

## Pride Tamasang Abongwa

Department of Natural Sciences,  
One University Way,  
Texas A&M University -San Antonio,  
San Antonio, TX 78245  
Phone: Office: (210) 784-2819  
Cell: (405) 408-8574  
Email: pabongwa@tamusa.edu

### EDUCATION

Ph.D., Oklahoma State University, Stillwater, Geology, August 2014.

Dissertation: “Assessing the Temporal Evolution of Dissolved Inorganic Carbon and Stable Carbon Isotopes in Surface Waters”

M.Sc., International Higher Institute of Water Education (IHE), Delft, The Netherlands, Hydrology, April 2004.

Thesis: “Predicting Transport of *Escherichia Coli* in Saturated Porous Media”

B.Sc. (Hons.), University of Buea, Cameroon, Geology, 1999.

Project: “The Geology of Ebondji and Environs, Southwestern Cameroon”

### Professional Experience

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| Aug. 2025- Present    | Associate Professor of Geology, Texas A&M University San Antonio, TX.  |
| Aug. 2019- July 2025  | Assistant Professor of Geology, Texas A&M University San Antonio, TX.  |
| Aug. 2018-July 2019   | Lecturer of Geology, Texas A&M University San Antonio, TX.   |
| Aug. 2017-Aug. 2018   | Lecturer of Geology, Texas A&M University San Antonio, San Antonio, TX.  |
| Jan. 2015-Aug. 2017   | Visiting Assistant Professor of Geology, Whitman College, Walla Walla, WA.<br>Visiting Assistant Professor of Geology/Geochemistry, Boone Pickens School of Geology, Oklahoma State University.  |
| Jan. 2011 – Aug. 2014 | Ph.D. candidate, Boone Pickens School of Geology, Oklahoma State University.   |
| Jan. 2011 – July 2014 | Teaching Assistant, Oklahoma State University, Stillwater, OK.<br>Introduction to Geology; Hydrogeology (instruct on problem solving); Advanced Well Log Analyses (instruct on problem solving); Geochemistry.   |
| Summer 2014           | Geology Field Camp (Canon City, CO), Oklahoma State University: (Mapping and formation interpretation, cross-section and formation correlation; prepared maps used for field exercises, Drive students to field daily, Drive students to Canon City, CO and back to Stillwater, OK). |
| Summer 2012           | Intern, Oil and Gas Division, EERC, Grand Forks, ND, USA (Experimentation and modeling on CO <sub>2</sub> -Enhanced Oil Recovery [EOR] operations; baseline hydro-geochemical determination for monitoring purposes; groundwater analyses and interpretation).                       |
| Summer 2013           | Intern, Oil and Gas Division, EERC, Grand Forks, ND, USA. (Experimentation on CO <sub>2</sub> -saline water-reservoir rock interaction during CO <sub>2</sub> -EOR operations; effect on rock porosity and petrophysical description of the Bakken Formation)                        |
| Summer 2011           | Geology Field Camp (Canon City, CO), Oklahoma State University: (Gamma-ray collection and interpretation; mapping, cross-section and formation correlation; prepared maps used for field exercises, Drive students to Canon City, CO and back to Stillwater, OK).                    |

### Guest Lectures

Fall 2023 Trinity University, San Antonio: Geoscience seminar series –Characterization of a Karst Aquifer.

**Research****Publications (\*Corresponding Author)**

- **\*Abongwa, P.**, Carson, R., Den., W. (2024, **in review**): Geochemical and Mineralogical Investigation in the Source-Determination of Shale-hosted Miocene Concretions of the Astoria Formation, Northwestern Oregon Coast, USA. *Geosciences Journal*.
- **\*Abongwa, P.**, Den, W., Teague, A., 2022. Dual Isotopic (O & N) Approach in the Assessment of NO<sub>3</sub><sup>-</sup> Pollution in an Urban River. *Water, Air, & Soil Pollution*, 233(7), 1-14.
- **\*Abongwa, P. T.**, Den, W., and Teague, A., 2022. Chemical and Carbon Isotopic Characterization of a Karst-Dominated Urbanized Watershed: Case of the Upper San Antonio River. *Archives of Environmental Contamination and Toxicology*, 1-16.
- **\*Abongwa, P.**, Den, W. (2021). Evolution of a Deep Fluid in a Surficial Environment Using Stable Carbon and Sulfur Isotopes: Case of the Transitional Zone of the Edwards Aquifer in South Central Texas. *Water, Air, & Soil Pollution*, 232(5), 1-19.
- **\*Abongwa, P.T.**, Atekwana, E. A., Puckette, J. O. (2020). Hydrogeochemical Investigation of Metal Evolution in Circum-Neutral Mine Discharge. *Water, Air, & Soil Pollution*, 231(4), 1-15.
- **\*Abongwa, P.**, Puckette, J., Atekwana, E. and Halihan, T. 2018. Aquifer Geology and Water Chemistry: Case of selected surface water and groundwater in Oklahoma, United States of America. *Shale Shaker - Oklahoma City Geological Society Issue #2 April 2018.*,
- **\*Abongwa, P.** and Atekwana, E., 2018. Investigating the effects of dilution by precipitation on dissolved inorganic carbon and stable isotope evolution in surface waters. *Environmental Science and Pollution Research* **25**, 19941-19952
- **\*Abongwa, P.**, Atekwana, E. and Puckette, J., 2016. Dissolved inorganic carbon and stable carbon isotopic evolution of neutral mine drainage interacting with atmospheric CO<sub>2(g)</sub>. *Science of the Total Environment* **546**, 57-66.
- **\*Abongwa, P.**, Atekwana, E., 2015. Controls on the chemical and isotopic composition of carbonate springs during evolution to saturation with respect to calcite. *Chemical Geology* 404, 136-149.
- **\*Abongwa, P.**, Atekwana, E., 2013. Assessing the temporal evolution of dissolved inorganic carbon in waters exposed to atmospheric CO<sub>2(g)</sub>: A laboratory Approach. *Journal of Hydrology* 505, 250-265.

**Conference Abstracts & Presentations (\*Students)**

- **\*Otabil, Benny, \*Mcfarland, Nova**, Abongwa, Pride, Luevano, Gizelle, Den, Walter: Hydrochemical investigation of surface water and groundwater interactions in a karst dominated aquifer in south central Texas. The Geological Society of America, October 17-22, 2025, San Antonio, TX, USA.
- **\*Abongwa, Pride, \*Mcfarland, Nova**, Smyth, Davida, Luevano, Gizelle, **\*Otabil, Benny**, Den, Walter: Microbiological and geochemical assessment of water in a karst dominated system. The Geological Society of America, October 17-22, 2025, San Antonio, TX, USA.
- **Otabil, B., \*Ofojioha, O.**, Abongwa, P., Smyth, D., Luevano, G.: Biogeochemical and Stable Isotopic Characterization of the Edwards Aquifer, South Central Texas, USA. The Geochemical Society, Goldschmidt, August 19-23, 2024, Chicago, IL, USA.
- **\*Guerra, D., \*Martinez, A.**, Abongwa, P., Den, W.: Surface Water and CO<sub>2</sub> Emissions: Diel Cycling of Carbon in the San Antonio River. 17<sup>th</sup> Annual Texas A&M University System Pathways Student Research Symposium, March 3-4, 2022, College Station, TX.

- Abongwa, P., Akondi, R., & Den, W.: *Isotopic and microbial-biogeochemical controls on the cycling of metals and metalloids in low-temperature aqueous systems. Geological Society of America (GSA) Annual Meeting, October 10-13, 2021, Portland, Oregon, USA.*
- Abongwa, P., Den, W., \***Gonzalez, S.**: *Chemical and Isotopic Characterization of a Karst-Dominated Watershed. Goldschmidt Virtual 2020, June 21-26, 2020, Hawaii.*
- Abongwa, P., Den, W., \***Gonzalez, S.**: Biogeochemical Investigations of Sulfate Producing Hot Springs Emanating from a Limestone Aquifer and an Oil Producing Shale Formation. American Geophysical Union (AGU) Annual Meeting, December 9-13, 2019, San Francisco, CA.
- \***Gonzalez, S.**, Abongwa, P., Den, W.: Natural and Anthropogenic Sources of Pollution to an Urban River: Case of the Edwards Aquifer – San Antonio River Interaction. 16<sup>th</sup> Annual Texas A&M University System-wide Symposium, November 6-7, 2019, Laredo, TX.
- Abongwa, P., \***Brettmann, A.**, Carson, R. Geochemical and mineralogical investigation of shale-hosted Miocene concretions. 70<sup>th</sup> joint Rocky Mountain and Cordilleran Geological Society of America Section meeting, May 15-17, 2018, Flagstaff, AZ.
- Abongwa, P., Atekwana, E., Puckette, J. Kinetic and Isotopic equilibration of a neutral mine discharge with atmospheric CO<sub>2</sub>: Case study of a gold mine discharge at the Cripple Creek Mining District, CO, USA. Abstracts with Program, Geological Society of America annual meeting, October 22-25, 2017, Seattle, WA.
- Abongwa, P., Atekwana, E., Puckette, J. Dissolved inorganic carbon and stable carbon isotopic evolution of neutral mine drainage from a gold mine. 34<sup>th</sup> Annual National Association of Black Geoscientists Meeting, September 9-12, 2015, Houston, Texas.
- **Roethe, Jessica\***, Atekwana, Eliot and Abongwa, Pride. A comparative assessment of the water quality of Claremore Lake, Oklahoma: Population growth and its effect on water quality. 49<sup>th</sup> Annual Geological Society of America South-Central Section Meeting, March 19-20, 2015, Stillwater, Oklahoma.
- **Aaron Prock\***, Pride Abongwa and others\*. Geochemical investigation of drainage ponds for the Cripple Creek Mining district at the Carlton Tunnel exit near Victor, Colorado. 49<sup>th</sup> Annual Geological Society of America South-Central Section Meeting, March 19-20, 2015, Stillwater, Oklahoma.
- Abongwa, P., Geyer, C., Puckette, J. Investigating the effectiveness of mineral precipitate as a tool in the removal of heavy metals from mine waters. American Geophysical Union annual meeting, December 15-19, 2014, San Francisco, California.
- Abongwa, P., Atekwana, E. Investigating the effects of precipitation on carbon evolution in surface water that interacts with atmospheric CO<sub>2(g)</sub>. Significance of stable carbon isotope ratios. Abstracts with Program, Geological Society of America annual meeting, October 27-30, 2013, Denver, Colorado.
- Abongwa, P., Puckette, J., Halihan, T., Atekwana, E. Water chemistry of selected springs, lakes, wells and creeks in central, south-central and northeastern Oklahoma. 2012 Oklahoma Water Resources Research Institute Symposium, November 13-14, 2012.
- Abongwa, P., Atekwana, E. Investigating potential loss of carbon dioxide from karst springs: constraints from dissolved inorganic carbon (DIC) and stable carbon isotope ratios of DIC ( $\delta^{13}\text{C}_{\text{DIC}}$ ). Abstracts with Program, Geological Society of America annual meeting, November 4-7, 2012, Charlotte, North Carolina.
- Abongwa, P., Atekwana, E. Assessing temporal loss of CO<sub>2</sub> from natural waters using dissolved inorganic carbon concentrations and stable carbon isotopes: Abstracts with Program, Geological Society of America annual meeting, Minneapolis, Minnesota, October 9-12, 2011.

## Fellowships, Awards and Scholarships

2023 United States Department of Agriculture (USDA) E. Kika De La Garza Science Curriculum Vitae of Pride Tamasang Abongwa 3

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|      | Fellowship 2023.  |
| 2021 | \$10000 Texas A&M San Antonio Research Council Grant 2021<br>\$5000 Texas A&M San Antonio College of Arts Sciences (CoAS) Summer 2021<br>Faculty Fellowship Grant |
| 2020 | \$10000 Texas A&M San Antonio Research Council Grant 2020<br>\$3000 Texas A&M San Antonio Summer Research Grant 2020  |
| 2019 | \$3000 Texas A&M San Antonio Summer Research Grant 2020   |
| 2012 | Excellence Award (Top award), National Association of Black Geoscientists.  |
| 2011 | Graduate Alumni Fellowship, Oklahoma State University (competitive).  |
| 2000 | Netherlands Fellowship Program (NFP). Top 3 applicants from Cameroon.   |

**Funding:**

**USDA-NIFA-HSI-009755: \$1,000,000** (Proposal #2024-0385: awarded)  
 Title: Comprehensive Experiential Learnings to Promote Climate Resilient Agriculture for Underrepresented Minority Students, by **Dr. Pride Abongwa (CO-PI)**; Dr. M. Sridhar (Florida International University [Co-PI; FIU]), and Dr. Liu X. (**PI**; Texas State University, San Marcos).

**TEACHING & CERTIFICATION**

**ACUE Certified: Effective Teaching Practices (2023).**

**Courses Taught**

**Texas A&M San Antonio**

- GEOL 1301 Earth Sciences I
- GEOL 1302 Earth Sciences II
- WATR3331 Hydrology
- WATR4330 Water Management and Field Investigation
- WATR5350 Groundwater Management and Field Investigation,

**Whitman College, Walla Walla, WA**

- GEOL 125 Environmental Geology
- GEOL 460 Geochemistry

**Oklahoma State University, Stillwater, OK**

- GEOL 1014 Geology and Human Affairs
- GEOL 1305 Environmental Geochemistry
- GEOL 2013 Geology of National Parks
- GEOL 4403 Physical Hydrology

**Students mentored:**

**Undergraduate**

1. Alisha Martinez: 2021-2024
2. Destiny Guerra: 2020-2023
3. Samantha Gonzalez: 2019-2020

**Graduate Students:**

**Thesis Committee Member:**

1. Pablo Vicaria: “Synthetic produced water treatment by directional solvent extraction in a semi-continuous system. – Spring 2024
2. Travis Walla: “Is onsite evaporation a feasible solution for produced water management for oil and gas development.” – Spring 2024
3. Austin Mcbrady: “Targeting macrophytes: Increased water quality through optimized vegetation considerations for constructed wetlands.” – Fall 2023
4. Jillin Sotomayor-Requena: “Dynamic of chemical and microbial evolution in pipe circulated with natural water.” – Spring 2022

### **Chair:**

5. John Hamilton: “Trashed: A review of anthropogenic litter in an urban watershed.”- Fall 2023
6. Benjamin Arrelano: “Produced Water.” – Fall 2023
7. Benny Otabil: “Groundwater-surface water interaction in a karst system.” – Fall 2023-Spring 2025
8. Onyeakachi Ofogioha: “Column experiments to determine fluid transport in a karst system.” – Spring 2024 –Fall 2025

### **SERVICE**

#### **University-wide**

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| Spring 2024 – Present | INSPIRE @ESPADA: Increasing Student Participation in Research Experiences                   |
| Summer/Fall 2022      | Search Committee Member – Associate Vice Provost of Student Success and Retention           |
| 2020-Present          | Faculty Senate Rep. for the department of Mathematical, Physical, and Engineering Sciences. |
| 2021-Present          | Member of the University Core Curriculum Committee  |

#### **College**

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| 2021 - Present | Member of the College of Arts and Sciences Curriculum Committee |
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#### **Departmental**

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| Fall 2025   | Pre-Tenure Review Committee Member for Dr. Ashley Teufel   |
| Fall 2025   | College promotion committee member for academic professional track faculty   |
| Spring 2025 | Search Committee <b>Chair</b> for the hiring of Instructional Assistant Professor of Biochemistry  |
| Summer 2024 | Search Committee <b>Chair</b> for the hiring of Geology Adjunct  |
| Fall 2023   | Search Committee member for a Tenure-Track Faculty in Physical Chemistry   |
| Spring 2022 | Search Committee member for adjunct faculty hire in Water Sciences   |
| Spring 2021 | Search Committee <b>Chair</b> for the hiring of a Post-Doc in the Physical Sciences Division.  |
| 2019/2020   | Search Committee <b>Chair</b> for the hiring of Adjuncts in the Physical Sciences Student research Symposium, Oklahoma State University, Stillwater. |
| 2012 - 2016 | Geology departmental liaison to the Graduate Professional and Student Government association, Oklahoma State University, Stillwater.                 |

#### **5c. Professional**

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| 2019 - Present | NSF Grants Reviewer (Hydrology, Geochemistry, and Instrumentation)     |
| 2017 - Present | Peer-Reviewer: Journal of Hydrology; Science of the Total Environment; |

Environmental Science and Pollution Research  
Nov. 2011 Organized annual meeting of the Oklahoma City Geological Society, Tulsa Geological Society and Oklahoma State University Geological Society (called Triple Junction Function) held at Oklahoma State University, Stillwater, OK.  
Oct. 2011 Member, Geological Society of America.  
Apr. 2011 Member, American Association of Petroleum Geologists (AAPG).  
Apr. 2011 Oklahoma State University Geological Society (President: 2011-2012).  
Jan. 2011 International Association of Geochemists.  
Jan. 2011 National Association of Black Geoscientists (NABG)