

Curriculum Vitae

Jonathan R. Gourley Ph.D.

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EDUCATION:

- (2000-2006) **University of Connecticut**, Ph.D. in Geological Sciences
Thesis: Syn-tectonic extension and lateral extrusion in Taiwan
- (1997-2000) **California State University Fresno**, M.S. in Geology
Thesis: Neogene fault constraint of the Soda-Avawatz fault zone, Mojave Desert, California
- (1996) **Indiana University**, Field geology program in Rocky Mountains
- (1992-1996) **Dickinson College**, B.S. in Geology and B.S. in Environmental Science
- (1988-1992) **Phillips Exeter Academy**, Exeter, NH

GRANTS, AWARDS AND SCHOLARSHIPS:

- USFS Grant (\$5000) for field expense for White Mountain Research (2017)**
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Trinity CUGS Arts Grant (\$3000) collaboration with ParkRiver.org (2012)
National Science Foundation, (Co-PI) Major Research Instrumentation for XRD (2010)
Best Poster for Educational Institution, CT GIS Day (2009)
Best Thesis Award, School of Science and Mathematics, CSU Fresno (2000)
Dean's Medal Nominee, CSU Fresno (spring 2000)
Dana Scholarship for Geology, CSU Fresno, (1998-1999)
William V. Vernon Prize, Dickinson College, (1996)

RECENT WORK EXPERIENCE:

- (2018-present) **Principal Lecturer/ Lab Coordinator**, Trinity College, Hartford, CT
- (2012-2018) **Senior Lecturer/ Lab Coordinator**, Trinity College, Hartford, CT
- (2006-2011) **Lecturer/ Lab Coordinator**, Trinity College, Hartford, CT
- (2003-2005) **Introductory Geology Lab Coordinator**, University of Connecticut, Storrs, CT
- (2000-2005) **Teaching Assistant**, University of Connecticut, teach introductory lab sections
- (2002-2003) **Adjunct faculty member**, Eastern Connecticut State University, Environmental Earth Science Department, developed and taught structural geology lecture/lab course
- (1997-2000) **Teaching Assistant**, CSU Fresno, taught physical geology lab sections and developed new lab exercises
- (1999-2000) **Research Assistant**, CSU Fresno/Caltrans, compiled a fossil sensitivity map for California highways using Arc-View (GIS) and field mapping

TECHNICAL AND COMPUTER SKILLS:

Proficient with: ESRI ArcGIS 10.x.; Inductively Coupled Plasma – Optical Emission Spectroscopy (ICP-OES); X-ray diffraction; total mercury analysis (Milestone DMA-80), ion chromatography (Thermo-Dionex ICS-1100); total carbon, nitrogen sulfur analysis (Elementar vario elCube), thin section preparation, petrographic microscope operation and analysis, various field mapping techniques.

PROFESSIOANL SOCIETY AFFILIATIONS:

Geology Society of America (GSA)
American Geophysical Union (AGU)
Geological Society of Connecticut (GSC)

PROFESSIONAL SERVICE:

Geological Society of Connecticut Faculty Advisory Panel – review/award student grant applications.

PEER REVIEWED PUBLICATIONS:

Geiss, C., and Gourley J., 2019, A thermomagnetic technique to quantify the risk of internal sulfur attack due to pyrrhotite, *Cement and Concrete Research*, v.115, p. 1-7, DOI:10.1016/j.cemconres.2018.09.010

Oyewumi, O., Feldman, J., Gourley, J., 2017, Evaluating stream sediment chemistry within an agricultural catchment of Lebanon, Connecticut, Northeastern, USA, *Environmental Monitoring and Assessment*, 189: 141 DOI: 10.1007/s10661-017-5856-z

Ching, K., Gourley, J., Lee, Y., Hsu, S., Chen, K. Chen, C., 2015, Rapid deformation rates due to development of diapiric anticline in southwester Taiwan from geodetic observations, *Tectonophysics*, DOI: 10.1016/j.tecto.2015.07.020

Semrod, K. A., and Gourley, J. R., 2014, Mapping the Distribution of the Bioaccessible Fraction of Trace Metals in the Sediments of an Urban Stream, Park River Watershed, Connecticut, *Water, Air and Soil Pollution*, v. 225:2029, DOI: 10.1007/s11270-014-2029-3

Gourley, J., Byrne, T., Chan, Y-C, Wu, F., Rau, R-J, 2007, Fault geometries illuminated from seismicity in central Taiwan: implications for crustal scale structural boundaries in the Central Range, *Tectonophysics*, v. 445, pp. 168-185.

SELECT CONFERENCE ABSTRACTS:

Gourley, J., and Geiss, C., 2017, Combining Mineral Identification Techniques to Help Homeowners of Northeastern Connecticut Diagnose Pyrrhotite Laced Concrete Foundations. Abstract PA41A-0313 presented at 2017 Fall Meeting, AGU, New Orleans, LA, Dec 14.

Geiss, C. and Gourley, J, 2017, Thermomagnetic Analyses to Test Concrete Stability (Invited), Abstract GP13A-08 presented at 2017 Fall Meeting, AGU, New Orleans, LA, Dec 11.

Gourley, J., Lee, Y-H., Ching, K-E., 2012, Vertical fault mapping within the Gutingkeng Formation of southern Taiwan: implications for sub-aerial mud diapir tectonics, Abstract T53-2699 presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.

Gourley, J. and Doñé, V., 2009, Trace metal analysis of sediments in the Park River watershed, Hartford, CT, 2009 in: *Geological Society of America Abstracts with Programs*, vol. 41 no. 7 p. 201.

Gourley, J. and Byrne, T., 2005, Oblique northeastward lateral extrusion of a crustal block in north-central Taiwan: a mechanism for syn-tectonic extension, *Eos Trans. AGU*, 86(52) Fall Meet. Suppl. Abstract T11B-0371.

SELECT CO-AUTHORED STUDENT ABSTRACTS:

Ruggiero, J., Cascino, L., Gourley, J., Geiss, C., 2018, X-ray diffraction analyses of sulfate minerals responsible for crumbling concrete in northeastern, Connecticut, *Geological Society of America Abstracts with Programs Vol 50*, no. 2. doi: 10.1130/abs/2018NE-310869

Oleskewicz, K., Ruggiero, J., Gourley, J., 2018, A field investigation of mercury in soils across the White Mountain National Forest, New Hampshire: Implications for Boreal Forest Ecosystems, *Abstracts with Programs Vol 50*, no. 2., doi: 10.1130/abs/2018NE-310871

Howard, L., and Gourley J., 2014, Analysis of Hourly Ground Temperature Data on the Trinity College Campus, Hartford, Connecticut, USA, Abstract GC13H-0762, presented at 2014 Fall Meeting, AGU San Francisco, CA, December 15-19, 2014.

Pool, K. and Gourley J., 2012, Distribution and bioavailability of total mercury in the Park River Watershed, greater Hartford, CT: *Geological Society of America Abstracts with Programs*, vol. 44. no. 2, p. 90.

Semrod, K., 2012, Geomorphological approach to toxic trace metal distribution across channel bar deposits in the Park River Watershed, Hartford, CT: *Geological Society of America Abstracts with Programs*, vol. 44, no. 2, p. 107.

Doñé, V., Zhu, S., Gourley, J., and Martin-Black, W., 2010, Toxic trace metal mobility in the Trout Brook at the West Hartford landfill, West Hartford, CT, in: *Geological Society of America Abstracts with Programs*, vol. 42, no. 5, p. 616.

Sobolewski, S. and Gourley J., 2009, Mineralogy and geochemistry of suspected mud volcano fluid migration pathways within the footwall of the active Chishan Fault, southern Taiwan, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract T53C-1597.

Sobolewski, S. and Gourley J., 2008, A field investigation of fault rocks within the footwall of the active Chishan Fault, southern Taiwan, *Eos Trans. AGU* 89(53), Fall Meet. Suppl., Abstract T51A-1863

COLLOQUIUMS:

Sept 2018, *Invited speaker*, Premier Colloque International sur la Pyrrhotite (First International Colloquium on Pyrrhotite), Trois Rivières, Québec, Canada.

PRESS COVERAGE:

Lumsden C., Editorial (Hartford Courant Opinion Editor), Oct 26, 2018, "To halt Connecticut's Pyrrhotite Plague, Follow Europe's Lead". – I was consulted on this article for the science details. The editorial also highlighted Trinity student field work.

Aloisio, Wyatt, (The Journal Register-southern MA- staff writer), September 27, 2018 "Breaking Down the Science" – I was featured in central Massachusetts's local newspaper after presentation to residents and politicians in Monson, MA.

Trahan, Brigitte, (le Nouvelliste – reporter, Trois Rivière, Quebec Canada), September 25, 2018 in French, “On y voit maintenant plus clair”(“We Now See More Clearly”) – Article highlighting the first International Colloquium on Pyrrhotite. I was an invited speaker to discuss the Connecticut pyrrhotite issue.

McWilliams, Kathleen (Hartford Courant reporter), July 9, 2018, “Trinity College Foundation Testing Program Brings Precise Results to Homeowners”- I was Interviewed (along with my colleague and students) at Trinity to highlight our thermomagnetic/sulfur testing method.