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## Education

- 2018–2020 **MS in Mathematics**, *University of Vermont*, *GPA: 4.00*.  
Extremal/Saturation Numbers and an Entropy Result for the Guessing Numbers of Undirected Graphs  
- Advisor: Puck Rombach, Ph.D.
- 2012–2016 **BA in Geology**, *Oberlin College*, *GPA: 3.73, Major GPA: 3.91*.  
Honors: Phi Beta Kappa, Sigma Xi

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## Experience

### Research

- August 2019–Present **Guessing Numbers of Graphs**, *University of Vermont*, Burlington, VT, Supervisor: Puck Rombach, Ph.D..
- Summer 2015 **Geologic Mapping of Putative Paleolake Deposits in a Coprates Catena, Mars**,  
January 2016 *Laboratory for Atmospheric and Space Physics*, Boulder, CO, Supervisor: Brian Hynek, Ph.D..
- June 2014–August 2016 **Undergraduate Research in Geomorphology**, *Oberlin College*, Oberlin, OH, Supervisor: Amanda Schmidt, Ph.D..  
Oberlin College
- January 2015 **Paleomagnetism of the Samial Ophiolite in Oman**, *Oberlin College*, Oberlin, OH, Supervisor: Andrew Horst, Ph.D..

### Teaching

- 2018–2020 **Graduate Teaching Assistant**, *University of Vermont*, Burlington, VT.
- GEOL 007 (Earth Hazards), Spring 2020
  - GEOL 001 (Introductory Geology), Fall 2018, Spring 2019, Fall 2019: independently instructed 2-3 lab sections.
- 2016–2018 **Instructor**, *Oberlin College*, Oberlin, OH, .
- GIS for Natural and Social Sciences, Winter 2017, Winter 2019
  - The Art of Data Visualization, Spring 2016, Spring 2017, Spring 2018
- 2016–2018 **Teaching Assistant**, *Oberlin College*, Oberlin, OH, .
- GEOL 235 (Applied GIS), Fall 2016, Fall 2017
- 2014 **Undergraduate Teaching Assistant**, *Oberlin College*, Oberlin, OH, .
- GEOL 235 (Applied GIS), Fall 2014
  - GIS for Natural and Social Sciences, January 2014
- 2016 **Tutor**, *Oberlin College*, Oberlin, OH, .
- Applied GIS, Fall 2015
  - Multivariable Calculus, Spring 2016
  - Earth Surface Processes, Spring 2016
- Fall 2013 **Computer Science Lab Helper**, *Oberlin College*, Oberlin, OH, .
- CSCI 150 & 151 (Intro to Computer Science and Algorithms)

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## Journal Publications

D. Pennington, I. Ebert-Uphoff, N. Freed, **J. R. Martin**, and S. A. Pierce, "Bridging sustainability science, earth science, and data science through interdisciplinary education," *Sustainability Science*, pp. 1–15, 2019.

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## Submitted Articles

**J. R. Martin** and P. Rombach, "Guessing numbers and extremal graph theory," *arXiv:2009.04529*, 2020.

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## Abstracts

A. J. Schmidt, P. R. Bierman, V. Sosa-Gonzalez, T. B. Neilson, D. H. Rood, **J. R. Martin**, and M. Hill, "Agricultural land use doubled sediment yield in western china's rivers," in *AGU Fall Meeting Abstracts*, 2017.

A. J. Horst, S. Trutner, E. S. Hartley, and **J. R. Martin**, "New paleomagnetic data from upper gabbros supports limited rotation of central semail massif in oman ophiolite," in *AGU Fall Meeting Abstracts*, 2017.

**J. R. Martin** and A. H. Schmidt, "Teaching python scripting through arcgis," in *Geological Society of America Abstracts with Programs*, vol. 49, 2017.

A. J. Horst, S. Trutner, E. S. Hartley, and **J. R. Martin**, "Development of foliations in uppermost gabbros in the oman ophiolite and implications for crustal accretion along a paleoridge axis," in *Geological Society of America Abstracts with Programs*, vol. 48, 2016.

**J. R. Martin**, B. M. Hynek, and M. Chojnacki, "Geologic mapping of putative paleolake deposits in a Coprates catena, Mars," in *Lunar and Planetary Science Conference*, vol. 47, 2016, p. 2625.

M. Chojnacki, B. M. Hynek, S. R. Black, R. Hoover, and **J. R. Martin**, "Geologic mapping of the Coprates Chasma (MTM-15057), Mars: Year 2," in *Lunar and Planetary Science Conference*, vol. 47, 2016, p. 2828.

**J. R. Martin**, D. Lawrence, A. H. Schmidt, P. Bierman, V. Sosa-Gonzalez, A. Singleton, and Y. Qui, "Examining land use and erosion in southwest China," in *Geological Society of America Abstracts with Programs*, vol. 47, 2015, p. 515.

B. M. Hynek, M. Chojnacki, S. R. Black, and **J. R. Martin**, "Geologic mapping of the Coprates Chasma (MTM-15057), Mars: Year 1," in *Abstracts of the Annual Meeting of Planetary Geologic Mappers*, 2015.

G. Garcia Greco, D. Fialo, T. B. Neilson, **J. R. Martin**, R. Wei, C. Zhang, and C. Liang, "Determining sediment sources and sinks in a small headwater watershed in Yunnan, China using short-lived radionuclides," in *Geological Society of America Abstracts with Programs*, vol. 46, 2014, p. 800.

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## Other Publications

**J. R. Martin** and A. H. Schmidt, "Lab 3: Changes to the green river," in *On the Cutting Edge Peer Reviewed Teaching Activities Collection*, 2017.

—, "Lab 4: Hurricanes," in *On the Cutting Edge Peer Reviewed Activities Teaching Collection*, 2017.

—, "Lab 5: Sea level rise," in *On the Cutting Edge Peer Reviewed Activities Teaching Collection*, 2017.

——, “Differences and similarities between mean local relief and slope,” in *On the Cutting Edge Peer Reviewed Activities Teaching Collection*, 2017.

——, “Lab 7: Hawai’i,” in *On the Cutting Edge Peer Reviewed Activities Teaching Collection*, 2017.

——, “Lab 8: Lidar,” in *On the Cutting Edge Peer Reviewed Activities Teaching Collection*, 2017.

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## Conference Activity

### Sessions Organized

2018 **Educating the Next Generation of Scientists: Interdisciplinary Education Bridging Geoscience and Data Science**, *American Geophysical Union Fall Meeting 2018*, Washington, DC, 14 Decemeber 2018.

Co-convended a session of talks and a session of posters.

### Talks Given

2017 **Teaching Python Scripting Through ArcGIS**, *Geological Society of America Northeast/North central Section Meeting*, Pittsburgh, PA, 19 March 2017.

### Posters Presented

2018 **IS-GEO - A Research Coordination Network on Intelligent Systems Research to Support the Geosciences**, *EarthCube 2018 All Hands Meeting*, Alexandria, VA, 7 June 2018.

2017 **Teaching Python Scripting to the Next Generation of Geoscientists**, *EarthCube 2017 All Hands Meeting*, Seattle, WA, 8 June 2017.

2016 **Geologic mapping of putative paleolake deposits in a Coprates catena, Mars**, *Lunar and Planetary Science Conference*, The Woodlands, TX, 22 March 2016.

2015 **Examining land use and erosion in southwest China**, *Geological Society of America Annual Meeting*, Baltimore, MD, 3 November 2015.

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## Workshops

August 2018 **2018 IS-GEO Summer Institute**, *University of Hawai’i at Hilo*, Hilo, HI.

July 2017 **2017 IS-GEO Summer Institute**, *Texas Advanced Computing Center*, Austin, TX.

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## Awards and Honors

2021 **2020-2021 Outstanding Master’s Thesis Award**, *Graduate College*, University of Vermont, Burlington, VT.

2020 **John F. Kenney Award for Mathematics**, *Department of Mathematics*, University of Vermont, Burlington, VT.

2020 **Geology Graduate Teaching Assistant Award**, *Department of Geology*, University of Vermont, Burlington, VT.

2016 **George B. Wharton Prize in Geology**, *Department of Geology*, Oberlin College, Oberlin, OH.