Curriculum Vitae | July 2023

**THOMAS RUBERTO**

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**RESEARCH**

**Motivation**

Facilitate the widespread production and consumption of geoscience Virtual Field Trips for place-based education as a tool to help students navigate the promises and perils of the Anthropocene.

**Interests**

My research involves designing, producing, assessing, and implementing immersive, interactive virtual field trips (iVFTs) for place-based education (PBE) and then evaluating their effectiveness as a learning modality. iVFTs for PBE can level the education playing field in the geosciences and other disciplines by providing students across the globe with access to pedagogically rich sites while mitigating the barriers of time, cost, distance, safety, equity, and accessibility. Of added interest is the importance of place-based learning in geoscience and other disciplines, and how to effectively transfer the power of in-person place-based learning and its associated sense of place gains to the digital realm. Additionally, my research examines ways to decentralize the virtual field trip (VFT) production process by creating workflows and best practices that empower students and teachers to produce their own VFTs.

**EDUCATION**

**Professional Preparation**

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| **Institution** | **Degree** | **Year** | **Field** |
| Arizona State University | Ph.D. | 2023 | Geology & Geoscience Education |
| Arizona State University | M.S. | 2018 | Geology |
| Arizona State University | B.S. | 2016 | Earth & Space Exploration: Geology |
| Estrella Mountain Community College | A.S. | 2014 | Science |
| Estrella Mountain Community College | A.A. | 2014 | Arts |

**Ph.D. Dissertation**

Ruberto, T. J. (2023). *Decentralization of Virtual Field Trip Production: A Proposed Framework for Producing Virtual Field Trips for Place-Based Education and How the Production Process Impacts Sense of Place and Content Knowledge Gains*. School of Earth and Space Exploration, Arizona State University. (Dissertation advisor: Professor Steve Semken. Committee: Professor Ariel Anbar, Professor Steve Reynolds, Professor Julia Johnson, Professor Duane DeVecchio)

**M.S. Thesis**

Ruberto, T. J. (2018). *Implications of learning outcomes of in-person and virtual field-based geoscience instruction at Grand Canyon National Park*. School of Earth and Space Exploration, Arizona State University. (Thesis advisor: Professor Steve Semken. Committee: Professor Ariel Anbar, Professor Sara Brownell)

**TEACHING**

**Teaching Statement**

As a teacher, I am committed to fostering a diverse, equitable, and inclusive learning environment for classes instructed in-person or online. I believe that geoscience education should embrace the rich tapestry of human experiences and perspectives by providing opportunities for all students to thrive and succeed. I incorporate diverse examples, case studies, and perspectives into my curriculum to ensure students see themselves represented and to encourage engagement from individuals with varying identities and experiences. I establish ground rules that promote open dialogue, active listening, and mutual respect among students, fostering an environment that values diverse viewpoints. Additionally, I employ inclusive pedagogical practices, accommodating different learning styles and abilities, and provide additional support and mentorship to underrepresented students. I actively seek professional development opportunities to ensure that I contribute to creating an equitable and inclusive geology learning environment.

**Teaching Experience**

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| **School** | **Course** | **Description** | **Date** |
| School of Earth & Space Exploration | SES 124 | History of Earth & Solar System Lab | Spring ‘23 |
| School of Earth & Space Exploration | SES 123 | Earth, Solar System & Universe Lab | Fall ‘23 |
| School of Earth & Space Exploration | SES 124 | History of Earth & Solar System Lab | Spring ‘22 |
| School of Earth & Space Exploration | SES 123 | Earth, Solar System & Universe Lab | Fall ‘22 |
| School of Earth & Space Exploration | SES 123 | Earth, Solar System & Universe Lab | Fall ‘21 |
| School of Earth & Space Exploration | GLG 108 | Water Planet | Summer ‘21 |
| School of Earth & Space Exploration | GLG 103 | Introduction to Geology Lab | Spring ‘21 |
| School of Earth & Space Exploration | SES 123 | Earth, Solar System & Universe Lab | Spring ‘20 |
| School of Earth & Space Exploration | SES 598 | VFTs for Earth & Space Science | Fall ‘20 |
| School of Earth & Space Exploration | GLG 103 | Introduction to Geology Lab | Fall ‘19 |
| School of Sustainability | SOS 594 | VFTs for Global Development | Spring ‘19 |
| Cronkite School of Journalism | n/a | Innovations in Digital Media | Summer ‘19 |
| School of Earth & Space Exploration | GLG 103 | Introduction to Geology Lab | Fall ‘18 |

**PUBLICATIONS**

Ruberto, T., Mead, C., Anbar, A. D., & Semken, S. (2023). Comparison of in-person and virtual Grand Canyon undergraduate field trip learning outcomes. *Journal of Geoscience Education*, 1-17.

Cooper KM, Hendrix T, Stephens MD, Cala JM, Mahrer K, Krieg A, Ruberto T, et al. (2018) To be funny or not to be funny: Gender differences in student perceptions of instructor humor in college science courses. PLoS ONE 13(8): e0201258. <https://doi.org/10.1371/journal.pone.0201258>

**PRESENTATIONS**

Thomas Ruberto (2023, May). Content learning outcomes from geological virtual field trips can exceed those from in-person field trips. *American Institute of Professional Geologists*

Thomas Ruberto (2022, November) Content Learning Outcomes from Geological Virtual Field Trips can Exceed those from In-person Field Trips. *Arizona Geological Society*

Ruberto, T. J., Mead, C., Aggarwal, R., Bruce, G., Semken, S., Tamer, A. J., & Anbar, A. D. (2020, December). Democratizing Virtual Field Trips: Teaching Learners to Create Their Own Virtual Field Trips for Earth and Space Science and Sustainability. In *AGU Fall Meeting Abstracts* (Vol. 2020, pp. ED006-10).

Steve Semken, Chris Mead, Thomas Ruberto, Geoffrey Bruce, Rimjhim Aggarwal, Ariel Anbar (2020, September). Stakeholder-Produced Virtual Field Experiences Can Contribute to Geoheritage. *GSA*

Tamer, A. J. J., Ruberto, T., Mead, C., Bruce, G., Semken, S., Anbar, A. D., & Aggarwal, R. (2019, December). Teaching and learning about Earth science and sustainability with student-created virtual field trips. In *AGU Fall Meeting Abstracts* (Vol. 2019, pp. ED22A-06).

Thomas Ruberto (2019, September). Mixed-methods research on the implications of learning outcomes for in-situ and virtual geological field trips. *GSA*

Thomas Ruberto (2019, April). Implications of Learning Outcomes of In-Person and Virtual Field-Based Geoscience Instruction at Grand Canyon National Park. *Grand Canyon Geology and Geoscience Education Public Symposium*

Semken, S. C., Ruberto, T., Mead, C., Bruce, G., Buxner, S., & Anbar, A. D. (2017, December). Learning outcomes of in-person and virtual field-based geoscience instruction at Grand Canyon National Park: complementary mixed-methods analyses. In *AGU Fall Meeting Abstracts* (Vol. 2017, pp. ED31E-03).

Semken, S., Ruberto, T., Mead, C., Bruce, G., Buxner, S. & Anbar, A. (2017). Mixed-methods research on student geoscience learning at Grand Canyon by complementary in-situ and virtual modalities [Abstract]. Presented at the *Earth Educators’ Rendezvous 2017, Albuquerque, NM*.

Semken, S. C., Ruberto, T., Mead, C., Bruce, G., Buxner, S., & Anbar, A. D. (2016, December). Complementary research on student geoscience learning at Grand Canyon by means of in-situ and virtual modalities. In *AGU Fall Meeting Abstracts* (Vol. 2016, pp. ED43A-0844).

Semken, S., Bruce, G., Mead., C., Buxner, S., Taylor, W., Ruberto, T., & Anbar, A. D. (2016). Reinvigorating the traditional “historical geology” curriculum with immersive virtual field exploration of the history of Earth and life [Abstract]. *Geological Society of America Abstracts with Programs, 48(7)*, doi: 10.1130/abs/2016AM-285458.

**DIGITAL MEDIA PRODUCTIONS**

Monument Valley Virtual Field Trip: https://imtinc360.com/MonumentValleyVFT/

Grand Canyon North Rim Virtual Field Trip: under development

Grand Canyon South Rim Virtual Field Trip: https://imtinc360.com/GrandCanyonVFT/

Sedona / Oak Creek Canyon Virtual Field Trip: https://imtinc360.com/SedonaVFT/

Phoenix / South Mountain Virtual Field Trip: under development

Tempe Butte (A Mountain) Virtual Field Trip: https://imtinc360.com/TempeButteVFT/

**HONORS AND AWARDS**

SESE Summer Exploration GRADUATE (SEG) Fellowship (Summer 2018)

Arizona Graduate Tuition Scholarship (Fall 2016, Spring 2017, Fall 2017, Spring 2018)

Ravi Defilppo Geology Field Camp Scholarship (June 2015)

Dietz Field Camp Scholarship (June 2015)

Beta Alpha Chapter of Phi Theta Kappa International Honor Society, November 2013

**MEMBERSHIPS**

American Geophysical Union

Geological Society of America

Arizona Geological Society

**WORK HISTORY**

Interactive Marketing Technologies, Inc.: 1992 – Present  
President / Founder / Owner

Southwest Media & Publishing, Inc.: 2005 - 2017  
President / Founder / Owner

Visionary Computer Systems, Inc.: 1998 – 2002  
President / Founder / Owner

**REFERENCES**

Professor Steve Semken | Arizona State University | [semken@asu.edu](mailto:semken@asu.edu)

Professor Steve Reynolds | Arizona State University | [sreynolds@asu.edu](mailto:sreynolds@asu.edu)

Professor Julia Johnson | Arizona State University | julia.johnson@asu.edu