

# SABRINA REICHERT (LAUTIN)

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## Skills Summary

Experienced STEM researcher and current PhD candidate in geophysics, with coursework in Chemistry, Physics, Math through ODE and Calc IV, Earth Sciences, Fluids, Thermo, and SusDev. SIE certification. Proficiency in Hebrew and French. Skilled at Microsoft Office, Solidworks/CFD, Underworld/Jupyter Notebook/Python software.

## Education

### ***UT Austin Jackson School of Geosciences—MS/PhD in-progress, June 2023-present***

Advisor: Harm Van Avendonk; co-advised by Nathan Bangs. Seismic tomography of the Blake Plateau and Carolina Trough, with relevant fieldwork on the R/V Marcus Langseth.

### ***Columbia University—Columbia College, BA '20***

Environmental Chemistry, with a minor in French Literature. Dean's List (multiple semesters). Ski team, Student Union for Sustainable Development board member, Real Estate Society board member, After-Hours Tutoring board member, Woodbridge Hall Council VP. Community Impact Exceptional Volunteer Award.

### ***Horace Mann School—High School Diploma, '16***

Summa Cum Laude. Class Day awards in every subject taken throughout my four years of high school. National Merit commended student. ACT 35 composite. The Record, Voyager, Spectrum, Cinemann, The Linguist, Varsity Water Polo, Varsity Swimming, Varsity Crew, Peer Tutoring, Saturday Morning Tutoring, Lower-Division Reading Program, Wind Ensemble.

## Experience

## **Fieldwork on the R/V Marcus Langseth**

*Research Associate / July 2023-August 2023*

Supervised by Harm Van Avendonk, Nathan Bangs, and Anne Bécél. Assisted in the deployment of air gun and hydrophone equipment, conducted data analysis at sea in real-time (for interpretation and quality control purposes), and prepared (anticipated) AGU abstract for December 2023.

## **University of Texas at Austin - Institute for Geophysics (UTIG)**

*Graduate Research Assistant / June 2023-present*

Supervised by Harm Van Avendonk and Nathan Bangs. Research on the Blake Plateau's seismic, magnetic, and bathymetric profile, using Linux, Paradigm, and GMT.

## **SUNY Stony Brook**

*Research Associate / June 2022-May 2023*

Seismology research using ObsPy and Seispy to generate waveform models of Alaska seismic activity. Rheology research using Underworld to analyze the Turkana rift area. Mineral physics research looking at ultrasonic images of crystals to determine properties under extreme temperature and pressure, with the end goal of an equation of state. Crystallography research on the deformation of the crystal lattice at high temperatures.

## **SUNY Stony Brook**

*Teaching Assistant / August 2022-May 2023*

GEO 104, GEO 106, and proctor pool coordinator.

## **SUNY Stony Brook**

*Project Instructor for WSE 380 / September 2022-November 2022*

Hosting five students at a time for mini-projects involving producing publication-worthy science journalism content.

## **Physics World**

*Student Contributor / August 2022-May 2023*

Work related to the intersection of materials science, physics, and geosciences.

## **Parliament Tutoring**

*Private Tutor / March 2021-May 2022*

Directed my teaching acumen towards helping veterans transition from active duty to college-level coursework.

## **Crédit Agricole CIB**

*Intern; Analyst / June 2019-October 2020*

## **Columbia University Chemistry Department**

*Teaching Assistant / May 2018-May 2020*

## **Geochemistry Research at Lamont Doherty Earth Observatory**

*Research Assistant / September 2018-May 2020*

## **Publications**

### ***'Volatile' elements in inner solar system have several different origins***

<https://physicsworld.com/a/volatile-elements-in-inner-solar-system-have-several-different-origins/>

### ***Microscale structure of rock affects microseismicity at underground carbon dioxide storage site***

<https://physicsworld.com/a/microscale-structure-of-rock-affects-microseismicity-at-underground-carbon-dioxide-storage-site/>

### ***Trapped fluid in undersea sediments contributed to 2011 Tohoku-Oki earthquake, new study reveals***

<https://physicsworld.com/a/trapped-fluid-in-undersea-sediments-contributed-to-2011-tohoku-oki-earthquake-new-study-reveals/>

### ***Turning drought into opportunity***

<https://www.labnews.co.uk/article/2091667/turning-drought-into-opportunity>

### ***Another Voice: Synthetic diamond production is one of many strategies to solve resource shortages***

[https://buffalonews.com/opinion/another-voice-synthetic-diamond-production-is-one-of-many-strategies-to-solve-resource-shortages/article\\_fa540b54-09c2-11ed-ab3d-f7a5093c9acb.html](https://buffalonews.com/opinion/another-voice-synthetic-diamond-production-is-one-of-many-strategies-to-solve-resource-shortages/article_fa540b54-09c2-11ed-ab3d-f7a5093c9acb.html)

### ***Thermomechanical Models of Extension across the Turkana Depression within the East African Rift***

*AGU abstract for December 2022*

<https://agu.confex.com/agu/fm22/meetingapp.cgi/Paper/1181938>

## **Projects**

### ***Blake Plateau Project***

June 2023-present. PI: Dr. Harm Van Avendonk.

### ***Turkana Miocene Project***

June 2022-December 2022. Funded by NSF; PI: Dr. Bill Holt. Abstract submitted to AGU in August 2022, and iPoster presented at AGU in December 2022.

### ***Chemical Oceanography and Paleoclimate through the lens of Micropaleontology***

September 2018-May 2020. PI: Dr. Bärbel Hönisch; Seminar Instructor: Dr. Logan Brenner. Senior thesis completed in May 2020, with a virtual poster session and several presentations to the rest of the Environmental Science Research Seminar cohort.

### **Professional Memberships**

#### ***American Geophysical Union (AGU)***

Member since August 2022

#### ***American Association of Petroleum Geologists (AAPG)***

Member since December 2022

### **Volunteering and other experiences**

#### ***Columbia-Barnard Athena Center***

Alumni volunteer

#### ***Horace Mann School***

Alumni network volunteer

#### ***Stony Brook GSEU Representative***

Attending GSEU (Graduate Student Employees Union) meetings and working to address TA/GA workplace concerns

#### ***Arf—Hamptons***

Working with new arrivals prior to adoption

#### ***Columbia Community Impact Exceptional Volunteer***

For my work as both a volunteer and board member of After-Hours Tutoring

***Columbia Real Estate Society***

Treasurer

***Columbia Student Union for Sustainable Development***

Secretary