David M. Whipp, Jr.

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Education

2003—2008	Ph.D. Geology Department of Geological Sciences, University of Michigan, Ann Arbor, MI, USA
1998—2002	B.S. Geology Department of Geological Sciences, University of Michigan, Ann Arbor, MI, USA

Professional Positions

2013—	Assistant Professor Institute of Seismology, Department of Geosciences and Geography, University of Helsinki, Helsinki, Finland
2013—2018	Adjunct of the Faculty of Graduate Studies Department of Earth Sciences, Dalhousie University, Halifax, Canada
2008—2012	Postdoctoral Fellow Department of Oceanography, Dalhousie University, Halifax, Canada and Géosciences Rennes, University of Rennes 1, Rennes, France
2007	Geoscientist (intern) ExxonMobil Exploration Company, Houston, TX, USA
2003—2008	Research Assistant Department of Geological Sciences, University of Michigan, Ann Arbor, MI, USA

Research Experience

Publications

In Review/Preparation

D. M. Whipp, Jr. and T. A. Ehlers. Quantifying the effect of landslide-derived sediments on detrital thermochronology. (in preparation)

Peer-Reviewed Articles

2016 K. R. Landry, I. Coutand, **D. M. Whipp, Jr.**, D Grujic, and J. K. Hourigan. Late Neogene tectonically driven crustal exhumation of the Sikkim Himalaya: Insights from inversion of multithermochronologic data. *Tectonics*, 2016

2014 **D. M. Whipp, Jr.**, C. Beaumont, and J. Braun. Feeding the 'aneurysm': Orogen-parallel mass transport into Nanga Parbat and the western Himalayan syntaxis. *Journal of Geophysical Research, Solid Earth*, 2014

M. A. Murphy, M. H. Taylor, J. Gosse, C. R. P. Silver, **D. M. Whipp, Jr.**, and C. Beaumont. Limit of strain partitioning in the Himalaya marked by large earthquakes in western Nepal. *Nature Geoscience*, 2014

I. Coutand, **D. M. Whipp, Jr.**, D. Grujic, M. Bernet, M. G. Fellin, B. Bookhagen, K. R. Landry, S. K. Ghalley, and C. Duncan. Geometry and kinematics of the Main Himalayan

Thrust and Neogene crustal exhumation in the Bhutanese Himalaya derived from inversion of multithermochronologic data. *Journal of Geophysical Research, Solid Earth*, 2014

2009 **D. M. Whipp, Jr.**, T. A. Ehlers, J. Braun, and C. D. Spath. Effects of exhumation kinematics and topographic evolution on detrital thermochronometer data. *Journal of Geophysical Research, Earth Surface*, 114, 2009

T. F. Schildgen, T. A. Ehlers, **D. M. Whipp, Jr.**, M. C. van Soest, K. X. Whipple, and K. V. Hodges. Quantifying canyon incision and Andean Plateau surface uplift, southwest Peru: A thermochronometer and numerical modeling approach. *Journal of Geophysical Research, Earth Surface*, 114, 2009

2007 **D. M. Whipp, Jr.** and T. A. Ehlers. Influence of groundwater flow on thermochronometer-derived exhumation rates in the central Nepalese Himalaya. *Geology*, 35(9):851–854, 2007

K. W. Huntington, T. A. Ehlers, K. V. Hodges, and **D. M. Whipp, Jr.** Topography, exhumation pathway, age uncertainties, and the interpretation of erosion rates from thermochronometer data. *Tectonics*, 26, 2007

D. M. Whipp, Jr., T. A. Ehlers, A. E. Blythe, K. W. Huntington, K. V. Hodges, and D. W. Burbank. Plio-Quaternary exhumation history of the central Nepalese Himalaya: 2. Thermokinematic and thermochronometer age prediction model. *Tectonics*, 26, 2007

Theses

2008 **D. M. Whipp, Jr.** *Quantitative Thermochronology and Interpretation of Exhumation in the Central Nepalese Himalaya*. PhD thesis, University of Michigan, 2008

Conference Abstracts (past 3 years; *student lead author)

2016 E. Koivisto, I. Kukkonen, and **D. Whipp**. New Master's program in Solid Earth Geophysics at the University of Helsinki: Lessons from one year of operation. 32nd Nordic Geological Winter Meeting, Helsinki, Finland 13-15 Jan, 2016

I. Kukkonen, E. Koivisto, and **D. Whipp**. Helsinki University Kumpula Campus Drill Hole Project. 32nd Nordic Geological Winter Meeting, Helsinki, Finland 13-15 Jan, 2016

J. Schütt* and **D. M. Whipp, Jr.** Controls on continental strain partitioning above an oblique subduction zone, Northern Andes. 32nd Nordic Geological Winter Meeting, Helsinki, Finland 13-15 Jan, 2016

D. M. Whipp, Jr. Orogen-parallel mass transport along the arcuate Himalayan front into Nanga Parbat and the western Himalayan syntaxis. 32nd Nordic Geological Winter Meeting, Helsinki, Finland 13-15 Jan, 2016

2015 I. Coutand, **D. M. Whipp, Jr.**, B. Bookhagen, and Grujic D. Impact of Drainage Basin Geology and Geomorphology on Detrital Thermochronometric Data from Modern River Sands: A Case Study in the Bhutan Himalaya. Abstract T24B-04 presented at 2015 Fall Meeting, AGU, San Francisco, CA, 14-18 Dec, 2015 (invited)

D. M. Whipp, Jr., I. Coutand, and B. Bookhagen. Quantifying spatial variations in mountain erosion: An example from the Himalaya of Bhutan. Second Finnish National Colloquium of Geosciences, University of Helsinki, Helsinki, Finland, 4-5 March, 2015

2014 **D. M. Whipp, Jr.**, T. A. Ehlers, I. Coutand, and B. Bookhagen. Quantifying the influence of sediment source area sampling on detrital thermochronometer data. Abstract EP23G-07 presented at 2014 Fall Meeting, AGU, San Francisco, CA, 15-19 Dec, 2014 (invited)

D. M. Whipp, Jr., C. Beaumont, and J. Braun. Orogen-parallel mass transport along the arcuate Himalayan front into Nanga Parbat and the western Himalayan syntaxis. *Lithosphere 2014 - Eighth Symposium on the Structure, Composition and Evolution of the Lithosphere in Finland. Programme and Extended Abstracts, Turku, Finland, November 4-6, 2014*, Institute of Seismology, University of Helsinki, 2014

Taylor. M. H., R. H. Styron, M. A. Murphy, K. E. Sundell, A. T. McCallister, J. C. Gosse, and **D. M. Whipp, Jr.** Dynamics of east-west extension in the western region of the Indo-Asian collision zone. *Abstracts with Programs*, Geological Society of America, 2014

I. Coutand, **D. M. Whipp, Jr.**, B. Bookhagen, M. Bernet, E. Garzanti, and D. Grujic. Neogene exhumation history of the Bhutan Himalaya quantified using multiple detrital proxies. *Proceedings of the 14th International Conference on Thermochronology, Chamonix, France*, September 2014

K. Landry, I. Coutand, **D. M. Whipp, Jr.**, and D. Grujic. Late Miocene-present exhumation kinematics of the Sikkim Himalaya derived from inversion of zircon (U-Th)/He and apatite fission-track ages using 3-D thermokinematic modelling. *Proceedings of the 14th International Conference on Thermochronology, Chamonix, France*, September 2014

I. Coutand, **D. M. Whipp, Jr.**, D. Grujic, M. Bernet, M. G. Fellin, B. Bookhagen, K. R. Landry, S. K. Ghalley, and C. Duncan. Geometry and kinematics of the Main Himalayan Thrust and Neogene crustal exhumation in the Bhutanese Himalaya derived from inversion of multi-thermochronologic data. 29th Himalayan Karakorum Tibet Workshop, Lucca, Italy, September 2-4, 2014

I. Coutand, **D. M. Whipp, Jr.**, B. Bookhagen, M. Bernet, E. Garzanti, and D. Grujic. Neogene exhumation history of the Bhutan Himalaya quantified using multiple detrital proxies. 29th Himalayan Karakorum Tibet Workshop, Lucca, Italy, September 2-4, 2014

K. Landry, I. Coutand, **D. M. Whipp, Jr.**, and D. Grujic. Late Miocene-present exhumation kinematics of the Sikkim Himalaya derived from inversion of zircon (U-Th)/He and apatite fission-track ages using 3-D thermokinematic modelling. 29th Himalayan Karakorum Tibet Workshop, Lucca, Italy, September 2-4, 2014

I. Coutand, **D. M. Whipp, Jr.**, D. Grujic, M. Brenet, M. G. Fellin, B. Bookhagen, K. Landry, K. Ghalley, and C. Duncan. Geometry and kinematics of the Main Himalayan Thrust and Neogene crustal exhumation in the Bhutanese Himalaya derived from inversion of multi-thermochronologic data. European Geosciences Union General Assembly, Vienna, Austria, 2014

C. G. Creason, J. Gosse, **D. Whipp**, M. Young, and R. Kislitsyn. An exhumation history of Hall Peninsula, Baffin Island, Canada derived from low-temperature thermochronology and 3D thermokinematic modeling. European Geosciences Union General Assembly, Vienna, Austria, 2014

D. M. Whipp, Jr. and T. A. Ehlers. Quantifying the effect of landslide-derived sediments on detrital thermochronology. European Geosciences Union General Assembly, Vienna, Austria, 2014

D. M. Whipp, Jr. and T. A. Ehlers. Quantifying the effect of landslide-derived sediments on detrital thermochronology. First Finnish National Colloquium of Geosciences, Geological Survey of Finland, Espoo, Finland, 19-20 March, 2014

C. G. Creason, J. Gosse, **D. Whipp**, M. Young, and R. Kislitsyn. An exhumation history of Hall Peninsula, Baffin Island, Canada derived from low-temperature thermochronology and 3D thermokinematic modeling. Atlantic Geoscience Society 40th Colloquium and Annual Meeting, Greenwick, N.S., Canada, 2014

J. Gosse, M. A. Murphy, M. H. Taylor, **D. Whipp**, and C. Beaumont. A newly discovered first-order cross-orogen transtentional shear zone: The Western Nepal Fault System. Atlantic Geoscience Society 40th Colloquium and Annual Meeting, Greenwick, N.S., Canada, 2014

Invited Lectures

2014	American Geophysical Union Fall Meeting, San Francisco, CA, USA
2013	University of Tübingen, Tübingen, Germany
2012	University of Helsinki, Helsinki, Finland

2011	Joseph Fourier University, Grenoble, France
2010	Stockholm University, Stockholm, Sweden
2009	Geological Society of America Annual Meeting, Portland, OR, USA
	Joseph Fourier University, Grenoble, France
2007	Dalhousie University, Halifax, NS, Canada

Grants - Research Funding ($\geq$ 5000€)

2014—2018	€ 451,763, *What controls deformation in a 'bent' 3D orogen? The effects of spatially variable rock strength, erosion and mass transport on the tectonics of the Bolivian Andes* Academy Project, Academy of Finland
2014—2017	€ 145,000, *What controls strain partitioning at obliquely convergent ocean-continent margins? 3D dynamics of crustal deformation along the western Andean margin* Three-Year Research Project, University of Helsinki, Helsinki, Finland
2010—2012	$40,000 [CAD], ACEnet Research Fellowships Program Atlantic Canada Computational Excellence Network (ACEnet); co-authored with C. Beaumont

Grants - Computing Allocations

2013	200,000 core-hours, PRACE Preparatory Access Partnership for Advanced Computing in Europe (PRACE)
2012	109 core-years, Compute Canada National Resource Allocation Compute Canada; co-authored with J. Allen and C. Beaumont.

Field Experience

2015	Death Valley region, CA/NV, USA, Finnish Doctoral Program in Geology field trip
2006, 2007	Bighorn Basin, MT/WY, USA, ExxonMobil Field Courses
2005	Nepalese Himalaya, Ph.D. Research
2002—2004	Pyrenees, Central California, Texas/New Mexico, University of Michigan Geological Sciences Field Trips

Teaching Experience

Courses taught

2013— Department of Geosciences and Geography, University of Helsinki, Helsinki, Finland

- Current Topics in Global Geophysics Research
- Geodynamics
- Introduction to Quantitative Geology
- Lithospheric Structure and Dynamics (with Prof. Ilmo Kukkonen, Dept. of Physics)

Short courses

2016 Introduction to lithospheric geodynamic modelling, Nordic Geological Winter Meeting, Helsinki, Finland

- Co-taught with postdoc L. Kaislaniemi, Dept. of Geosciences and Geography

2015 Software Carpentry Bootcamp, University of Helsinki, Helsinki, Finland

- Co-taught with postdoc J. Lehtomäki, Dept. of Biosciences

Introduction to Lithospheric Geodynamics, Geological Survey of Finland, Espoo, Finland

- Co-taught with postdoc L. Kaislaniemi, Dept. of Geosciences and Geography

Guest lecture(s)

2015— Department of Geosciences and Geography, University of Helsinki, Helsinki, Finland
- Dynamic Earth (Introductory geoscience course)

2010 Department of Earth Sciences, Dalhousie University, Halifax, NS, Canada
- Geochronology and Thermochronology

Assistant teaching

2003—2007 Department of Geological Sciences, University of Michigan, Ann Arbor, MI, USA
- Earth Surface Processes and Soils laboratory
- Geology of the Rockies, University of Michigan Camp Davis, WY, USA
- Introduction to Geology laboratory/discussion
- Introduction to Oceanography laboratory

Research Supervision

Main supervisor

2016— Miro Pütz, Bachelors student, Institute of Geophysics, University of Hamburg, Germany

2015— Lars Kaislaniemi, Postdoctoral researcher, Geosciences and Geography, University of Helsinki

2014— Jorina Schütt, Doctoral student, Geophysics, University of Helsinki

2014—2016 Niclas Blomqvist, Masters student, Geosciences and Geography, University of Helsinki

Student Supervisory Committee

2011— Janice Allen, Doctoral student, Earth Sciences, Dalhousie University

2012—2015 Gabe Creason, Masters student, Earth Sciences, Dalhousie University

2011—2014 Kyle Landry, Masters student, Earth Sciences, Dalhousie University

Undergraduate Research Assistants

2014 Niclas Blomqvist, Geosciences and Geography, University of Helsinki

2006—2008 Chris Spath, Computer Sciences, University of Michigan; co-supervised with Todd Ehlers

2004 Nick Olds, Geological Sciences, University of Michigan; co-supervised with Todd Ehlers

Honors and Awards

2014 Exceptional Reviewer
Lithosphere, Geological Society of America

2007 Outstanding Graduate Student Instructor Award
Rackham Graduate School, University of Michigan, Ann Arbor, MI, USA

2007 Outstanding Graduate Student Instructor Award
Department of Geological Sciences, University of Michigan, Ann Arbor, MI, USA

2006 Outstanding Student Paper Award
American Geophysical Union Fall Meeting, Tectonophysics Section

2003 Camp Davis Field Geologist Award
Department of Geological Sciences, University of Michigan, Ann Arbor, MI, USA

Professional Service

Departmental

2015—2017 Departmental council member
Department of Geosciences and Geography, University of Helsinki, Finland

2014— Co-coordinator of Solid Earth Geophysics Masters program
Department of Geosciences and Geography, University of Helsinki, Finland

2013— Co-coordinator department seminar
Department of Geosciences and Geography, University of Helsinki, Finland

2007—2008 Graduate Student Mentor
Department of Geological Sciences, University of Michigan, Ann Arbor, MI, USA

Professional Organizations

2016 Session co-convener
Nordic Geological Winter Meeting, Helsinki, Finland
"Dynamics and evolution of the lithosphere from Archean to present"
"Interactions between climate, erosion and tectonics"

2014 Steering committee member
Lithosphere 2014 symposium, Turku, Finland

2013-2015 Scientific expert in review panel
Fennovoima nuclear power company, Helsinki, Finland

2013 Session Co-convener
28th Himalayan Karakorum Tibet Workshop and 6th International Symposium on Tibetan Plateau Joint Conference, Tübingen, Germany
"Crustal Doming, Exhumation and Lateral Extrusion"

2010 Session Co-convener
Geological Society of America Annual Meeting, Denver, Colorado, USA
"Orogeny: From rigid plates to diffuse lithospheric deformation", one of several sessions celebrating the 30th anniversary of the Structural Geology and Tectonics Division of the GSA.

2007— Referee
Journals: *Basin Research*, *Chemical Geology*, *Earth and Planetary Science Letters*, *Earth Surface Processes and Landforms*, *Geological Society of America Bulletin*, *Geology*, *Geophysica*, *Journal of Geology*, *Journal of Geophysical Research - Earth Surface*, *Journal of Geophysical Research - Solid Earth*, *Lithosphere*, *Nature Geoscience*, *Science*, *Tectonics*

Research project proposals: US NSF Geomorphology and Land Use Dynamics program, US NSF Tectonics program, US NSF Earth Sciences Postdoctoral Fellowship program

Professional Affiliations

2014— European Geosciences Union

2005— Geological Society of America

2003— American Geophysical Union

Community Outreach

2007 Guest Lecturer
Melbourne High School, Melbourne, Florida, USA
Introduced eleventh grade English students to the geology and culture of Nepal related to their reading of Jon Krakauer's *Into Thin Air*.

Personal

Date of birth: March 9, 1980

Citizenship: US

Family: Married, two children

Languages

English: Native language. Fluent speaker, reader and writer.
Finnish: CEFR level A1.3, basic knowledge.
French: Basic knowledge. Functional speaker, reader and writer.

Helsinki, Finland, April 9, 2016