# **Markus William Koeneke**

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**Education**

B.S. Environmental Technology and Management, 2017

Minors: Soil Science and Environmental Toxicology

North Carolina State University, Raleigh, NC

Advisor: Terrie Litzenberger

**Educational Experience**

Engineers Without Boarders Sierra Leone Water Supply Project

Dele Village Learning Center

Lower Allentown, Sierra Leone

Study Abroad Water Woes: People, Parks, and Pollution

Hamakuya, Limpopo Province, South Africa

**Professional Experience**

2018-Present Lab Technician, Soil and Environmental Hydrogeochemistry

Advisor: Matthew Polizzotto

Department of Earth Science

University of Oregon, Eugene, OR

2017-2018 Undergraduate Researcher, Soil and Environmental Biogeochemistry

Advisor: Owen Duckworth

Department of Crop and Soil Science

North Carolina State University, Raleigh, NC

2016-2017 Honors Undergraduate Researcher, Soil and Environmental Hydrogeochemistry

Advisor: Matthew Polizzotto

Department of Crop and Soil Science

North Carolina State University, Raleigh, NC

2015-2016 Coordinator, Climate Reality Project

North Carolina State University, Raleigh, NC

**Honors and Awards**

2017 Top Presenter Award. NC State University 2017 Spring Undergraduate Research Symposium

Fall 2016-2017 Dean’s List

**Grants/Funding**

1. CNR Enrichment Fund, Travel to Soil Science Society of America Conference, 2017, $800
2. Undergraduate Research Travel Grant, Soil Science Society of America Conference, 2017, $500
3. Undergraduate Research Grant, Arsenic remediation experiment, 2017, $500
4. CNR Enrichment Fund, Travel to Stanford Synchrotron Radiation Lightsource, 2017, $500
5. CNR Enrichment Fund, Travel to American Geophysical Union Conference, 2017, $700

**Presentations**

1. **Koeneke, M.**, Jones, MC., Gillispie, E., and Polizzotto, M. Elucidating the role of carbon sources on abiotic and biotic release of arsenic into Cambodian aquifers. American Geophysical Union Annual Conference, New Orleans, Louisiana, December, 2017. Poster presentation.
2. Polizzotto, M., Gillispie, E., Jones, MC., Andujar, E., Schacht, L., **Koeneke, M.**, Middleton, R., Phen, N., Matteson, A., and Duckworth, O. Sediment manganese oxide content as an indicator of groundwater arsenic pollution potential. Soil Science Society of America Annual Meeting, October, 2017, Invited presentation.
3. **Koeneke, M.**, Jones, MC., Gillispie, E., and Polizzotto, M. Elucidating the role of carbon sources on abiotic and biotic release of arsenic into Cambodian aquifers. Soil Science Society of America Annual Meeting, Tampa, FL, October, 2017. Poster presentation.
4. Merril, J., McLean, NL., **Koeneke, M.**, Moscatello, M., Grissom, A. A novel handwashing station design for the urban and peri-urban developing world. Engineers Without Boarders USA Conference, Milwaukee, WI, October, 2017. Poster presentation.
5. **Koeneke, M.**, Jones, MC., Gillispie, E., and Polizzotto, M. Elucidating the role of carbon sources on abiotic and biotic release of arsenic into Cambodian aquifers. North Carolina State University Spring Undergraduate Research Symposium, Raleigh, NC, August, 2017. Poster presentation.
6. **Koeneke, M.**, Jones, MC., Gillispie, E., and Polizzotto, M. Elucidating the role of carbon sources on abiotic and biotic release of arsenic into Cambodian aquifers. North Carolina State University Spring Undergraduate Research Symposium, Raleigh, NC, April, 2017. Poster presentation.