

## Amanda Henck Schmidt

Curriculum vitae

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### EDUCATION

- 2010 Ph.D. Geological Sciences, University of Washington  
2002 BSE Civil and Environmental Engineering, Princeton University

### PROFESSIONAL APPOINTMENTS/EMPLOYMENT

- 2018- Associate Professor, Geology Department, Oberlin College  
2011-2018 Assistant Professor, Geology Department, Oberlin College

### PUBLICATIONS

Note: My name is bolded; Oberlin student co-authors are identified with a \*.

#### Refereed journal articles

- 2019 **Schmidt, A.H.**, Denn, A.R., Hidy, A.J., Bierman, P.R. and Tang, Y., 2019. Human and natural controls on erosion in the Lower Jinsha River, China. *Journal of Asian Earth Sciences*, 170:351-359.
- 2018 **Schmidt, A. H.**, Sosa Gonzalez, V., Bierman, P. R., Neilson, T. B., and Rood, D. H., 2018, Agricultural land use doubled sediment loads in western China's rivers. *Anthropocene*. 21:95-106.
- 2017 Neilson, T.B., **Schmidt, A.H.**, Bierman, P.R., Rood, D.H. and Gonzalez, V.S., 2017. Efficacy of *in situ* and meteoric <sup>10</sup>Be mixing in fluvial sediment collected from small catchments in China. *Chemical Geology*. 471:119-130.
- 2017 Gonzalez, V.S., **Schmidt, A.H.**, Bierman, P.R. and Rood, D.H., 2017. Spatial and temporal replicability of meteoric and *in situ* <sup>10</sup>Be concentrations in fluvial sediment. *Earth Surface Processes and Landforms*. 42:2570-2584.
- 2017 **Schmidt, A. H.**, Y. X. Li, Y. Tang, 2017. Unintended side effects of conservation: a case study of changing land use in Jiuzhaigou, Sichuan, China. *Mountain Research and Development*, 37(1):56-65. <http://www.bioone.org/doi/full/10.1659/MRD-JOURNAL-D-15-00056.1>.
- 2017 Singleton, A.A.\* , **Schmidt, A.H.**, Bierman, P.R., Rood, D.H., Neilson, T.B., Greene, E.S., Bower, J.A.\* , Perdrial, N., 2017. Effects of grain size, mineralogy, and acid-extractable grain coatings on the distribution of the fallout radionuclides <sup>7</sup>Be, <sup>10</sup>Be, <sup>137</sup>Cs, and <sup>210</sup>Pb in river sediment. *Geochim Cosmochim Acta*. 179: 71-86. <http://dx.doi.org/10.1016/j.gca.2016.10.007>

- 2016 Harrell, S., Yang, Q. X., Viraldo, S. J., Hagmann, R. K., Hinckley, T., and **Schmidt, A. H.**, 2016, Forest is forest and meadows are meadows: cultural landscapes and bureaucratic landscapes in Jiuzhaigou County, Sichuan: *Archiv Orientální*, 84(3), 595-+.
- 2016 **Schmidt, A.H.**, Neilson, T.B., Bierman, P.R., Rood, D.H., Ouimet, W.B., Sosa Gonzalez, V., 2016. Influence of topography and human activity on apparent in situ <sup>10</sup>Be-derived erosion rates in Yunnan. *Earth Surface Dynamics*. v. 4, n. 4, 819-830.
- 2015 Wei, R. J., Liang, C., **Schmidt, A. H.**, and Zhang, C. M., 2015, 210Pb dating of outlet sediments in Mengtong watershed of Yunnan: South to North Water Transfers and Water Science and Technology, v. 13, no. 1, p. 55-58.
- 2015 d'Alpoim Guedes, J. A., H. L. Lu, A. M. Hein, **A. H. Schmidt**, 2015. Early evidence for the use of wheat and barley as staple crops on the margins of the Tibetan Plateau. *Proceedings of the National Academy of Science*. 112(18): 5625-5630.
- 2014 Urgenson, L. U., **A. H. Schmidt**, J. K. Combs, S. Harrell, T. M. Hinckley, Q. X. Yang, Z. Y. Ma, Y. X. Li, H. L. Lu, A. MacIver, 2014. Traditional Livelihoods, Conservation and Meadow Ecology in Jiuzhaigou National Park, Sichuan, China. *Human Ecology*. 42(3): 281-291.
- 2013 Hinckley, T. M., P. Chi, K. Hagmann, S. Harrell, **A. H. Schmidt**, L. Urgenson, Z. Y. Zeng, 2013. The interaction between human uses of forest resources and forest and individual tree productivity: case study of Yunnan pine in SW China. *Journal of Mountain Science*. 10(5):824-832.
- 2013 Trac, C. J., **A. H. Schmidt**, S. Harrell, T. M. Hinckley, 2013. Is the Returning Farmland to Forest Program a Success? Three case studies from Sichuan. *Environmental Practice*, 15(3):350-366. doi:10.1017/S1466056613000355.
- 2013 Qiao, X., Y. H. Xu, Y. Tang, **A. H. Schmidt**, C. S. Zhang, 2013. Demonstrating urban environmental changes using toxic metals of road dust and roadside soil in Chengdu, southwestern China. *Stochastic Environmental Research and Risk Assessment*. August 2013. doi:10.1007/s00477-013-0790-2.
- 2012 Feathers, J.K., M.A. Casson, **A. Henck**, M.L. Chithambo, 2012. Application of pulsed OSL to fine-grained samples. *Radiation Measurements*. 47, 201-209.
- 2012 **Schmidt, A. H.**, J. K. Combs, A. Freeburg, R. Jespersen, A. Robbins, H. S. Rogers, K. Sheldon, E. Wheat, 2012. Interdisciplinary, inter-institutional, international graduate education: a new model for training future environmental leaders. *Bioscience*, 62(3), 296-304. doi:10.1525/bio.2012.62.3.11.
- 2011 **Henck, A. C.**, K. W. Huntington, J. Stone, D. R. Montgomery, and B. Hallet, 2011. Spatial controls on erosion in the Three Rivers Region, southwest China. *Earth and Planetary Science Letters* 303, 71-83. doi: 10.1016/j.epsl.2010.12.038.
- 2011 **Schmidt, A. H.**, D. R. Montgomery, K. W. Huntington, and C. Liang, 2011. The question of Communist land degradation: new evidence from local erosion and basin-wide sediment yield in SW China and SE Tibet. *Annals of the Association of American Geographers*. 101(3):1-19.
- 2010 **Henck, A. C.**, D. R. Montgomery, K. W. Huntington, and C. Liang, 2010. Monsoon control of effective discharge, Yunnan and Tibet. *Geology* 38, 975-978. doi:10.1130/G31444.1.
- 2010 **Henck, A.**, J. Taylor, H. L. Lu, Y. X. Li, Q. X. Yang, B. L. Grub, S. J. Breslow, A. Robbins, A. Elliott, T. M. Hinckley, J. Combs, L. S. Urgenson, S. Widder, X. X. Hu, Z. Y. Ma, Y. W. Yuan, D. J. Jian, X. Liao, and Y. Tang, 2010. Hillslope terraces and

- swidden agriculture in northern Sichuan, China. *Quaternary Research* 73, 201-207. doi: 10.1016/j.yqres.2009.10.001.
- 2010 Urgenson, L. S., R. K. Hagmann, **A. C. Henck**, S. Harrell, T. M. Hinckley, S. J. Shepler, B. L. Grub, and P. M. Chi, 2010. Social-ecological dynamics of a forested watershed in SW China. *Society and Ecology*. **115**(5): 2. [online] <http://www.ecologyandsociety.org/vol15/iss4/art2/>.
- 2009 L.S. Gaulke, X. Weiyang, A. Scanlon, **A. Henck**, T. Hinckley, 2009. Evaluation Criteria for Implementation of a Sustainable Sanitation and Wastewater Treatment System at Jiuzhaigou National Park, Sichuan Province China. *Environmental Management*. doi: 10.1007/s00267-009-9398-1.
- 2007 Trac, C. J., S. Harrell, T. Hinckley, **A. Henck**. 2007. Reforestation programs in Southwest China: reported success, observed failure, and the reasons why. *Journal of Mountain Science* 4(4): 275-292.

### **Manuscripts in press**

### **Manuscripts in submission**

### **Manuscripts in revision**

**Schmidt, A. H.**, Lüdtke, S., Andermann, C., in revision. Seasonal groundwater fluctuations considerably smaller than surface and vadose zone water storage in monsoon Asia. *Earth and Planetary Science Letters*.

### **Other publications**

- 2018 \*Martin, J., **Schmidt, A. H.**, 2018. Python exercises for use in teaching GIS. A series of teaching activities online as part of the Cutting Edge Peer Reviewed Exemplary Teaching Activities collection.
- 2014 **Schmidt, A. H.**, 2014. Landscape Evolution Debate. A teaching activity online as part of the Cutting Edge Peer Reviewed Exemplary Teaching Activities collection.
- 2014 **Schmidt, A. H.**, 2014. Lag to peak with a stream table. A teaching activity online as part of the Cutting Edge Peer Reviewed Exemplary Teaching Activities collection.
- 2011 **Schmidt, A. H.**, 2011. Google Earth and Meandering Rivers. A teaching activity online as part of the Cutting Edge Peer Reviewed Exemplary Teaching Activities collection.
- 2011 **Schmidt, A. H.**, 2011. Logging, erosion, and sediment yield in western China. A vignette to accompany a new geomorphology textbook as online supplemental material. <http://serc.carleton.edu/59464>
- 2011 **Schmidt, A. H.**, 2011. Effective discharge in monsoon controlled rivers. A vignette to accompany a new geomorphology textbook as online supplemental material. <http://serc.carleton.edu/59944>
- 2011 **Schmidt, A. H.**, 2011. Blog posts for the NY Times Scientist at Work: <http://scientistatwork.blogs.nytimes.com/author/amanda-schmidt/>
- 2010 **Henck, A. C.**, 2010, Spatial and temporal patterns of erosion in Western China and Tibet: University of Washington, 158 p. PhD dissertation.

- 2002 **Henck, A**, 2002. Geomorphology of steep, forested headwater basins in the northeast. Princeton, NJ: Princeton University. 117 p. BSE thesis.

## **AWARDS AND HONORS**

- 2018 NSF Earth Sciences Instrumentation and Facilities grant; 2 years  
2018 Oberlin College Internal award for a research assistant  
2018 2 Oberlin College Grant in Aid awards for research support  
2018 2 Oberlin College Power Travel Grants to fund Cuba field work  
2018 2 Oberlin College LIASE research awards for Asian studies and the environment  
2017 NSF Geomorphology and Land Use Dynamics RAPID grant; 1 year  
2017 NSF Geomorphology and Land Use Dynamics research grant; 2 years  
2017 Oberlin College LIASE grant to develop Asia-based material for a course  
2017 Oberlin College LIASE research assistant award for Asian studies and the environment  
2017 Oberlin College internal award for a research assistant  
2016 Oberlin College HHMI grant to add python material to GIS course  
2016 Oberlin College internal award for a research assistant  
2015 Oberlin College Powers Travel Grant to fund winter field work  
2015 Oberlin College Grant in Aid to fund winter field work  
2015 Oberlin College LIASE grant to develop Asia-based material for a course  
2015 Oberlin College internal award for a research assistant  
2015 Oberlin College Powers Travel Grant  
2015 Oberlin College Grant in Aid  
2014 Chinese Natural Science Foundation Young Foreign Researcher; finalist  
2014 Nominated for Oberlin College Professor Props  
2014 Oberlin College internal award for a research assistant  
2013 Oberlin College CLEAR Curriculum Development Grant  
2013 Oberlin College internal award for a research assistant  
2013 “Open Fund” grant from Academic Committee of the State Key Laboratory of Hydraulics and Mountain River Engineering (SKLH) at Sichuan University; 2 years  
2012 Oberlin College internal award for a research assistant  
2012 Graduate Women in Science Fellowship honorable mention  
2012 National Science Foundation Hydrological Sciences supplement to research grant; 6 months  
2011 National Science Foundation Hydrological Sciences research grant; 3 years  
2011 Oberlin College internal award for a teaching assistant  
2011 Oberlin College internal award for a research assistant  
2011 Oberlin Modeling Initiative grant  
2010 Jiuzhaigou National Park/Sichuan University Postdoctoral Research Fellowship; 2 years  
2009 Fulbright Student Fellowship  
2009 UW Earth and Space Sciences Joseph Vance Research Award  
2006 GSA J. Hoover Mackin Student Research Award  
2006 GSA Robert Fahnestock Student Research Award  
2005 NSF Graduate Research Fellowship; 3 years  
2005 Foreign Language and Area Studies Fellowship (declined due to other funding)  
2004 Multinational Collaborations on Challenges to the Environment IGERT Fellow; 2 years

## **INVITED TALKS**

- 2017 The effects of Chinese land use policies on erosion in southwest China; Tulane University; New Orleans; 29 September 2017
- 2017 Understanding hydrological processes of rivers in monsoon Asia; University of Nevada, Reno; 3 February 2017
- 2016 The effects of Chinese land use policies on erosion in southwest China; Vanderbilt University; 21 October 2016
- 2016 Modulation of the hydrological cycle in monsoon Asia by transient storage; Cambridge University; 19 May 2016
- 2016 Modulation of the hydrological cycle in monsoon Asia by transient storage; German Research Center for Geosciences (GFZ) Potsdam; 17 May 2016
- 2016 The effects of Chinese land use policies on erosion in southwest China; Appalachian State University; 18 March 2016
- 2016 Using <sup>10</sup>Be and short-lived fallout radionuclides to track sediment movement through watersheds in Yunnan, China; Sichuan University; 19 January 2016
- 2016 Erosion and fire in the lower Jinsha; Sichuan University; 5 January 2016
- 2013 Spatial patterns of erosion in western China and Tibet; Illinois State University; 15 November 2013
- 2013 The effects of Chinese land use policies on erosion in western China; Mercyhurst University; 29 January 2013
- 2012 Spatial patterns of erosion in western China and Tibet; Wooster College; 13 September 2012
- 2012 An earth scientist's perspective on Big Interdisciplinarity; Social Science research Council Dissertation Proposal Development Workshop on Ecological History; 31 May 2012
- 2012 Spatial patterns of erosion in western China and Tibet; Kent State University; 6 April 2012
- 2010 Spatial controls on erosion in the Three Rivers Region, SW China (in Chinese); Chinese Academy of Sciences Hydrobiology Laboratory, Wuhan, China; 23 November 2010
- 2010 Spatial patterns of erosion in the Three Rivers Region, SW China; Rensselaer Polytechnic Institute; 3 February 2010
- 2009 Spatial controls on erosion in the Three Rivers Region, SW China; University of Vermont; 24 November 2009
- 2009 Cryptic legacy of Chinese Communist Party environmental policies on sediment yield in SW China and SE Tibet; University of Wisconsin; 16 November 2009

## **CONFERENCE ACTIVITY**

### **Sessions organized**

- 2018 The fluvial geomorphology of post-glacial rivers; Geological Society of America Annual Meeting; 6 November 2018
- 2017 The development and application of chronometers in geomorphology; American Geophysical Union Fall Meeting; 13 December 2017

- 2017 Fluvial Geomorphology of Post-Glacial Rivers; Geological Society of America Northeast/North central Section Meeting; 19 March 2017
- 2015 Orogenic Evolution from the Middle Crust to Earth's Surface; American Geophysical Union Fall Meeting; 14 and 15 December 2015
- 2010 Linking Life to Landscape Dynamics; American Geophysical Union Fall Meeting; 14 December 2010

### **Talks given**

Note: invited talks are indicated with \*

- 2017 \*The geomorphic history of humans in southwestern China; Geological Society of America Annual Meeting; 23 October 2017
- 2017 \*Tracers derived in situ replicate and mix better than fallout tracers incorporated into grain coatings; Geological Society of America Annual Meeting; 22 October 2017
- 2016 Estimating transient water storage from precipitation-discharge hysteresis; Geological Society of America Annual Meeting; 25 September 2016
- 2015 Using <sup>10</sup>Be and short-lived fallout radionuclides to track sediment movement through watersheds in Yunnan, China; Geological Society of America Annual Meeting; 2 November 2015
- 2013 Understanding hydrological processes of rivers draining the Tibetan Plateau; Geological Society of America Annual Meeting; 30 October 2013
- 2012 Why does the loess have stones in it? An investigation of loess deposits in Jiuzhaigou National Park, Sichuan, China; Geological Society of America Annual Meeting; 5 November 2012
- 2012 \*What are Natural Landscapes? A Case Study of Land-use, Management, and People in Jiuzhaigou National Park, Sichuan, China; Association of American Geographers Annual Meeting; 25 February 2012
- 2009 Interdisciplinary investigations of anthropogenic hillslope terraces, Jiuzhaigou National Park, China; North American Luminescence Workshop; October 2009
- 2009 Cryptic legacy of Chinese Communist Party policies on sediment yield in SW China and SE Tibet; Geological Society of America Fall Meeting; October 2009
- 2007 Patterns of Erosion in the Three Rivers Area, Eastern Tibet; Geological Society of America Fall Meeting; October 2007
- 2006 Patterns of Erosion in the Three Rivers Region, China; Western Pacific Geophysics Meeting; July 2006

### **Posters presented**

- 2017 Agricultural land use doubled sediment yield of western China's rivers; American Geophysical Union Fall Meeting; 12 December 2017
- 2015 Effects of Chinese deforestation and reforestation policies on sediment sourcing in Yunnan, China; American Geophysical Union Fall Meeting; 15 December 2015
- 2011 Landslides, habitable land, and hazards for Tibetan villages in Jiuzhaigou National Park, Sichuan, China; Geological Society of America Fall Meeting; 11 October 2011

- 2007 Using interdisciplinary methods to understand Jiuzhaigou terraces; Conference for Sustainability IGERTs; October 2007
- 2007 Summary of June 2007 Research Collaborations; Conference for Sustainability IGERTs; October 2007
- 2006 Taking environmental science out of the classroom and into Jiuzhaigou National Park, Sichuan, China; Geological Society of America Fall Meeting; October 2006
- 2004 Three Pedagogical Internships; IGERT PI Annual Meeting; May 2004

### Conference abstracts

Note: My name is bolded; undergraduate student co-authors are identified with a \*.

- 2018 \*Maffie, S., \*Grande, A., \*Soord, N., **Schmidt, A. H.**, Bierman, P. R., 2018. Analyzing the effects of land use on soil erosion in southwestern China using fallout radionuclides. Geological Society of America Abstract with Programs. Vol. 50, No. 6. doi: 10.1130/abs/2018AM-321852
- 2018 \*Dix, M., \*Lewis, A., \*Hill, M., \*Maffie, S., \*Sussman, F., **Schmidt, A. H.**, 2018. Short-term study of the impact of land use on creek development in Plum Creek, Oberlin OH. Geological Society of America Abstract with Programs. Vol. 50, No. 6. doi: 10.1130/abs/2018AM-321005
- 2018 \*Hill, M., \*Bordt, E. A., \*Quock, M., \*Amber, E., Corbett, L. B., \*Biales, J., **Schmidt, A. H.**, Bierman, P. R., 2018. Assessing spatial erosion patterns resulting from Hurricane Maria on Dominica, Lesser Antilles, Caribbean. Geological Society of America Abstract with Programs. Vol. 50, No. 6. doi: 10.1130/abs/2018AM-321777
- 2017 Bierman, P. R., Corbett, L. B., Shakun, J. D., **Schmidt, A. H.**, 2017. Counting atoms to place human impacts in a geologic context. Geological Society of America Abstracts with Programs. Vol. 49, No. 6. doi: 10.1130/abs/2017AM-306223
- 2017 \*Dix, M., \*Hill, M., \*Sussman, F., **Schmidt, A. H.**, 2017. Temporal and spatial variability in sediment source in Plum Creek, Oberlin, OH. Geological Society of America Abstracts with Programs. Vol. 49, No. 6. doi: 10.1130/abs/2017AM-300191
- 2017 \*McGuire, C., **Schmidt, A. H.**, Keen-Zebert, A., Collins, B. D., d'Alpoim Guedes, J., 2017. Timing and provenance of loess in Jiuzhaigou, China. Geological Society of America Abstracts with Programs. Vol. 49, No. 6. doi: 10.1130/abs/2017AM-307967
- 2017 **Schmidt, A. H.**, Bierman, P. R., Sosa-Gonzalez, V., Neilson, T. B., Rood, D. H., \*Martin, J., \*Hill, M. 2017. Agricultural land use doubled sediment yield of western China's rivers, Abstract EP21D-1867 presented at 2017 Fall Meeting, AGU, New Orleans, LA, 11-15 Dec.
- 2017 **Schmidt, A. H.**, Bierman, P. R., Collins, B. D., Harrell, S., Hinckley, T., Tang, Y., 2017. The geomorphic history of humans in southwestern China. Geological Society of America Abstracts with Programs. Vol. 49, No. 6. doi: 10.1130/abs/2017AM-303455
- 2017 **Schmidt, A. H.**, Bierman, P. R., Sosa-Gonzalez, V., Neilson, T. B., Rood, D. H., \*Campbell, M. K., \*Hill, M., 2017. Tracers derived *in situ* replicate and mix better than fallout tracers incorporated into grain coatings. Geological Society of America Abstracts with Programs. Vol. 49, No. 6. doi: 10.1130/abs/2017AM-299479
- 2017 \*Talbot-Wendlandt, H., \*Jimerson, C., \*Tomenchok, K., \*Hill, M., **Schmidt, A. H.**, Frey, H. M., 2017. Spatial patterns of erosion on Dominica, a volcanic tropical island.

- Geological Society of America Abstracts with Programs. Vol. 49, No. 6. doi: 10.1130/abs/2017AM-299765
- 2017 \*Tomenchock, K., \*Hill, M., \*Jimerson, C., \*Talbot-Wendlandt, H., **Schmidt, A. H.**, Frey, H. M., 2017, Landslides and Volcanoes: Fingerprinting Erosional Processes on a tropical island, Dominica, Lesser Antilles, Abstract EP51A-1636 presented at 2017 Fall Meeting, AGU, New Orleans, LA, 11-15 Dec.
- 2017 \*Campbell, M. K., **Schmidt, A. H.**, \*Woodmansee, S. J., and \*Bower, J. A., 2017, The effects of agricultural drainage tiles on erosion in the Vermillion River watershed, northeastern Ohio: Geological Society of America Abstracts with Programs, v. 49, no. 2.
- 2017 \*Martin, J., **Schmidt, A. H.**, 2017. Teaching python scripting through ArcGIS: Geological Society of America Abstracts with Programs, v. 49, no. 2.
- 2016 \*Campbell, M. K., **Schmidt, A. H.**, \*Woodmansee, S. J., and \*Bower, J. A., 2016, The effects of agricultural drainage tiles on erosion in the Vermillion River watershed, northeastern Ohio: Geological Society of America Abstracts with Programs, v. 48, no. 7.
- 2016 \*Curiel, M., \*Doak, S., \*Hill, M., **Schmidt, A. H.**, and Collins, B., 2016, Quantifying land use and erosion in southwest China: Geological Society of America Abstracts with Programs, v. 48, no. 7.
- 2016 \*Hill, M., \*Singleton, A. A., \*Isaacs, C., \*Dix, M., Greene, E. S., **Schmidt, A. H.**, and Bierman, P. R., 2016, Acid leaching to increase detection limits in gamma counting unsupported Pb-210, National Association of Black Geoscientists Annual Technical Conference: New Orleans, LA.
- 2016 **Schmidt, A. H.**, Andermann, C., and Ludtke, S., 2016, Estimating transient water storage from precipitation-discharge hysteresis: Geological Society of America Abstracts with Programs, v. 48, no. 7.
- 2016 \*Singleton, A., \*Isaacs, C., \*Hill, M., \*Dix, M., Greene, E. S., **Schmidt, A. H.**, and Bierman, P. R., 2016, Acid leaching to increase detection limits in gamma counting unsupported Pb-210: Geological Society of America Abstracts with Programs, v. 48, no. 7.
- 2015 \*Campbell, M. K., \*Bower, J. A., **Schmidt, A. H.**, Neilson, T. B., Sosa-Gonzalez, V., and Bierman, P. R., 2015, Fallout radionuclides in soil profiles and history of land use in Yunnan Province, China: Geological Society of America Abstracts with Programs, v. 47, no. 7, p. 515.
- 2015 \*Fiallo, D., **Schmidt, A. H.**, and Simonson, B. M., 2015, Using grain size and carbonate precipitation in loess terraces to reconstruct mass wasting events and trace groundwater movement: Geological Society of America Abstracts with Programs, v. 47, no. 7, p. 735.
- 2015 \*Martin, J., \*Lawrence, D., **Schmidt, A. H.**, Bierman, P. R., Sosa-Gonzalez, V., \*Singleton, A., and \*Qiu, Y., 2015, Effects of Chinese deforestation and reforestation policies on sediment sourcing in Yunnan, China: Geological Society of America Abstracts with Programs, v. 47, no. 7, p. 515.
- 2015 **Schmidt, A. H.**, Bierman, P. R., Sosa-Gonzalez, V., Neilson, T. B., \*Singleton, A., \*Qiu, Y., \*Bower, J. A., and Rood, D. H., 2015a, Effects of Chinese deforestation and reforestation policies on sediment sourcing in Yunnan, China, v. Abstract EP21C-0923 presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec.
- 2015 **Schmidt, A. H.**, Neilson, T. B., Bierman, P. R., Sosa-Gonzalez, V., \*Bower, J. A., Rood, D. H., and Ouimet, W. B., 2015b, Using <sup>10</sup>Be and short-lived fallout radionuclides to



- track sediment movement through watersheds in Yunnan, China: Geological Society of America Abstracts with Programs, v. 47, no. 7, p. 240.
- 2015 \*Singleton, A., **Schmidt, A. H.**, Sosa-Gonzalez, V., \*Qiu, Y., Neilson, T. B., Greene, E. S., Bierman, P. R., Rood, D. H., \*Campbell, M. K., and \*Woodmansee, S. J., 2015, Effects of grain size and mineralogy on the distribution of fallout radionuclides  $^7\text{Be}$ ,  $^{10}\text{Be}$ ,  $^{137}\text{Cs}$ , and  $^{210}\text{Pb}$  in sediment: Geological Society of America Abstracts with Programs, v. 47, no. 7, p. 240.
- 2015 Sosa-Gonzalez, V., **Schmidt, A. H.**, Bierman, P. R., Neilson, T. B., \*Singleton, A., \*Qiu, Y., \*Bower, J. A., and Rood, D. H., 2015, Understanding sediment sourcing and erosion controls from  $^{10}\text{Be}$  measurements in fluvial sediments from Yunnan, China: Geological Society of America Abstracts with Programs, v. 47, no. 7, p. 240.
- 2014 \*Dunn, C., B. C. Yellen, J. Woodruff, **A. H. Schmidt**, 2014. How unusual is Tropical Storm Irene? A case study of storm deposition in the Littleville Lake, Huntington, MA. Geological Society of America *Abstracts with Programs* 46(2), 84.
- 2014 \*Garcia Greco, G., \*D. Fiallo, T. B. Neilson, \*J. Martin, A. H. Schmidt, P. Bierman, V. Sosa-Gonzalez, R. J. Wei, C. M. Zhang, C. Liang, 2014. Determining sediment sources and sinks in a small headwater watershed in Yunnan, China using short-lived radionuclides. Geological Society of America *Abstracts with Programs* 46(6), 800.
- 2014 Neilson, T. B., P. Bierman, A. H. Schmidt, V. Sosa-Gonzalez, D. Rood, 2014. Impacts of contemporary sediment yield on the use of *in situ*  $^{10}\text{Be}$  in river sediment as a tool for estimating background erosion rates. Geological Society of America *Abstracts with Programs* 46(6), 665.
- 2014 \*Woodmansee, S., \*J. A. Bower, **A. H. Schmidt**, 2014. Using short lived radionuclides and x-ray diffraction to explore the effects of agricultural drainage tiles on depth of erosion in the Vermilion watershed, Northern Ohio. Geological Society of America *Abstracts with Programs* 46(6), 800.
- 2013 Neilson, T. B., **A. H. Schmidt**, V. Sosa-Gonzalez, \*M. Rothenberg, P. Bierman, 2013. Understanding modern landscape behavior using meteoric and *in situ*  $^{10}\text{Be}$  and  $^{137}\text{Cs}$  in large river basins, SW China. Geological Society of America *Abstracts with Programs* 45(7).
- 2013 **Schmidt, A. H.**, C. Andermann, S. Ludtke, \*A. J. Gillom, 2013. Understanding hydrological processes of rivers draining the Tibetan Plateau. Geological Society of America *Abstracts with Programs* 45(7).
- 2013 \*Gilliom, A. J., **A. H. Schmidt**, C. Andermann, \*M. Rothenberg, 2013. Groundwater storage in western China and eastern Tibet observed from precipitation-discharge hysteresis. Geological Society of America *Abstracts with Programs* 45(4), 62. (note: this poster won best student poster at the meeting.)
- 2012 \*Bower, J. A., **A. H. Schmidt**, 2012. Using short-lived radionuclides to explore the effects of agricultural drainage tiles on erosion depth in the Vermilion watershed, Ohio. Geological Society of America *Abstracts with Programs* 44(7), 418.
- 2012 \*Curliss, L., **A. H. Schmidt**, 2012. Controls on bedrock sinuosity in Eastern Tibet. Geological Society of America *Abstracts with Programs* 44(7), 247.
- 2012 **Schmidt, A. H.**, B. D. Collins, B. M. Simonson, \*K. X. Goh, \*Z. Alikaya, Y. Tang, G. P. Deng, 2012. Why does the loess have stones in it? An investigation of loess deposits in Jiuzhaigou National Park, Sichuan, China. Geological Society of America *Abstracts with Programs* 44(7), 186.

- 2012 **Schmidt, A. H.**, L. S. Urgenson, J. K. Combs, Q. X. Yang, Z. Y. Ma, T. M. Hinckley, and S. Harrell, 2012. What are Natural Landscapes? A Case Study of Land-use, Management, and People in Jiuzhaigou National Park, Sichuan, China. In "Association of American Geographers." New York, NY.
- 2011 Collins, B. D., **A. H. Schmidt**, S. Harrell, 2011. Soil erosion, fluvial processes, and land use history in a mountainous catchment in southwest Sichuan Province, China. Association of American Geographers Annual Meeting, Seattle, WA.
- 2011 \*Rothenberg, M., \*L. Gelb, \*C. A. Appleby, \*B. M. Sherrod, \*S. Taylor, and **A. H. Schmidt**, 2011. GIS and community-based learning in an undergraduate classroom. Geological Society of America *Abstracts with Programs* 43(5), 403.
- 2011 **Schmidt, A. H.**, B. D. Collins, \*K. X. Goh, J. P. Schmidt, Y. Tang, Y. X. Li, and G. P. Deng, 2011. Landslides, habitable land, and hazards for Tibetan villages in Jiuzhaigou National Park, Sichuan, China. Geological Society of America *Abstracts with Programs* 43(5), 446.
- 2010 Lu, H. L., **A. Henck**, J. Taylor, Y. X. Li, 2010. Archaeological research at a Han Dynasty settlement in Jiuzhaigou National Park, Sichuan. Society of American Archaeologists, St. Louis, MO.
- 2009 **Henck, A.**, J. Taylor, J. Feathers, T. Hinckley, H. L. Lu, Y. X. Li, Y. Tang, 2009. Interdisciplinary investigations of anthropogenic hillslope terraces, Jiuzhaigou National Park, China. North American Luminescence Workshop. Seattle, WA. October 2009.
- 2009 **Henck, A.**, D. R. Montgomery, C. Liang, 2009. Cryptic legacy of Chinese Communist Party policies on sediment yield in SW China and SE Tibet. Geological Society of America *Abstracts with Programs*, Vol. 41.
- 2008 Feathers, J. K., M. A. Casson, and **A. Henck**, 2008, Application of pulsed OSL to fine-grained samples. Presented at the 12th International Conference on Luminescence and Electron Spin Resonance Dating, Beijing.
- 2008 Hagedorn, B., B. K. Nelson, T. J. Kennel, **A. Henck**, and B. Hallet, 2008. Seasonal trends in solutes and  $^{87}\text{Sr}/^{86}\text{Sr}$  ratios of SE Tibet rivers: Yarlung Tsangpo and Parlung. Goldschmidt Conference 2008, Vancouver. *Geochimica et Cosmochimica Acta* 72 (12): A400.
- 2008 Taylor, J., **A. Henck**, Y. X. Li, H. L. Lu, and Q. X. Yang, 2008. Interdisciplinary, international research at the Asano Archaeological Site, Jiuzhaigou National Park, Sichuan, China. Society of American Archaeologists, Vancouver, Canada.
- 2007 **Henck, A.**, J. O. Stone, D. R. Montgomery, B. Hallet, 2007. Patterns of Erosion in the Three Rivers Area, Eastern Tibet. Geological Society of America *Abstracts with Programs*, Vol. 39, No. 6, p. 183.
- 2006 Koons, P., B. Hallet, **A. Henck**, Y. P. Liu, P. Zeitler, 2005. Topographic Expression of Crustal Velocity Curves: An Example from Eastern Himalaya to Burma. *Eos Trans. AGU*, v. 87 no. 47, Fall Meeting Suppl., Abstract T51F-07.
- 2006 **Henck, A.**, D. Montgomery, B. Hallet, C. Liang, S. Frister, 2006. Patterns of Erosion in the Three Rivers Region, China. *Eos Trans. AGU*, 87(36), West. Pac. Geophys. Meet. Suppl., Abstract H25A-03.
- 2006 **Henck, A.**, M. D. Mulligan, S. Frister, A. Scanlon, R. Chen, T. Hinckley, S. Harrell, 2006. Taking environmental science out of the classroom and into Jiuzhaigou National

- Park, Sichuan, China. Geological Society of America *Abstracts with Programs*, Vol. 38, No. 7, p. 220.
- 2005 Dryer, D., L. Gaulke, **A. Henck**, T. Nguyen, E. Wheat, 2005, Assessing the oxygen dead zone in the Hood Canal. International Conference on Environment and Livelihoods in Coastal Zones: Managing Agriculture-Fishery-Aquaculture Conflicts, Bac Lieu, Vietnam.
- 2004 Montgomery, D., B. Hallet, Y. P. Liu, N. Finnegan, A. Gillespie, M. Kuharic, **A. Henck**, A. Anders, & H. Greenberg, 2004. Evidence for Holocene megafloods down the Tsangpo River Gorge, Southeastern Tibet. *Eos Trans. AGU*, v. 85 no. 47, Fall Meeting Suppl. Abstract T34B-02.

## **CAMPUS TALKS**

- 2017 The effects of Chinese land use policies on erosion in southwest China; Science Friday, Oberlin College; 17 February 2017
- 2011 Quantifying Tibetan land use choices in Jiuzhaigou National Park; Science Friday, Oberlin College; 8 April 2011
- 2010 Quantifying Tibetan land use choices in Jiuzhaigou National Park (in Chinese); Sichuan University, Sichuan, China; 30 November 2010
- 2010 Anthropogenic Hillslope Terraces (in Chinese); Jiuzhaigou National Park Management Bureau; 15 July 2010
- 2008 Epistemology of Erosion; University of Washington; 26 March 2008

## **TEACHING EXPERIENCE**

### **Oberlin College**

Earth Surface Processes (Spring 2011, Fall 2012, Spring 2013, Spring 2014, Spring 2016, Spring 2017, Spring 2018, Spring 2019)

Applied Geographic Information Systems (Spring 2011, Spring 2012, Fall 2013, Spring 2016, Fall 2016, Fall 2017, Fall 2018)

Soils and Society (Spring 2012, Spring 2013, Spring 2014, Fall 2017, Spring 2019)

Earth's Environment (lab only) (Fall 2013, Fall 2016, Fall 2017, Fall 2018)

### **University of Washington**

Introduction to Environmental Science (Summer 2009)

Field Environmental Science (co-instructor) (Summer 2006)

Sichuan University and University of Washington Exchange Program (site director) (2005-2006)

Fluvial Geomorphology (TA) (Spring 2004)

Introduction to Geology (TA) (Fall 2003)

## **RESEARCH EXPERIENCE**

Landslides and tropical storms in setting patterns of erosion in Dominica (Keck project)

Groundwater storage in monsoon Asia (collaborative with an Oberlin student and GFZ German Research Centre for Geosciences, Potsdam)

Understanding the effects of drainage tiles on erosion depth and sediment sources in the Vermilion watershed, Ohio (collaborative with Oberlin students)  
Controls on bedrock river sinuosity in eastern Tibet (collaborative with an Oberlin student)  
Understanding human-altered landscapes, Jiuzhaigou National Park, China (collaborative with the University of Washington and Sichuan University)  
Human-landscape interactions in Yangjuan, Sichuan, China (collaborative with the University of Washington and Sichuan University)  
Deciphering connections among land management, soil erosion, and sediment yield in large river basins (collaborative with Oberlin students, the University of Vermont, Imperial College London, and Sichuan University)  
Spatial and temporal patterns of erosion in western China (dissertation; collaborative with Sichuan University)  
Assessing the oxygen dead zone in the Hood Canal (interdisciplinary project at the University of Washington)  
Geodynamics of Indentor Corners – Namche Barwa (RA on multi-institutional project)

### **SERVICE TO PROFESSION**

Served on National Science Foundation panels for:

Geomorphology and Land Use Dynamics division (2)  
Critical Zone Research Coordination Networks (1)

Reviewed proposals for:

American Philosophical Society (4)  
National Science Foundation  
Hydrologic Sciences division (2)  
Geomorphology and Land Use Dynamics division (5)  
Geography and Spatial Sciences division (1)  
Paleo Perspectives on Climate Change (1)  
Integrated Earth Systems (1)

National Geographic Society Young Explorer's Award (1)

Natural Sciences and Engineering Research Council of Canada Collaborative  
Research and Training Experience Program (1)

Quaternary Geology and Geomorphology division at GSA (student awards) (1 year, 5 students)

Reviewed manuscripts for:

Annals of the Association of American Geographers (1 paper, reviewed twice)  
Arid Land Management (1)  
Basin Research (1)  
Conservation Letters (1)  
Earth Surface Processes and Landforms (1)  
Environmental Practice (1)  
Environmental and Engineering Geology (1)  
Geochimica et Cosmochimica Acta (1)  
Geology (1)  
Geomorphology (1)  
Geophysical Research Letters (1 paper, reviewed twice)

Gondwana Research (1)  
International Journal of Nursing Education (1)  
Journal of Asian Earth Sciences (1)  
Journal of Geoscience Education (3)  
Journal of Mountain Science (1)  
Science Advances (2)  
Science of the Total Environment (1)  
Quaternary International (1)  
Member of the awards panel for the Quaternary Geology and Geomorphology Section of the Geological Society of America (2013-2015)  
Nominated paper for the Kirk Bryan Award (Quaternary Geology and Geomorphology Section of the Geological Society of America) (2015)

### **DEPARTMENTAL/COLLEGE SERVICE**

Science Advisory Committee (2<sup>nd</sup> to chair); 2017-2018; 2018-2019 (for ESPC and geology)  
Environmental Studies Program Committee; 2018-2019  
Led winter term trip to China (January 2019)  
Workshop on communicating science with figures for STRONG Scholars (2016, 2017)  
Met with visiting HHMI awardees from U. Houston; 2017  
Admissions panels; 2016, 2017  
Participated in brainstorming sessions for HHMI proposal; 2016  
Traveled to NY with admissions office; 2016  
Assisted with Keck Symposium at Oberlin and was Keck rep. at GSA meeting; 2016  
Hosted department seminar speakers; 2013, 2014, 2016  
Co-facilitator (with Steven Wojtal) of LIASE workshop on resilience; November 2014  
Archaeological Studies Committee; 2013-2014, 2016-2017, 2017-2018, 2018-2019 (Chair)  
Fellowship Committee; 2011-2012, 2013-2014, 2016-2017, 2017-2018  
Geology department searches for visiting assistant professor (7 searches); 2011-2019  
Luce in Asia Studying the Environment grant proposal group; 2012-2014  
Quantitative and Formal Reasoning Committee; 2013-2014, 2016-2017  
Science Friday seminar series organizer; 2011-2012

### **EXTRACURRICULAR COLLEGE SERVICE**

Bahá'í affiliate with the Office of Religious and Spiritual Life; 2015-2019  
Advisor to Oberlin College Cycling Team; 2011-2012; 2018-2019

### **COMMUNITY INVOLVEMENT/OUTREACH**

2018 Skype a Scientist – video chat with 5 teachers and 6 class sessions  
2018 Skype interview with 5<sup>th</sup> grade science class for Women in Science week (with an OC research student)  
2017 Skype interview with 3<sup>rd</sup> grade science class for Women in Science week (with an OC research student)  
2017 Interviewed by the Government Information Service TV station in Dominica

- 2017 Interviewed by Dominica Traveler about my research
- 2016 Coordinate geology department participation in STEM Night – outreach for local grade 3-5 students

## **MEDIA COVERAGE**

- 2015 A River Wild. Oberlin College news article about my field work (<http://news.oberlin.edu/articles/river-wild/>)
- 2014 The Role of Fallout Radionuclides in River Erosion. Oberlin College news article about my grain size study (<https://oncampus.oberlin.edu/source/articles/2015/08/31/role-fallout-radionuclides-river-erosion>)
- 2013 ‘Case of the Missing Dirt’ Brings Oberlin to China. Oberlin College news article about my field work (<http://news.oberlin.edu/articles/case-missing-dirt-brings-oberlin-china/#.UqXE6eJkZ8E>)

## **ADDITIONAL PROFESSIONAL TRAINING**

### **Workshops hosted off campus**

- 2017 Building Resilient Communities: Ethnic and Religious Dialogue; Philadelphia, PA; July 2017.
- 2014 Teaching Sedimentary Geology, Geomorphology, and Paleontology; St. Paul, MN; June 2014. Gave invited presentation at workshop.
- 2013 Concept Sketches in Geoscience Courses; Online webinar
- 2012 Teaching Problem Solving; Online reading and discussion group
- 2011 Early Career Workshop for Geoscience Faculty; Williamsburg, VA; June 2011
- 2011 Designing GIS and Remote Sensing Courses; Online workshop

### **Workshops hosted at Oberlin**

- 2015 Art to Survive Disasters By; Oberlin, OH; February 2015
- 2013 Junior faculty workshop on developing new approaches to teaching
- 2013 Enhancing Quantitative and Formal Reasoning Across the Disciplines
- 2012 Workshop on Experiential Learning and the Oberlin Project
- 2012 Workshop for junior faculty on Incorporating Writing into Classes
- 2011 Making Writing More Visible in Our Classes

## **LANGUAGES**

Mandarin Chinese, excellent speaking, good reading and writing

## **PROFESSIONAL MEMBERSHIPS**

American Geophysical Union  
 Association of American Geographers  
 Association of Women Geoscientists

Earth Science Women's Network  
Geological Society of America  
National Association of Geoscience Teachers  
Sigma Xi