

# Christopher L. Cook

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## INTERESTS

- Data analysis for biological, environmental, and geological sciences

## EDUCATION

**M.S. Geology**, University of Tennessee, Knoxville, August 2020

- Thesis title: *Extracellular enzymes in aquatic environments: Possible role of non-specific peptidases in microcystin degradation and effects of assay protocol on calculated activities*

**B.S. Geology**, Towson University, May 2018

## RESEARCH AND WORK EXPERIENCE

**U.S. Environmental Protection Agency, Durham, NC**

ORISE Research Participant (Mar. 2021 – Present; 40 hours/week)

- Assist in the refinement and expansion of a public database of toxicokinetic versus time data
- Assist in the development of [invivoPKfit](#), an R package designed to apply generic pharmacokinetic models to large datasets of toxicokinetic versus time data

**University of Tennessee, Knoxville Dept. of Earth and Planetary Sciences**

Graduate Student (Aug. 2018 – Aug. 2020; 40 hours/week)

- Primary developer and maintainer of [ezmmek](#), an R package designed to analyze fluorometric enzyme assay data (available on CRAN and GitHub)
- Teaching Assistant for introductory geology courses

**U.S. Army Edgewood Chemical Biological Center, Aberdeen Proving Ground, MD**

Physical Science Research Intern (June 2016 – Aug. 2016; 40 hours/week)

- Used several spectroscopic techniques to study the chemical interactions between chemical warfare agent and various environmental substrates

## SKILLS

### **R Programming Language**

- Write well-commented, reproducible, and modular code
- tidyverse, ggplot2, Markdown, shiny, S3, Git version control
- Graduate-level coursework in data analysis

### **Instrumentation and Laboratory**

- High performance liquid chromatography, including method development
- Infrared, ultraviolet-visible, and fluorescence spectroscopy
- Scanning electron microscopy
- Aseptic technique

## PUBLICATIONS AND CONFERENCE ABSTRACTS

- **Cook, C.L.** and Steen, A.D. (2021). *ezmmek*: An R package to analyze fluorometric enzyme assay data reproducibly. *Manuscript in preparation*.
- **Cook, C.L.** et al. (2018). Spectral characterization of pterin molecules: Implications for detecting life on Mars. *Lunar and Planetary Science Conference*, 2228.

## ACTIVITIES

- Appalachian Trail through-hike (Mar. 2017 – Aug. 2017)