

# David Michael Whipp, Jr.

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## EDUCATION

**University of Michigan, Ann Arbor, MI (2003-present)**  
Ph.D. Candidate, Geological Sciences, Advisor: Todd A. Ehlers  
Dissertation: Quantitative thermochronology and interpretation of exhumation in the central Nepalese Himalaya

**University of Michigan, Ann Arbor, MI (1998-2002)**  
B.S., Geological Sciences; Academic minor, Physics

## WORK EXPERIENCE

**Research Assistant, University of Michigan, Ann Arbor, MI (2003-present)**  
Developed 3D numerical modeling code used to interpret bedrock and detrital cooling age data from the Nepalese Himalaya. Supervised undergraduate laboratory assistants.

**Graduate Student Instructor, University of Michigan, Ann Arbor, MI (2003-2007)**  
Earth Surface Processes and Soils laboratory  
Geology of the Rockies, University of Michigan Camp Davis, WY  
Introduction to Geology laboratory/discussion  
Introduction to Oceanography laboratory

**Intern, ExxonMobil Exploration Company, Houston, TX (April-July 2007)**  
Created 1D subsidence history models of the Bighorn Basin, WY integrated with thermochronometer data from surrounding ranges. Presented 1D basin modeling results at an ExxonMobil field school.

**Laboratory Assistant, University of Michigan, Ann Arbor, MI (2001-2003)**  
Predicted thermochronometer sample ages using a 3D thermal model. Webmaster: [www.geowall.org](http://www.geowall.org).  
Experimented with stereo visualization software. Developed a 2D tectonic model to predict exposed surface rock types. Calculated rock surface area on geologic maps. Processed various datasets.

## FIELD EXPERIENCE

**Bighorn Basin, MT/WY, ExxonMobil Field School (2006,2007)**  
Collected thermochronometer and organic/inorganic maturity samples. Worked with a team of students to generate a hydrocarbon play map based on field observations and various datasets.

**Nepalese Himalaya, Ph.D. Research (2005)**  
Collected thermochronometer rock samples and assisted in mapping structures within the Modi River valley in central Nepal.

**UM Geological Sciences Field Trips (2002-2004)**  
Spanish Pyrenees - Stratigraphy and structure  
Central California - Metamorphic petrology  
Texas/New Mexico - Carbonate sedimentology

## AWARDS

- Outstanding Graduate Student Instructor, Rackham Graduate School, University of Michigan (2007)
- Outstanding Graduate Student Instructor, Geological Sciences, University of Michigan (2007)
- Outstanding Student Paper, American Geophysical Union Fall Meeting, Tectonophysics Section (2006)
- Camp Davis Field Geologist Award, Geological Sciences, University of Michigan (2003)

## SERVICE

- Graduate Student Mentor, Geological Sciences, University of Michigan (2007-present)

## GRANTS

- Scott Turner Award in Earth Science, Geological Sciences, University of Michigan (2004)  
Modeling Tectonic and Erosional Coupling in the Greater Himalaya

## INVITED LECTURES

- Dalhousie University, Halifax, NS (2008)  
Quantifying the exhumation history of the central Nepalese Himalaya: Insights from numerical modeling and thermochronology

## PUBLICATIONS (IN REVIEW/PREP)

- Schildgen, T., T.A. Ehlers, **D.M. Whipp, Jr.**, K. Whipple, K. Hodges, M. van Soest (in review with co-authors)  
Quantifying canyon incision and Andean Plateau surface uplift, southwest Peru: A thermochronometer and numerical modeling approach

## PUBLICATIONS (PEER REVIEWED)

- Whipp, D.M. Jr.**, T.A. Ehlers (2007)  
Influence of groundwater flow on thermochronometer-derived exhumation rates in the central Nepalese Himalaya, *Geology*: Vol. 35, No. 9, pp. 851-854, doi:10.1130/G23788A.1
- Huntington, K.W., T.A. Ehlers, K.V. Hodges, **D.M. Whipp Jr.** (2007)  
Topography, exhumation pathway, age uncertainties, and the interpretation of erosion rates from thermochronometer data, *Tectonics*, 26, TC4012, doi:10.1029/2007TC002108
- Whipp, D.M. Jr.**, T.A. Ehlers, A.E. Blythe, K.W. Huntington, K.V. Hodges, D.W. Burbank (2007)  
Plio-Quaternary exhumation history of the central Nepalese Himalaya: 2. Thermo-kinematic and thermochronometer age prediction model, *Tectonics*, 26, TC3003, doi:10.1029/2006TC001991

## CONFERENCE ABSTRACTS

- Schildgen, T., T. Ehlers, M. van Soest, **D. Whipp**, K. Whipple, K. Hodges (2008)  
Quantifying canyon incision and Andean Plateau surface uplift, southwest Peru: A thermochronometer and numerical modeling approach, *Geophysical Research Abstracts*, Vol. 10, EGU2008-A-08016
- Whipp, D.M. Jr.**, T.A. Ehlers (2007)  
Influence of topographic evolution and faulting on detrital thermochronometer ages: Application to the Nepalese Himalaya, *Eos Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract T21E-04

**Whipp, D.M. Jr., T.A. Ehlers (2006)**

Influence of groundwater flow on thermochronometer ages and exhumation rates: Insights from the Nepalese Himalaya, *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract T13E-07

Huntington, K.W., T.A. Ehlers, K.V. Hodges, **D.M. Whipp Jr.** (2006)

Age Uncertainties, Topography, Exhumation Pathway, and the Interpretation of Erosion Rates and Exhumation Kinematics from Thermochronometer Age-Elevation Data, *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract T11D-0464

**Whipp, D.M. Jr., T.A. Ehlers, A.E. Blythe, K.W. Ruhl, K.V. Hodges, D.W. Burbank (2005)**

Kinematic and Erosion History of the Greater Himalayan Sequence, Central Nepal, from Integrated Thermochronology and Numerical Modeling, *Geological Society of America Abstracts with Programs*, Vol. 37, No. 7, p. 346

**Whipp, D.M., T.A. Ehlers, A.E. Blythe, D.W. Burbank (2004)**

Constraining the Tectonic History of the Himalaya in Central Nepal with Low-Temperature Thermochronometry and Numerical Modeling, *Eos Trans. AGU*, 85(47), Fall Meet. Suppl., Abstract T31B-1308

### PROFESSIONAL AFFILIATIONS

American Geophysical Union (2003-present)

Geological Society of America (2005-present)

Mineralogical Society of America (2005-present)

American Association of Petroleum Geologists (2006-present)

### UNDERGRADUATE RESEARCH SUPERVISION

**Undergraduate Research Assistant(s)**

Chris Spath - Computer science major; co-supervised with Todd Ehlers (2007-present)

Nicholas Olds - Geology major; co-supervised with Todd Ehlers (2004)

**Undergraduate Research Opportunity Program (UROP) Students**

Chris Spath - Computer Science major; co-supervised with Todd Ehlers (2006-2007)

**UROP abstracts and presentations**

Spath, C., T.A. Ehlers and **D.M. Whipp** (2007)

Thermal modeling, age dating and mountain erosion, University of Michigan, UROP symposium, April

### COMPUTATIONAL SKILLS

**Environments** - Mac OS, UNIX variants, Windows

**Languages** - Fortran 77/90, Python, MATLAB, C, C++, shell scripting, Java, Arc Macro Language, Lotus Macro Language, Tecplot Macro Language, php, html

**Software** - Tecplot, Sigmaplot, 2DMove, ArcInfo, ArcGIS Desktop, RiverTools, Adobe Illustrator and Photoshop, ENVI, ABAQUS, ANSYS, Microsoft Office, OpenOffice, Lotus 1-2-3, Codewarrior, standard UNIX commands

### EXTRACURRICULAR ACTIVITIES

University of Michigan Ski and Snowboard Team Alumni Association and Educational Foundation, Co-founder, Board of Directors (2005-present)

University of Michigan Ski and Snowboard Team, President, Co-Captain (2002)

University of Michigan Ski and Snowboard Team, Executive board (1999-2001)