

Andrés Felipe Salamanca Saavedra

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EDUCATION

- **The University of Kansas** Lawrence, Kansas
PhD in Geology *Expected May 2027*
Research Interests: Hydrogeophysics, Hydrology, GPR
Advisor: Dr. George Tsoflias
- **Universidad Nacional de Colombia** Bogotá, Colombia
Master of Sciences - Geophysics *Aug 2016*
Thesis title: Static Correction for PS Converted Wave Using Seismic Interferometry
Advisor: Dr. Luis Montes
- **Universidad Nacional de Colombia** Bogotá, Colombia
BS, Geology *Feb 2013*

EXPERIENCE

- **GIDCO Geology and Geophysics** Bogotá
Consultant Company (Entrepreneurship) *Nov 2016 - Present*
 - : Acquire, process, and interpret geophysical data such as seismic, electromagnetics and potential methods for more than 75 projects across Colombia. The depth of investigation and targets varied from burial sites at 0 ft - 30 ft, groundwater contaminants' mapping (300 ft - 1,500 ft in depth).
 - : Started my own company from scratch to reach USD\$45,000 annual income, organize field trips with up to ten employees, present results to a broad and varied audience (more than 20 participants).
 - : Identified accurate and precise measurements to model the behavior on the subsurface using 4-D geophysical data. Worked with a multidisciplinary work along with engineers, environmental scientists and geologists to monitor oil/brine spills.
- **Colombian Geological Survey** Bogotá
Geophysicists (Full-time) *Jan 2018 - Dec 2019*
 - : Conducted research on airborne gamma-ray spectrometric and magnetic data for postulating 1,070 new areas of interest for mineral resources.
 - : Published two reports and three presentations to boost the geophysical exploration in Colombia.
- **HMV Ingenieros LTDA.** Bogotá
Geologist (Full-time) *Dec 2012 - Apr 2014*
 - : Interpreted the geological information (geological outcrops, rock core samples, open pits, borehole geophysics, lab measurements, fractures' description) to evaluate the geotechnical parameters of dams (up to 570 MW), bridges, and roads.
 - : Elaborated at least 15 geological models based on fieldwork observations to determine the geotechnical feasibility of engineering projects.

RESEARCH PROJECTS

- **Map of Geophysical Anomalies of Colombia for mineral resources (Interpretation, Processing):** Description of the magnetic and radiometric anomalies along the entire country with the aim of promoting mining projects in Colombia (December '19).
- **Attenuation and dispersion of elastic wave study for fractured reservoir and correction of image distortion by the presence of weathered layer:** Developed a method of statics calculation for PS converted-wave in the region of Quifa Block (Llanos Orientales) (August '18).

PUBLICATIONS

- **Peer reviewed article:** Molina C., Wisniewski, K., Salamanca, A., Saumett, M., Rojas, C., Gomez, H., Baena, A. & Pringle, J. (2024). Monitoring of simulated clandestine graves of victims using UAVs, GPR, electrical tomography and conductivity over 4-8 years post-burial to aid forensic search investigators in Colombia, South America: *Forensic Science International*, v.335, 111919, ISSN 0379-0738, DOI: 10.11144/j.forsciint.2023.111919.
- **Chapter in a Book:** Arias, H., Salamanca, A., Puentes, M., Lara, N., Gomez, E., Moyano, I., Ospina, L. (2020). Contribution of new airborne geophysical information to the geological knowledge of eastern Colombia. In: Ingeominas. *The Geology of Colombia* (p.1 - 20). Colombia: Publicaciones Geológicas Especiales Del Ingeominas, DOI: 10.32685/pub.esp.35.2019.02
- **Peer reviewed article:** Salamanca A. & Montes, L. (2019). A raypath-consistent receiver correction in PS converted wave processing through seismic interferometry: new application for tropical zones: *Universitas Scientiarum*, v.24, p. 589 - 604 , DOI: 10.11144/Javeriana.SC24-3.arcr

CONFERENCE POSTER PRESENTATIONS

- **2019 Colombian Geology Congress: Salamanca, A.** & Montes, L. Correction of weathering effect for PS converted-wave using seismic interferometry: Case of application in the Llanos Orientales. Santa Marta, Colombia.
- **SEG International Exposition and 88th Annual Meeting: Salamanca, A.,** Gutiérrez, E. & Montes, L. (2017). Optimization of a seismic inversion genetic algorithm. Houston, TX.
- **2015 National Physics Congress: Salamanca, A.** & Montes, L. Static correction for converted wave by means of seismic interferometry. Manizales, Colombia.
- **23rd Latin American Colloquium LAK 2014:** Patarroyo, P., Rojas, A. & **Salamanca, A.** Stratigraphy of the Lower Calcareous Member (Valaniginian - Hauterivian), Tibasosa Formation, Tibasosa– Boyacá (Colombia, S. A.). Heidelberg, Germany.

HONORS AND AWARDS

- Fulbright Scholarship - Doctorate - August 2022 - USD \$87.500
- Innovation Award by Ecopetrol (Colombian Petroleum Co.) - National Exploration Category - October 2017
- Innovation Award by Ecopetrol (Colombian Petroleum Co.) - Regional Exploration Category - October 2017
- Third Runner's Up at Challenge Bowl - World Finals - Society of Exploration Geophysicists - October 2016
- SEG/ExxonMobil Student Education Program (SEP) - October 2016
- Scholarship, First place at the Final Exam of Sciences (Geology) - December 2012 - COP \$20.000.000

VOLUNTEER EXPERIENCE

- **Scientific contribution** Latin America
Translation of the Encyclopedic Dictionary of Applied Geophysics from English into Spanish Jan 2016 - Oct 2020

SKILLS SUMMARY

- **Programming Languages:** Python, Java, JavaScript
- **Languages:** English and Spanish (Native)
- **Soft Skills:** Leadership, Project Management
- **Specialized Software:** Promax 2D / 3D, ArcGIS, Oasis Montaj

RESEARCH AFFILIATIONS

- **Society of Exploration Geophysicists:** KU SEG Chapter President
- **Colombian Association of Energy Geologists and Geophysicists:** Active Member (Since 2022)

REFERENCES

References available upon request.