

Phiala Thouvenin, Ph.D.

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EXPERIENCE

Purdue University

Research and Teaching Assistant

August 2013 – July 2022

West Lafayette, IN

- Conceptualized and carried out multidisciplinary physical/numerical scientific experiments, leading to several international conference presentations and the development of several manuscripts in collaboration with multiple researchers.
- Formulated algorithms in Python, MATLAB and R, to process, segment, and statistically analyze experimental time-series data, resulting in large (100 million row+), well-organized tabular datasets, along with detailed scientific visualizations using matplotlib and other post-processing tools.
- Provided personal mentorship to numerous (>10) students and academic researchers, guiding them in the use of scientific techniques, software, and equipment, resulting in work presented at academic presentations, in theses and dissertations, and in peer-reviewed literature.
- Advised dozens of instructors and instructed hundreds of students, enhancing the quality of teaching within the department, and resulting in the recognition of instructional/advisory excellence through several awards.

The University of Akron

Graduate Research Assistant

August 2011 – August 2013

Akron, OH

- Conducted and executed 200+ numerical experiments using MATLAB and open-source numerical codes, applying novel algorithms to organize, process, and visualize extensive scientific statistical datasets, culminating in the publication of research in peer-reviewed journals and international conference presentations.
- Secured grants from multiple public and private funding agencies, accelerating the pace of research completion. Utilized grant funding for collaborative initiatives with other scientists across the United States.

The University of Akron

Undergraduate Research Assistant

January 2009 – August 2011

Akron, OH

- Completed two senior research projects collaboratively with diverse teams, utilizing advanced data analysis and visualization techniques, and yielding multiple manuscripts and international academic presentations.
- Assisted instruction of both undergraduate and graduate students in advanced courses focused on scientific data analysis and visualization, facilitating a deeper understanding of course materials, and enhancing students' proficiency in numerical modeling and data processing concepts.

EDUCATION

Purdue University

Ph.D., Geophysics

July, 2022

West Lafayette, IN

The University of Akron

M.S., Geology

August, 2013

Akron, OH

The University of Akron

B.S., Geology

August, 2011

Akron, OH

SKILLS

- **Languages:** Python, MATLAB, R, C/C++, SQL
- **Developer Tools:** Git, VS Code, RStudio, Jupyter Notebooks, Spyder, PyCharm
- **Libraries:** Pandas/Polars, NumPy, SciPy, Matplotlib (seaborn, plotly), PySpark, scikit-learn, PyTorch
- **Other Skills:** Technical Writing, Data Visualization, Numerical/Statistical Modeling, Machine/Deep Learning, Data Cleaning/Wrangling, Big Data Tools, Linux Tools, Shell Scripting, Adobe Products, Microsoft Products