

PROMOTION RECOMMENDATION
The University of Michigan
College of Literature, Science, and the Arts

Marin K. Clark, assistant professor of Earth and environmental sciences, College of Literature, Science, and the Arts, is recommended for promotion to associate professor of Earth and environmental sciences, with tenure, College of Literature, Science, and the Arts.

Academic Degrees:

Ph.D.	2003	Massachusetts Institute of Technology
A.B.	1995	Cornell University

Professional Record:

2006 – present	Assistant Professor, Department of Earth and Environmental Sciences, University of Michigan
2003 – 2005	Texaco Prize Postdoctoral Research Fellow, California Institute of Technology

Summary of Evaluation:

Teaching – Professor Clark is a committed educator, who thinks deeply about her teaching philosophy and effectiveness. She has demonstrated her skill successfully in a wide variety of courses at every level. She has played a key role in re-vitalizing introductory course offerings at the Camp Davis field station and initiated a new applied geophysics course for undergraduates on the Ann Arbor campus. Professor Clark is rigorous in her expectations, yet skillful in presenting material and drawing students to the demanding aspects of Earth science. In response, students are enthusiastic in their comments and give her strong evaluation scores. Her first Ph.D. student is now a tenure-track assistant professor at a major research university.

Research – Professor Clark’s fieldwork in Tibet generally involves large research teams research problems addressing tectonic-climate-erosion interactions are inter-disciplinary in nature. She is an active collaborator who is sought after because of her unique expertise in linking surface topography with underlying lithosphere dynamics. Her collaborators include those in the National Academy of Sciences. External reviewers consistently rank her as one of the most creative and accomplished scientists of her generation in her field. The number of citations per paper is unusually high, which has been the case throughout her publishing career.

Recent and Significant Publications:

- “Widespread Late Cenozoic increase in erosion rates across the interior of eastern Tibet constrained by detrital low-temperature thermochronometry,” *Tectonics*, 31, 2012, TC3014, doi:10.1029/2011TC002969.
- “Continental collision slowing due to viscous mantle lithosphere rather than topography,” *Nature*, 483(7387), 2012, pp. 74-77.
- “Synchronized fault motion and accelerated erosion in northeastern Tibet circa the onset of India-Asia collision,” with A. R. Duvall, et al., *Earth and Planetary Science Letters*, 304, 2011, pp. 520-526.

“Early Cenozoic faulting of the northern Tibetan Plateau margin from apatite (U-Th)/He ages,” with K. A. Farley, et al., *Earth and Planetary Science Letters*, 296, 2010, pp. 78-88.

Service – Professor Clark has performed above normal service in her department. She has served as an editor for the high-impact journal *Geology* (2008-present) and has been invited to serve on a National Science Foundation panel and workshop.

External Reviewers:

Reviewer (A)

“Marin is a bright...scientist with an impressive record of original contributions to orogenic studies. ... Ten...scientists of this generation with similar interests come to mind who, in my opinion, can be broadly separated into two grouping. I would place Marin in the superior cohort... ..her [*Nature*] paper...is indeed one of the most significant articles to appear recently in this field.”

Reviewer (B)

“Marin is a focused, intelligent, dedicated and ambitious scientist. I am confident the University of Michigan will do well to award her tenure and promotion: Marin has earned it, and your institution will profit from her continued presence.”

Reviewer (C)

“Her greatest strength is her breadth and ability to bring a variety of tools to tectonic problems. ... She has established herself in a position bridging surface processes and tectonics, which is a growth field with high potential. ... I fully expect that she will continue to make valuable contributions to the field and is deserving of tenure...”

Reviewer (D)

“She has distinguished herself as one of a very few...who can compellingly relate surface processes to deeper geodynamics and longer timescales than is typically done. ... The 2012 Tectonics article...is truly a very nice piece of work. It is careful, detailed, and a beautiful proof of concept...”

Reviewer (E)

“...I evaluate her scholarship as being outstanding both in its approach and in its results: Marin Clark applies field, remote sensing of several kinds, laboratory analytical, and modeling approaches all of which require strong backgrounds in geology and geophysics coupled with the application of modern statistical methods to her research. Few of her contemporaries, and none of her seniors, excel in all 5 fields...”

Reviewer (F)

“In every way I find Dr[.] Clark’s contributions to both research and teaching to be outstanding. In research she has developed a distinctive approach that combines quantitative studies of surface and upper crustal processes with inferences about underlying drivers in the deeper lithosphere and plate tectonics. This is a field in which she has few peers and for which she has already established an international reputation.”

Reviewer (G)

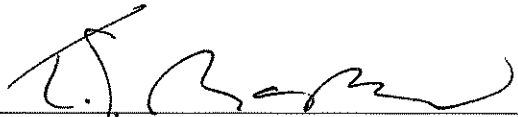
“...Dr. Clark is one of the leading lights in current efforts to link surface processes and topography with lithospheric dynamics. ... Clark’s recent paper in *Nature* employs a new, parsimonious reinterpretation of well-known data sets...to propose a truly novel geodynamic model. ...this new analysis provides compelling new ideas and may define a whole new paradigm. This paper is a great example of how Dr. Clark combines rigorous analysis with innovation and simple models, and it emphasizes her unusual ability to think ‘outside of the box.’”

Reviewer (H)

“...Clark is a careful scientist who thinks deeply about her observations, has original ideas, and is interested in questions of broad importance. ...much of her work has illustrated to the geochemistry/geochronology community what can be done with carefully thought out sampling and high quality analyses.”

Summary of Recommendation:

Professor Clark does outstanding research that touches a diverse set of issues. She is also an excellent teacher and citizen. The Executive Committee of the College of Literature, Science, and the Arts and I recommend that Assistant Professor Marin K. Clark be promoted to the rank of associate professor of Earth and environmental sciences, with tenure, College of Literature, Science, and the Arts.



Terrence J. McDonald
Arthur F. Thurnau Professor,
Professor of History and Dean
College of Literature, Science, and the Arts

May 2013