Marcos Miranda

Research Scientist | Carbon Solutions LLC

Profile

Marcos is a research scientist that uses linear optimization, geospatial analysis, and data management to tackle challenges surrounding carbon capture, utilization, and sequestration. Marcos is passionate about using these tools and his skills to support ongoing CCUS efforts and drive forth new research in this field. He is currently finishing his Ph.D. at The Ohio State University and anticipates graduating in the Spring of 2023.

Contact Information

Phone:
+1-301-404-8512

Email:
marcos.miranda@carbonsolutionsllc.com

LinkedIn:
https://www.linkedin.com/in/marcos-miranda-01342223a/

Carbon Solutions LLC Website:
www.carbonsolutionsllc.com/

Education

Ph.D. | **Civil Engineering**
The Ohio State University | **2018-2023**
B.Sc. | **Environmental Engineering**
University of Delaware | **2013–2017**

Professional Experience

Research Scientist | **Carbon Solutions LLC** | **2022–Present**
Support projects related to the development and deployment of Carbon Capture, Utilization, and Storage networks via .

Door-to-Door Salesperson | **Inspire Energy LLC** | **2017-2018**
Went door to door for small businesses selling wind power energy to consumers. Attended events on behalf of Inspire Energy as a salesperson. Developed key communication skills and ability to communicate complex information quickly and succinctly.

Professional Conference Presentations

- **Miranda, M.** (presenter), Bielicki, J., Cheng, C. "Life Cycle Assessment of Treating Acid Mine Drainage Treatment and Producing Rare Earth Element Using Coal Combustion By-Products." **2022**. *American Ecological Engineering Society Annual Meeting*. Baltimore. June 21 – 23.
- **Miranda, M.** (presenter), Bielicki, J., Cheng, C. "Life Cycle Assessment of Treating Acid Mine Drainage Treatment and Producing Rare Earth Element Using Coal Combustion By-Products." **2020**. *AIChE Annual Meeting*. Virtual. Nov. 16 – 20.
- Bielicki, J., Ogland-Hand, J., **Miranda, M.** (presenter), Maldonado, S., Howard, C., Adams, B., Saar, M., Middleton, R. "Geospatial Optimization of Infrastructure for CO_2-Based Geothermal Electricity Generation." ***2019*** *INFORMS Annual Meeting*, Seattle, Washington. Oct. 20 – 23.

Publications

1. **Miranda, M.,** Chun, S., Bielicki, J. Cheng, C. (**2022**). "Environmental and Economic Consequences of Producing Rare Earth Elements from Coal Mine Drainage." *Environmental Engineering Science*. *doi.org/10.1089/ees.2021.0378*
2. Lily Liu, **Marcos M. Miranda**, Jeffrey M. Bielicki, Brian R. Ellis, and Jermiah X. Johnson. (**2023**). "Life Cycle Greenhouse Gas Emissions of CO_2-Enabled Sedimentary Basin Geothermal." *Environmental Science & Technology*. DOI: 10.1021/acs.est.3c04006
3. Bielicki, J., Adams, B., **Miranda, M.,** Choi, H., Jamiyuranson, B., Saar, M., Taff, S., Buscheck, T., Ogland-Hand, J. (In Revision). "Engineering Cost-Competitive Geothermal Electricity from Geologic CO_2 Storage." *Energy Conversion and Management*.

PUBLICATIONS

4. J. Ogland-Hand, J. Bielicki, M. Miranda, I. Patel, B. Adams, T. Buscheck, K. Mansoor, M. Saar. (In Preparation.) “Optimal Heat Mining of Geothermal Reservoirs.” Renewable Energy.
5. S. Maldonado, J. Bielicki, **M. Miranda**, J. Ogland-Hand, C. Howard, B. Adams, T. Buscheck, M. Saar, (**2020**). “Geospatial Estimation of the Electric Power Potential in Sedimentary Basin Geothermal Resources Using Geologically Stored Carbon Dioxide.” *Proceedings World Geothermal Congress 2020*, Reykjavik, Iceland, April 26-May 2, 2020.
6. J. Ogland-Hand, **M. Miranda**, J. Bielicki, B. Adams, T. Buscheck, M. Saar, (**2018**). “Operational Characteristics of a Geologic CO_2 Storage Bulk Energy Storage Technology.” *Proceedings of the 14th International Conference on Greenhouse Gas Technologies*, Melbourne, Australia, October 21-25, 2018.
7. J. Buckley, **M. Miranda**, A. Trauth, M. Johnson, M. Vaughan, T. Zephirin, D. Dickerson, R. Davidson, (**2019**). “The MEP Census: Characterizing Essential Programmatic and Intrastructural Elements ofMinority Engineering Programs (MEP) Nationwide.” *126th ASEE Annual Conference*. Tampa, Florida, June 2019. 10.18260/1-2--33406. *https://peer.asee.org/33406*.