

Biographical Sketch - Dr. Steven J. Whitmeyer

Professional Preparation

University of New Hampshire,	Geology,	B.Sc. with honors, 1999
Boston University,	Earth Sciences,	Ph.D., 2004
University of New Mexico,	Tectonics,	Post Doctoral Fellow, 2004

Appointments

2005 - present, Associate (formerly Assistant) Professor and Director of Ireland Field Course,
James Madison University
2004 - 2005, Visiting Scholar, University of Tennessee

Publications

Five related contributions

- Whitmeyer, S.J. 2012. Community mapping in geology education and research: How digital field methods empower student creation of accurate geologic maps. In Kastens, K., and Manduca, C.A. (eds) *Earth and Mind II: A Synthesis of Research on Thinking and Learning in the Geosciences*, GSA Special Paper 486, p. 171-174, doi: 10.1130/2012.2486(27).
- De Paor, D.G., Whitmeyer, S.J., Marks, M., and Bailey, J. Geoscience applications of client / server scripts, Fusion Tables, and dynamic KML. In Whitmeyer, S.J., De Paor, D.G., Bailey, J., and Ornduff, T. (eds) *Google Earth and Virtual Visualizations in Geoscience Education and Research*, GSA Special Paper, *in press*.
- Shufeldt, O., Whitmeyer, S.J., and Bailey, C.M. The new frontier of interactive, Digital Geologic Maps: Google Earth-based multi-level maps of Virginia geology. In Whitmeyer, S.J., De Paor, D.G., Bailey, J., and Ornduff, T. (eds) *Google Earth and Virtual Visualizations in Geoscience Education and Research*, GSA Special Paper, *in press*.
- De Paor, D.G. and Whitmeyer, S.J. 2011. Geological and Geophysical Modeling on Virtual Globes Using KML, COLLADA, and Javascript. *Computers and Geosciences*, v. 37, p. 100-110, doi:10.1016/j.cageo.2010.05.003.
- Whitmeyer, S.J., Nicoletti, J., and De Paor, D.G. The Digital Revolution in Geologic Mapping. *GSA Today*, v. 20, p. 4-10, doi: 10.1130/GSATG70A.1.

Five other recent contributions

- Whitmeyer, S.J., Bailey, J., De Paor, D.G., and Ornduff, T. (eds). *Google Earth and Virtual Visualizations in Geoscience Education and Research*, GSA Special Paper, *in press*.
- Whitmeyer, S.J., and Mogk, D.W. 2009. Geoscience Field Education: A Recent Resurgence. *EOS Transactions AGU*, v. 90, p. 385-386, doi:10.1029/2009EO430001.
- Whitmeyer, S.J., Feely, M., De Paor, D.G., Hennessy, R., Whitmeyer, S., Nicoletti, J., Santangelo, B., Rivera, M., Daniels, J. 2009. Visualization Techniques in Field Geology Education: Modern Pedagogy and Original Research in Western Ireland. In Whitmeyer, S.J., Mogk, D., and Pyle, E.J. (eds) *Field Geology Education: Historical Perspectives and Modern Approaches*, GSA Special Paper 461, p. 105-116.
- Whitmeyer, S.J., Mogk, D., and Pyle, E.J. (eds). 2009. *Field Geology Education: Historical Perspectives and Modern Approaches*, GSA Special Paper 461, 356 p.
- Whitmeyer, S.J. and Karlstrom, K.E. 2007. Tectonic model for the Proterozoic growth of North America. *Geosphere*, 3, p. 220-259, doi: 10.1130/GES00055.1.

Synergistic Activities

- Whitmeyer has been at the forefront of the development and integration of 3D and 4D visualization techniques in geoscience research and education, with a diverse group of international colleagues (see Collaborators below.) Much of this work has been disseminated through Google Earth educational workshops at NE GSA (Durham, NH, 2007), SE GSA (St. Petersburg, FL, 2009), national GSA (Portland, OR, 2009), and NE-SE GSA in Baltimore, MD (2010).
- Whitmeyer was a co-organizer of the GSA Penrose conference on Google Earth: Visualizing the possibilities for geoscience education and research, held at Google headquarters in Mountain View, CA in January, 2011.
- Whitmeyer is the director of the James Madison University Ireland Field Course. This field course is a 6 week capstone geologic experience for undergraduate students from across the U.S. Strengths of the curriculum include digital mapping and visualization, where students learn modern techniques of field mapping using handheld PCs and produce professional-quality geologic maps using GIS.
- Whitmeyer is chair of the EarthScope Education and Outreach subcommittee and a member of the EarthScope steering committee.
- Whitmeyer has advised and mentored more than 20 undergraduate students on research projects that focus on mapping, geoscience visualization, and Google Earth (see below.)

Collaborators

Bailey, C. (College of William & Mary); Bailey, J. (Univ. of Alaska, Fairbanks); Biggs, T. (Univ. of Virginia); Burton, W. (USGS); De Paor, D. (Old Dominion University); Evans, M. (Central Connecticut State University); Feely, M. (National University of Ireland, Galway); Fichter, L. (James Madison University); Hennessy, R. (National University of Ireland, Galway); Karlstrom, K. (Univ. of New Mexico; post doctoral advisor); Mogk, D. (Montana State University); Pavlis, T. (Univ. of Texas, El Paso); Pyle, E. (James Madison University); Simpson, C. (Old Dominion University, PhD advisor); Wintsch, R. (Indiana University)

Recent Undergraduate Research Students and Projects

2011-2012	Kyle Hazelwood	“Structural Mapping and Analyses In the Monterey SE Quadrangle, Va”
	Catherine Patterson	“Developing a Template for Efficient Migration of Data from ArcGIS to Google Earth”
	Michael Tracy	“Detailed Structural Analyses of a Fault Ramp Exposure in Bergton, Va”
2010-2011	Jesse Drummond	“Bedrock mapping of the Luray Quadrangle, VA”
2009-2010	Nicholas Pence & Elizabeth Weisbrot	“Design and Evaluation of Google Earth-based Learning Objects in Geoscience Curricula”
2008-2009	Jeremy Nicoletti & Michael Rivera	“Interactive, Virtual Globe-based Geologic Maps of Field Areas in Western Ireland”