

GCCC Educational Outreach



One of the urgent needs for CCS is training for technical practitioners

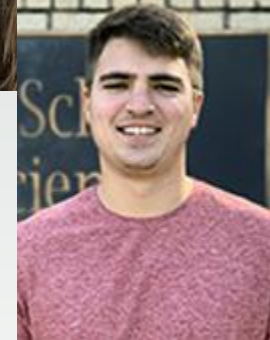
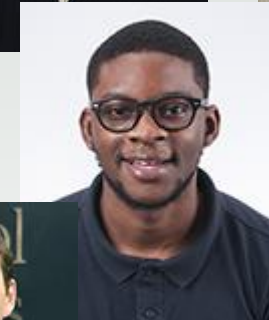
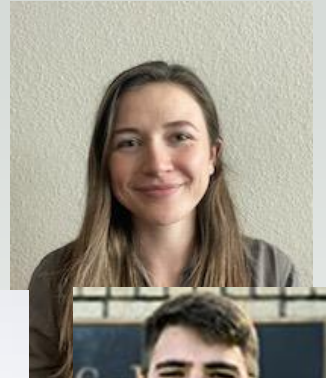
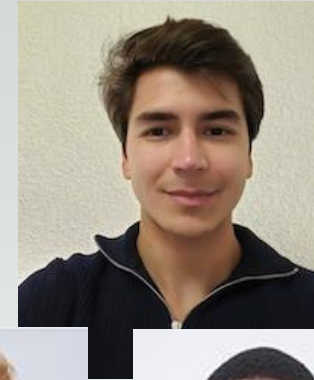
- GCCC work funded or leveraged by GoMCarb (includes also significant project-specific funding, GCCC, and SECARB USA contributions)
- Storage short courses
- Student training
- Publications
- Technical presentations
- Also Environmental Justice work

Storage Classes taught

- Alex Bump, Katherine Romanak and Seyyed Hosseini – Storage for geoscience professionals
- 3 for public training groups - 2 more planned
- 1 for the Trinidad Ministry of Energy
- 3 for industry groups - 2 more planned
- Planned online course offering through UT

Student Training – Grads 2021-2022

- Marco Guirola - Internship at Exxon
- Maddie Laidlaw – Macquarie investment bank UK
- Taylor Barnhart - National Weather Service NO
- Arnold Aluge – McKinsey
- Melianna Ulfah – TetraTech doing CCS
- Harry Hull -EOG
- John Franey - Antea Group
- Margaret Murakami –U of Helsinki



Students – 2022-2023



Edna Rodriguez Calzado



Ismail Halim Faruqi



Shadya Taleb Restrepo



Chinemerem Okenzi

Richard Larson

Angela Luciano

Yushan Li

Many, Many Talks

- **Gordon Research Conference in Ventura California. Hovorka gave a paper on “Remaining Challenges in Storage of CO₂ in Deep Saline Formations”**
- **Climate Change and the Energy Transition the State Bar of Texas ENRLS and Texas Law Environmental Journal**
- **(nine talks) AAPG CCUS 2022 conference in Houston**
- **CCS Roundtable UK Consulate in Houston, Department of International Trade.**
- **US-DOE and India workshop on CCS**
- **North American Energy Dialogue Series.**



Publications 2021-2022

- Ulfah, Melianna Hosseini, Seyyed Hovorka, Susan Bump, Alex Bakhshian, Sahar Dunlap, Dallas, 2022 Assessing Impacts on Pressure Stabilization and Leasing Acreage for CO₂ Storage Utilizing Oil Migration Concepts, International Journal of Greenhouse Gas Control, Volume 115 <https://doi.org/10.1016/j.ijggc.2022.103612>.
- Bump, A. P., Hovorka, S. D., and Meckel, T. A., 2021, Common risk segment mapping: streamlining exploration for carbon storage sites, with application to coastal Texas and Louisiana: International Journal of Greenhouse Gas Control, v. 111, no. 103457, 13 p., <http://doi.org/10.1016/j.ijggc.2021.103457>.
- Madugula, A. C. S., Sachde, D., Hovorka, S. D., Meckel, T. A., and Benson, T. J., 2021, Estimation of CO₂ from petroleum refineries based on the total operable capacity for carbon capture applications: Chemical Engineering Journal Advances, v. 8, no. 100162, 9 p <http://doi.org/10.1016/j.ceja.2021.100162>.
- Meckel, T. A., Bump, A. P., Hovorka, S. D., and Treviño, R. H., 2021, Carbon capture, utilization, and storage hub development on the Gulf Coast: Greenhouse Gases: Science and Technology, v. 11, no. 4, p. 619-632, <http://doi.org/10.1002/ghg.2082>.
- Ni, H., and Meckel, T. A., 2021, Characterizing the effect of capillary heterogeneity on multiphase flow pulsation in an intermediate-scale beadpack experiment using time series clustering and frequency analysis: Water Resources Research, v. 57, no. 11, article no. e2021WR030876, 17 p., <http://doi.org/10.1029/2021WR030876>.

Environmental Justice

Site-specific applications of EPA EJ tools specifically for storage

Dialog with EPA and other staff; collecting information in this rapidly evolving topic area.

Issues:

Bias toward urban areas

Storage sites likely to negotiate with large landowner



Ramon Gil Egui