleistocene environmental dynamics recorded in the loess of the middle and lower Danube basin. *Quaternary Science Reviews* 41, 104-118.

Fitzsimmons, K.E., et al. (2007) The timing of linear dune activity in the Strzelecki and Tirari Deserts, Australia. *Quaternary Science Reviews* 26, 2598–2616.

Stern, N., Tumney, J., **Fitzsimmons, K.E.**, Kajewski, P. (2013) Strategies for investigating human responses to changes in landscape and climate at Lake Mungo in the Willandra Lakes, southeast Australia. In: Frankel, D., Webb, J.M., Lawrence, S. (eds) *Archaeology in environment and technology: Intersections and Transformations*. Routledge, 31-50.