611 McKinley St., Room 310, Lafayette 70503, LA, USA davide.oppo@louisiana.edu - risingfluids.org

EDUCATION

Doctor of Philosophy in Earth Sciences, University of Bologna, Italy

2012

2006

Dissertation title: Study of mud volcanoes to define the migration of deep fluids

Advisor: Prof. Rossella Capozzi

Master of Science in Environmental Sciences, Marine Geology, 110/110 Summa cum Laude, University of Bologna, Italy 2008

Thesis title: Fluids migration and Recent deformations in the Calabrian Arc

Advisor: Prof. Rossella Capozzi

Bachelor of Science in Marine Environmental Sciences, 110/110 Summa cum Laude, University of Sassari, Italy

Thesis title: Distribution of Dynoflagellate cists in relation to the sediment dynamic in the Gulf of Olbia

Advisors: Prof. Vincenzo Pascucci and Prof. Antonella Luglié

PROFESSIONAL EXPERIENCE

ASSISTANT PROFESSOR 08/2018 – Present

School of Geosciences, the University of Louisiana at Lafayette, USA

- Pioneer Production Endowed Professor of Geology (Since Fall 2019)
- Geology B.Sc. Program Coordinator
- Coordinator of the Sedimentary Basins Research Group
- AAPG Student Chapter and UL Lafayette Imperial Barrel Award Faculty Advisor

LECTURER 04/2016 – 09/2018

Department of Geology and Petroleum Geology, University of Aberdeen, UK

- Designed and led multidisciplinary Geosciences projects, including field surveys in Europe and East Africa.
- Fostered relationships between my home department and industry to pursue projects on common interests.
- Bid for research funds, awarded c. £200,000 including grants from The National Geographic Society and The Carnegie
 Trust
- Mentored and supervised undergraduate and graduate students.

VISITING LECTURER 10/2016 – 08/2018

Department of Geology, University of Dar es Salaam, Tanzania

- Played an integral role in establishing undergraduate and graduate programs in Petroleum Geology.
- Mentored faculty members to increase the courses effectiveness.
- Introduced and coordinated *in-country* projects to stimulate partnerships with industries, including Shell, Beach Petroleum, and TPDC.
- Taught 6 courses related to Petroleum Geology and Economics at Bachelor and Master levels.
- Mentoring and supervision of undergraduate students during research and educational activities.

POST-DOCTORAL RESEARCH FELLOW

03/2012 - 08/2014

Department of Geology, University of Bologna, Italy

- Highly versatile in applying multiple analytical strategies to reconstruct deep petroleum generation and migration.
- Experienced in coordinating complex research projects analyzing the biogeochemistry of authigenic carbonates, resulting
 in the discovery of a subsurface methane migration network.
- Highly efficient and experienced in leading field activities in remote areas, as demonstrated by successful field surveys in Turkmenistan, which generated 2 publications.

Curriculum Vitae

VISITING SCIENTIST 04/2011 – 07/2011

Department of Geophysics, Colorado School of Mines, USA

 Processed geoelectrical resistivity tomography data to obtain high-resolution images of feeding conduits in mud volcanoes subsurface.

EXPLORATION GEOLOGIST

01/2010 - 02/2012

Geophi s.r.l., Bologna, Italy

- Project scientist with full accountability to characterize petroleum systems in 2 permits, with a multidisciplinary dataset.
- Efficient resource management by decreasing analytical cost, resulted in enhanced company return on investment.
- Effective writing and presentation of final technical project reports to the stakeholders.

VISITING SCIENTIST 04/2009 – 07/2009

Department of Geology, University of Aveiro, Portugal

- Characterized the mineralogy and geochemistry of methane-derived carbonates.
- Re-processed reflection seismic 2D data.

TEACHING ASSISTANT 01/2009 – 02/2012

Department of Geology, University of Bologna, Italy

Developed and taught laboratory and field trips in Sedimentology, Stratigraphy, and Coastal Geomorphology.

RESEARCH GRANTS AND DATA DONATIONS

- 2023-2026, **Principal Investigator**: Louisiana Board of Regents, RCS. *Advanced Time-Lapse Seismic Characterization of a Methane Hydrate-Bearing System*. Funded, \$150,140 to support two MSc. Students.
 - 2022, UL Lafayette Travel Grant (Round 2) Award / 2022-2023. Funded: \$750.
- 2023-2025, **Principal Investigator**: American Chemical Society. *Advanced Time-Lapse Seismic Characterization of a Methane Hydrate-Bearing System*. Funded, \$110,000 to support one Ph.D. student.
- 2022-2027, **Principal Investigator**: National Science Foundation, DGE, *Graduate Research Fellowship Program (GRFP)*. Funded: \$138,000
 - 2022, Principal Investigator: BP Houston. Geophysical data donation. Value unknown.
- 2021-2022, **Co-Principal Investigator**: National Science Foundation, IF. *Acquisition of a tabletop SEM+EDS system at the University of Louisiana at Lafayette*. Funded: \$162,850 (\$25,175 to Co-PI).
 - 2020, Principal Investigator: TGS Houston. Geophysical data donation. Value \$2M+.
- 2019-2020, **Co-Principal Investigator**: Louisiana Board of Regents, Targeted Enhancement: *Acquisition of a laser diffraction particle size analyzer for research, education, and training in earth and energy sciences*. Funded: \$87,945 (\$14,687 to Co-PI).
 - 2019, **Principal Investigator**: CGG London. Remote sensing data donation. Value unknown.
 - 2018, UL Lafayette Travel Grant (Round 2) Award / 2018-2019. Funded: \$750.
- 2018-2021, **Principal Investigator**: Bangabandhu Science and Technology Fellowship Trust. *Post-Messinian structural and stratigraphic architecture of the Levant Basin offshore Lebanon*. Funded for Ph.D. student salary: 135,600 GBP.
- 2017-2018, **Principal Investigator**: The Carnegie Trust. Research Incentive Grant. *Numerical modeling of mud volcanoes: how do mud chambers control surface fluid emission?* Funded: 5,138 GBP.
 - 2017, **Principal Investigator**: The Royal Society of Edinburgh. International Exchange Programme. *Relationship among methane-derived authigenic carbonates formation and climate variations*. Funded: 1,675 GBP.

Curriculum Vitae

- 2017-2018, **Co-Principal Investigator**: National Geographic Society. *WIMBI Tsunami hazards along Tanzania coastlines*. Funded: \$18,420.
- 2016-2018, **Principal Investigator**: European Union Aid Tanzania. *Spontaneous oil seepage as a tool to assess the oil-generative potential of Tanzanian Coastal Sedimentary Basin*. Funded: 15,110 EUR.
- 2016-2018, **Principal Investigator**: European Union Aid Tanzania. *Assessment of Mesozoic sandstone units as possible reservoirs in the Mandawa Basin*. Funded: 15,470 EUR.
- 2016-2018, **Co-Principal Investigator**: European Union Aid Tanzania. *An investigation of the Jurassic source rocks and their basement rocks for an assessment of a petroleum system in south-western Tanzania*. Funded: 15,000 EUR.
- 2016-2018, **Co-Principal Investigator**: European Union Aid Tanzania. *Petrophysical and petrographic evaluation of the potential hydrocarbon reservoir rocks in the Rukwa Rift Basin, Southwestern Tanzania*. Funded: 14,895 EUR.
- 2012-2014, **Investigator**: PRIN 2009 MIUR Italy. *Stratigraphic and structural control on fluid migration and related carbonate precipitation along conduits*. Funded: 87,312 EUR, Personal role: Sedimentologist, Geochemist.

FELLOWSHIPS, AWARDS & RECOGNITIONS

2023 AAPG Foundation Inspirational Geoscience Educator Award

Pioneer Production Endowed Professor of Geology at UL Lafayette, 2019-current

Professor of the month – Theta Xi Fraternity at UL Lafayette, October 2018

Elected Fellow of the Geological Society of London, 2016

Elected Associate Member of the Royal Society of Chemistry, 2016

Outstanding Reviewer, Marine and Petroleum Geology - Elsevier, 2015; 2017

The University of Bologna **Fellowship**. This competitive fellowship appointment provides funding for 2.5 years of postdoctoral research. Proposal title: *Biogeochemistry of saline waters and hydrocarbon cold seepage associated with the formation of Methane-Derived Authigenic Carbonates in shelfal fine-grained sediments.* Total funds: 57,500€, 2012.

Italian Ministry for Education, University and Research **Scholarship**. This competitive scholarship provides funding for 3 years to the best candidate (30 applicants for 2009 call) in the admission exam for the Doctor of Philosophy in Geology at the University of Bologna. Proposal title: *Study of mud volcanoes for the definition of deep fluids migration*. Total funds: 48,180€, 2009.

TAUGHT COURSES

The University of Louisiana at Lafayette

- GEOL 105—Geology and Man
- GEOL 339—Sedimentary Petrology
- GEOL 341—Stratigraphy
- GEOL 400—Field Camp

- GEOL 456G—Basin analysis
- GEOL 415—Advanced stratigraphy
- GEOL 414—Advanced Sedimentary Petrology
- GEOL 633—Evolution of the coast and continental shelf

University of Dar es Salaam (2016-2018)

- GY338 Petroleum Geophysics
- GY449 Technology Review
- GY450 Prospect Assessment, Evaluation, and Petroleum Economics
- GY600 Advanced Petroleum Geology
- GY607—Seismic data interpretation
- GY612 Reservoir Diagenesis and quality

PROFESSIONAL ACTIVITIES

Associate Editor Marine and Petroleum Geology, 2019-Present

Associate Editor Frontiers in Earth Sciences – Marine Geosciences, 2021-Present

Curriculum Vitae

Review Editor Frontier in Marine Science—Marine Biogeochemistry, 2020-Present

Research Grant proposal Reviewer - Agence Nationale de la Recherche (France), 2020

Member of the Management Board of the South-Central Section of the Geological Society of America, 2020-2021

Member of the Elsevier Advisory Panel. 2016-Present

Reviewer for:

- Geology
- Marine and Petroleum Geology
- Chemical Geology
- Marine Geology
- Sedimentary Geology
- Journal of Petroleum Science and Engineering

UNIVERSITY SERVICE

While at UL Lafavette:

Coordinator of the Geology BSc Program (2023-Present)

Chair for the search of a Tenure-Track Assistant/Associate Professor in Structural Geology (2023)

Member of the Faculty Senate (2020-Present)

Assistant Director of the School of Geosciences (June-July 2022)

Recruitment at Louisiana high schools (2022-present)

Member of the UL Success and Retention Committee (Spring 2023)

Member of the Graduate students committee at the School of Geosciences (2020 - Present)

Member of the committee for the revision of the Geology Curriculum at the School of Geosciences (2019-Present)

Web ambassador for the School of Geosciences at UL Lafayette (2018 - Present)

Member of the committee for re-organization and instructor of Field Camp (2018—Present)

Faculty advisor of the UL Lafayette IBA Team (2021-Present)

Faculty advisor for the AAPG Student Chapter at UL Lafayette

Member of the committee for evaluation of the Geochemistry Analytical Needs of the School (2020)

Promoter and organizer of the new Graduate Students offices in Hamilton Hall 127 (2020)

Co-organizer of the refurbishment and upgrade of the IBA room/advanced computer lab (2019-2020)

Member of the committee for the hiring of new faculty in Environmental Science (2019-2020)

Represented the School at the College of Sciences Preview Day (2019-2020-2021-2022-2023)

Exhibitor/recruiter for the School of Geosciences at the LAGCOE conference, New Orleans (2019)

Responsible for organizing the Seminar series at UL Lafayette's School of Geosciences (FA18 to FA19)

Taskforce member for analyzing the UL Lafayette's School of Geosciences website (2018)

Creator and webmaster of the website of UL Lafayette's School of Geosciences Field Camp

Exhibitor/recruiter for the School of Geosciences at the GSA annual conference, Indianapolis (2018) and LAGCOE (2019)

Older activities:

Member of the committee for the revision and improvement of BSc and MSc degrees in Petroleum Geology, University of Dar es Salaam (TZ) (2016-2017)

External examiner for 6 graduate dissertations in Geology, University of Dar es Salaam (TZ) (2016)

Elected delegate for the Post-Doctoral Researchers in the Geology Department Board at the University of Bologna (2012-2014)

Curriculum Vitae

PROFESSIONAL TRAINING

- Building, developing, and motivating teams
- Interview skills
- Course co-ordination and curriculum management
- Learning & Teaching in Higher Education
- Diversity in learning and teaching

- Essential supervisory skills
- Giving and receiving feedback
- Diversity in the workplace
- Field Safety Leadership
- Geosciences and Society: A Teaching Workshop

PROFESSIONAL SOCIETY MEMBERSHIPS

American Association of Petroleum Geologists (AAPG) - Member

American Geophysical Union (AGU) - Life member

International Association of Sedimentologists (IAS) - Life member

European Geosciences Union (EGU) - Life member

Geological Society of America (GSA) - Member

Lafayette Geological Society (LGS) - Member

SOFTWARE SKILLS

ESRI ArcGIS, QGis, Global Mapper, Adobe Creative Suite, Petrel, Kingdom Suite, Surfer

FIELD SURVEYS AND RESEARCH CRUISES

- 2022, Onboard scientist: Cascadia margin, OR. Cruise RR2210; NSF Early Career PI sediment coring training.
- 2021-2022, Co-Leading scientist: Louisiana, USA. Causes and processes of coastal subsidence in Louisiana.
 - 2019, Co-Leading scientist: Nova Scotia, Canada. Sedimentological record of paleo-tsunami in coastal lakes.
- 2016-2017, **Leading scientist**: Tanzania Coastal Basins. Investigation of paleo-reefs to characterize the Quaternary sea-level change.
- 2016-2017, **Leading scientist**: Mandawa Basin, Tanzania. Deposition of Mesozoic sandstones and their evaluation as hydrocarbon reservoirs.
- 2016-2017, **Leading scientist**: Coastal Basins, Tanzania. Characterization of spontaneous seepages to assess oil-generative potential.
- 2016-2017, **Co-Leading scientist**: Tanzania Coastal Basins and Zanzibar Island. Records of Holocene trans-oceanic paleo-tsunami and exceptional storm deposits along East Africa.
 - 2016, Co-investigator: Central Tanzania Coastal Basin. Deposition and deformation of Miocene Rufiji paleo delta.
- 2012-2014, **Leading scientist**: Northern Apennines, Italy. Over 10 surveys to study the Methane-derived authigenic carbonates formation in relation to the hosting Plio-Pleistocene successions.
 - 2010, **Leading scientist**: Western Turkmenistan. Origin and characteristics of fluids and sediment remobilization in the Coastal Basin.
- 2009-2012, Leading scientist: Northern Apennines, Italy. Over 10 surveys to characterize the regional petroleum system.
 - 2008, **Onboard scientist**: CALAMARE Cruise Calabrian Arc, Ionian Sea. Multidisciplinary cruise to investigate active deformation and seismic hazard.
 - 2007, Onboard scientist: Adriatic Sea. Seafloor sampling and coring in the Rospo Mare petroleum field, Italy.
 - 2006, Onboard scientist: Tyrrhenian Sea. High-resolution seismic and SSS survey offshore Alghero coast, Italy.

SELECTED INVITED SEMINARS, GUEST LECTURES, AND ORGANIZED WORKSHOPS

- Individual benthic foraminifera analysis and its use in reconstructing the history of methane seeps. Ocean Ecology and Biogeochemistry Seminar, Oregon State University (2023).
- Leaky salt: pipe trails record the history of cross-evaporite fluid escape in the Northern Levant Basin, Eastern Mediterranean. Tulane University (2021).

Curriculum Vitae

- Guest lecturer in the Petroleum Geology course. Louisiana State University (2020).
- Role of deep-sourced fluids on the initiation and growth of isolated carbonate build-ups, Colorado School of Mines (2019).
- Cold seepage: a window to the deep petroleum system, Louisiana State University (2018); Van Tuyl Lecture at School of Mines (2019).
- Focused fluid flow: mud volcanoes in outcrop and seismic, University of Aberdeen (UK), 2017.
- Relations among recent tectonic activity, mud diapirism, and slope instability. The case of the Calabrian Arc, Ionian Sea, Italy, University of Alabama (USA), 2015.
- Study of sediment remobilization and fluid flow during the petroleum system definition and assessment, Total (FR), 2014
- A new model of the Total Petroleum System in the Northern Apennines and its relationship with the emplacement of MDAC chimneys fields, Italy, California State University Bakersfield (USA), 2014.
- Carbonate conduits linked to hydrocarbon-enriched fluid escape. Workshop and field seminar, Bologna, Italy, 2013.
- Study of mud volcanoes to define deep fluid migration, University of Aveiro (PT), 2012.
- Study of mud volcanoes to define deep fluid migration pathways in deformed setting, Colorado School of Mines (USA), 2011.

CONVENER OF TOPICAL SESSIONS AT INTERNATIONAL CONFERENCES

- Skarke A., Oppo D., Joye S., Babineaux G., (2023) Methane Cold Seep processes, dynamics, and impacts. AGU Fall Meeting, Dec 11 – 15, San Francisco
- 2. Joye S., **Oppo D.**, Shah Water S., Skarke A. (2022) Cold Seep methane dynamics -geological drivers and biogeochemical impacts. AGU Fall Meeting, Dec 12 16, Chicago
- 3. Argentino C., **Oppo D.**, Panieri G., Röemer M., (2022) Hydrocarbon seepage: from past records to modern examples and models to evaluate the future. EGU General Assembly, 3-8 April 2022.
- 4. Skarke A., **Oppo D.**, Joye S., (2021) Hydrocarbon Cold Seep Processes: From the Subsurface to the Water Column. AGU Fall Meeting, Dec 13 17, New Orleans
- 5. Argentino C., **Oppo D.**, Panieri G., Röemer M., (2021) Hydrocarbon seepage: from past records to modern examples and models to evaluate the future. EGU General Assembly, 19-30 April 2021, Virtual.
- 6. **Oppo D.**, Skarke A., Römer M., Joye S., (2020) Seafloor Cold Seeps Dynamics: Local to Global Impacts of Methane Emission and Gas Hydrates on the Marine Environment. AGU Fall Meeting, 7 17 December 2020, Virtual.
- 7. **Oppo D.**, Joye S., Baumberger T, Demopoulos A., (2020) Seafloor cold seepage: interactions and effects of hydrocarbon emission and methane hydrates on the geological and biological environments. Ocean Sciences Meeting, 16-21 February 2020, San Diego, CA

SPECIAL ISSUES

 Oppo D., Feng D., Joye S., Peckmann J., Zwicker J. (2022). Chemical and Biogeochemical Processes at Methane and Other Cold Seeps. Frontiers in Earth Sciences, Marine Geoscience.

ISI PEER-REVIEWED JOURNAL ARTICLES

(* Graduate student author)

- 1. **Oppo, D.**, Jackson, C. A-L., Gorini, C., Iacopini, D., Evans, S., Maselli, V., (2023). Mass wasting records the first stages of the Messinian Salinity Crisis in the eastern Mediterranean. Geology, 51 (7), 637–641. https://doi.org/10.1130/G51146.1
- Clemens, S.C., Thirumalai, K., & Oppo, D., (2023). Indian margin methane hydrate dissociation recorded in the carbon isotopes of benthic (Miliolida) foraminifera. Earth and Planetary Science Letters, Volume 609, 118101, https://doi.org/10.1016/j.epsl.2023.118101

Media: NSF News; phys.org; futurity.org; newswise.com; The Science Times

Curriculum Vitae

- 3. Kabir, S.M.M.*, Iacopini, D., Hartley, A., Maselli, V., & **Oppo, D.** (2022). Seismic characterization and depositional significance of the Nahr Menashe deposits: Implications for the terminal phases of the Messinian salinity crisis in the northeast Levant Basin, offshore Lebanon. Basin Research, 34(6), 2085-2110. https://doi.org/10.1111/bre.12697
- 4. **Oppo, D.**, Capozzi, R., Tingay, M., Marabini, S. (2021) Early burial mud diapirism: Lateral overpressure transfer and slope failure in a deformed foredeep. Geophysical Research Letters, 48, e2021GL094922. https://doi.org/10.1029/2021GL094922
- 5. **Oppo, D.**, Evans, S.*, Iacopini, D., Kabir, S. M.*, Maselli, V., & Jackson, C. A. (2021). Leaky salt: pipe trails record the history of cross-evaporite fluid escape in the northern Levant Basin, Eastern Mediterranean. Basin Research, 33, 1798-1819. https://doi.org/10.1111/bre.12536
- 6. Maselli, V., Micallef, A., Normandeau, A., **Oppo, D.**, Iacopini, D., Green, A. & Ge, Z. (2021) Active faulting controls bedforms development on a deep-water fan. Geology, 49 (12): 1495–1500 https://doi.org/10.1130/G49206.1.
- 7. Evans, S.*, Jackson, C. A., **Oppo, D.** (2021). Taking the pulse of salt-detached gravity gliding in the eastern Mediterranean. Tectonics, 40, e2020TC006476. https://doi.org/10.1029/2020TC006476
- 8. Boyden, P.*, Weil-Accardo, J., Deschamps, P., **Oppo, D.**, Rovere, A., (2021) Last Interglacial sea-level proxies in East Africa and the Western Indian Ocean. Earth System Science Data, 13, 1633–1651. https://doi.org/10.5194/essd-13-1633-2021
- 9. **Oppo D.**, De Siena L., Kemp D., (2020) A record of seafloor methane seepage across the last 150 million years. Scientific Reports 10:2562, https://doi.org/10.1038/s41598-020-59431-3

Media: Thomasy, H. (2020), Oceanic changes correlate with methane seepage, Eos, 101, https://doi.org/10.1029/2020EO145301

10. Maselli, V., **Oppo, D.**, Moore, A.L., Gusman, A.R., Mtelela, C., Iacopini, D., Taviani, M., Mjema, E., Mulaya, E., Che, M., Tomioka, A.L., Mshiu, E., Ortiz, J.D., (2020) - A 1000-yr-old tsunami in the Indian Ocean points to greater risk for East Africa. Geology 48 (8), 808–813. https://doi.org/10.1130/G47257.1

Media: phys.org; National Geographic; Scientific American

- 11. Russell, J.M., ..., **Oppo D**., et al., (2020) ICDP workshop on the Lake Tanganyika Scientific Drilling Project: a late Miocene–present record of climate, rifting, and ecosystem evolution from the world's oldest tropical lake. Scientific Drilling 27, 53–60, https://doi.org/10.5194/sd-27-53-2020.
- 12. **Oppo D.**, Hovland M., (2019) Role of deep-sourced fluids on the initiation and growth of isolated carbonate build-ups. Marine and Petroleum Geology 105, 141-157. https://doi.org/10.1016/j.marpetgeo.2019.04.019
- 13. **Oppo D.**, Hurst A. (2018) Seepage of hydrothermally generated petroleum in East African Rift lakes: an example from Lake Tanganyika. Marine and Petroleum Geology 92, 149-159. https://doi.org/10.1016/j.marpetgeo.2018.02.031
- 14. **Oppo D.,** Viola I.*, Capozzi R. (2017) Fluid source and stable isotopes signatures in Authigenic Carbonates: examples from the Northern Apennines, Italy. Marine and Petroleum Geology 86, 606-619. https://doi.org/10.1016/j.marpetgeo.2017.06.016
- 15. Capozzi R., **Oppo D.**, Taviani M. (2017) Cold Seepages: An Economic Tool for Hydrocarbon Appraisal. In: Hurst A., Kenter J., Graham S. (eds.), Outcrops that change the way we practice petroleum geology, Special Issue AAPG Bulletin 101 (4), 617-623. 10.1306/011817DIG17041
- 16. **Oppo D.**, Capozzi R. (2016) Spatial association of mud volcano and sandstone intrusions, Boyadag anticline, western Turkmenistan. Basin Research 28, 827-839.
- 17. **Oppo D.**, Capozzi R., Picotti V., Ponza A. (2015) A genetic model of hydrocarbon-derived carbonate chimneys in shelfal fine grained sediments: the Enza River field, Northern Apennines (Italy). In: Capozzi R., Negri A., Rietner J. and Taviani M. (eds), Carbonate conduits linked to hydrocarbon enriched fluid escape, Marine and Petroleum Geology Special Issue 66, 555-565.
- 18. Viola I.*, **Oppo D.**, Dinelli E., Capozzi R., Franchi F., Liverani B., Taviani M. (2015) Mineralogy, geochemistry and petrography of Methane-Derived Authigenic Carbonates from Enza River, Northern Apennines (Italy). In: Capozzi R., Negri A., Rietner J. and Taviani M., (eds), Carbonate conduits linked to hydrocarbon enriched fluid escape, Marine and Petroleum

Curriculum Vitae

Geology Special Issue 66, 566-581.

- 19. **Oppo D.**, Capozzi R., Nigarov A., Esenov P. (2014) Mud volcanism and fluid geochemistry in the Cheleken Peninsula, western Turkmenistan. Marine and Petroleum Geology 57, 122-134.
- 20. **Oppo D**., Capozzi R., Picotti V. (2013) A new model of the Petroleum System in the Northern Apennines, Italy. Marine and Petroleum Geology 48, 57-76.
- 21. Capozzi R., Guido F.L., **Oppo D**., Gabbianelli G. (2012) Methane-Derived Authigenic Carbonates (MDAC) in Northern-Central Adriatic Sea: relationships between reservoirs and methane seepages. In: Anka Z., Berndt C. and Gay A., Marine Geology Special Issue: Natural gas seepage and Focused fluid flow on continental margins, 332-334, 174-188.
- 22. Capozzi R., Artoni A., Torelli L., Lorenzini S., **Oppo D**., Mussoni P., Polonia A. (2012) Neogene to Quaternary tectonics and mud diapirism in the Gulf of Squillace (Crotone-Spartivento Basin, Calabrian Arc, Italy). Marine and Petroleum Geology 35, 219-234.

CONFERENCE AND MEETING ABSTRACTS

(§ Oral presentation; *student - If one of my students is leading author, I am either 2nd or last author)

- 1. **Oppo, D.**, Clemens, S.C., Thirumalai, K., (2023) Indian Margin Methane Hydrate Dissociation Recorded in the Carbon Isotopes of Benthic (Miliolida) Foraminifera. AGU Fall Meeting, 11-15 December, San Francisco.
- 2. Babineaux, G.*, **Oppo, D.**, Thirumalai, K., Macelloni, L., (2023) Isotopic Signatures of Methane Seepage Recorded in Benthic Foraminifera from Woolsey Mound (Gulf of Mexico). AGU Fall Meeting, 11-15 December, San Francisco.
- 3. Beeson, J.W., **Oppo, D.**, Babineaux, G.*, Baumberger, T., Merle, S.G., Buterfield, D.A., Lu, G., Buck, N.J., Roe, K.K., (2023) Discovery of a Thrust-Associated Mud Volcano at the mid-slope break of the Cascadia Margin: Implications for Cascadia Accretionary Wedge Evolution and Deep Fluid Migration Pathways. AGU Fall Meeting, 11-15 December, San Francisco.
- 4. lacopini, D., Dottore Stagna, M.*, Tavani, S, Gorini, C., Maselli, V., **Oppo, D**. (2023) Plio-Early Pleistocene re activation of Levant Fracture system. (Outer shelf, Offshore Lebanon). INQUA 2023, 14-20 July, Rome (Italy).
- 5. Brovold, C., Huval, A.M., Gottardi, R., Oppo, D., Schubert, B., Villa, J.A. (2023) Organic Matter Quantity and Composition After a Storm Surge Event in Coastal Louisiana. State of the Coast, New Orleans, LA.
- 6. Aralu, J.*§, **Oppo, D.**, Alvez, T. (2022) Large Pockmark fields point to extensive past fluid expulsion in the Gippsland Basin (SE Australia). AGU Fall Meeting, 12-16 December, Chicago.
- 7. Babineaux G.*, **Oppo D.**, Thirumalai K., Panieri G., Richey, J., Macelloni L., (2022) Individual Benthic Foraminifera Analysis and its Use in Reconstructing Methane Seepage: the Case of Woolsey Mound, Gulf of Mexico, AGU Fall Meeting, 12-16 December, Chicago.
- 8. Feng, D., Wang, X., **Oppo, D.**, Wang, M., Chen, T., Roberts, H.H., Chen, D. (2022) Sediment loading triggered gas and fluid expulsions during the last 130 ka: Evidence from Gulf of Mexico continental slope. AGU Fall Meeting, 12-16 December, Chicago.
- 9. Havard, E.*, Thirumalai, K., Richey, J.N., **Oppo, D.**, (2022) Species Abundance and Individual Foraminiferal Analyses During the Younger Dryas in the Northern Gulf of Mexico. AGU Fall Meeting, 12-16 December, Chicago.
- 10. Brovold, C.*, Huval, A., Gottardi, R., **Oppo, D.**, Shubert, B., Villa, J.A. (2022) Salt Tectonics Affects Organic Matter Quality and Quantity of a Coastal Wetland in Southwest Louisiana. AGU Fall Meeting, 12-16 December, Chicago.
- 11. Maselli, V., Micallef, A., Normandeau, A., **Oppo, D.**, Iacopini, D., Green, A. & Ge, Z. (2022) Active faulting suppresses bedform development on a (supercritical) deep-water fan. AGU Fall Meeting, 12-16 December, Chicago.
- 12. Feng, D., Wang, X., **Oppo, D.**, Wang, M., Chen, T., Roberts, H.H., Chen, D. (2022) Timing of fluid and gas expulsion on the northern Gulf of Mexico continental slope. International Sedimentological Congress, 22-26 August, Beijing.
- 13. Maselli, V.§, Micallef, A., Normandeau, A., **Oppo, D.**, Iacopini, D., Green, A. & Ge, Z. (2022) Influence of tectonically controlled topography on deep-water sedimentation. AGS 48th Colloquium and Annual General Meeting, Atlantic Geoscience Society, 11-12 February 2022, virtual.

Curriculum Vitae

- 14. Maselli, V.§, Micallef, A., Normandeau, A., **Oppo, D.**, Iacopini, D., Green, A. & Ge, Z. (2022) Influence of tectonically controlled topography on deep-water sedimentation. Intarnational Conference on Seafloor Landforms, July 4-6, Malta.
- 15. **Oppo D.**, Evans S.*, Jackson C.A-L., Iacopini D., Kabir M.*, Maselli V., (2021) Leaky salt: the history of cross-evaporite fluid escape as recorded in pipe trails, Levant Basin, Eastern Mediterranean. AGU Fall Meeting, Dec 13 17, New Orleans.
- 16. Babineaux G.*§, **Oppo D.**, Powers N.*, Thirumalai K., Selznick E.*, Panieri G., Macelloni L., (2021) New analyses reveal a high variability of methane release over the last 50 kys at Woolsey Mound (Gulf of Mexico). AGU Fall Meeting, Dec 13 17, New Orleans.
- 17. Batubo P.*, **Oppo D.**, Morra G., Moore A., (2021) Inverse Modelling of Tsunami Deposits Using a Deep Learning Neural Network: Application to the 1929 Grand Banks Tsunami Deposits. AGU Fall Meeting, Dec 13 17, New Orleans.
- 18. **Oppo D.** §, Evans S.*, Jackson C.A-L., Iacopini D., Kabir M., Maselli V., (2021) Leaky salt: pipe trails record the history of cross-evaporite fluid escape in the northern Levant Basin, Eastern Mediterranean. EGU General Assembly 2021, 19-30 April 2021. (Virtual do to Covid-19).
- 19. Maselli V., **Oppo D.**, Moore A.L., Gusman A.R. Mtelela C., Iacopini D., Taviani M., Mjema E., Mulaya E., Che M., Tomioka A.L., Mshiu E., Ortiz J.D., (2021) Historical evidence warns about disastrous tele-tsunami risk on the coast of East Africa. EGU General Assembly 2021, 19-30 April 2021. (Virtual do to Covid-19).
- 20. Kabir M*, Iacopini D., Hartley A., Maselli V., **Oppo D.** (2021) The role of the Nahr Menashe in the Messinian Salinity Crisis: formation, dissolution and fluvial incision of the top evaporite unit in the NE Levant Basin, Eastern Mediterranean. . EGU General Assembly 2021, 19-30 April 2021. (Virtual do to Covid-19).
- 21. Roy S., Hovland M., Jensen J., **Oppo D.**, (2020) Faunal characteristics of the Nyegga/Storegga cold-seep, NE-Atlantic. AGU Fall Meeting, Dec 7 11, San Francisco (Virtual due to Covid-19).
- 22. Ajala S.*, Gottardi R., Onwumelu C., **Oppo D.** (2020) Depositional environment and sequence stratigraphy of the Lower Tuscaloosa sandstone in Washington Parish, Louisiana. GSA 2929 Connects Online. (Virtual do to Covid-19)
- 23. **Oppo D.**§, Hurst A. (2020) Seepage Rate of Hydrothermally Generated Petroleum in East African Rift Lakes: an Example from Lake Tanganyika. AAPG ACE 2020, Sept 29-Oct 1, Houston, USA. (Virtual do to Covid-19)
- 24. **Oppo D.**, Hovland M. (2020) Role of Deep-Sourced Fluids on the Initiation and Growth of Isolated Carbonate Build-Ups. AAPG ACE 2020, Sept 29-Oct 1, Houston, USA. (Virtual do to Covid-19)
- 25. Chapman J.C.*, **Oppo D.**, Alves T. (2020) Formation of a Large Field of Sub-circular Depressions due to Fluid Migration in the Gippsland Basin (SE Australia). AAPG ACE 2020, Sept 29-Oct 1, Houston, USA (Virtual do to Covid-19)
- 26. **Oppo D.** §, De Siena L., Kemp D. (2020) A record of seafloor methane seepage across the last 150 million years. EGU General Assembly 2020, 3-8 May, Vienna, Austria. (Virtual do to Covid-19)
- 27. **Oppo D.**, Chan M.A., Berry C., Komatsu G. (2020) Shapes of mud volcanoes: geomorphic similarities, differences and implications for Mars. 51st Lunar and Planetary Science Conference, 16-20 march, USRA-Houston, USA. (Virtual do to Covid-19)
- 28. Stone G.L. §*, **Oppo D.**, Gottardi R., Fearn M. (2019) An evaluation of the Cenomanian-Turonian Oceanic Anoxic Event in the Gulf of Mexico through a core recovered from the Tuscaloosa marine shale, southeast Louisiana. GSA Annual Meeting in Phoenix, Arizona, USA
- 29. Chapman J.C.*, **Oppo D.** (2019) Investigation of Fluid Migration in the Gippsland Basin (SE Australia). Annual AAPG Student Expo. Sept. 5-6, 2019, Houston, Texas
- 30. Kabir M. *, Iacopini D., Hartley A., Maselli V., **Oppo D.** (2019) Seismic Characterization of the Top Messinian Unit in North Eastern Levant Basin, Offshore Lebanon. 34th IAS Meeting of Sedimentology, 10-13 September, Rome, Italy.
- 31. Ajala S.*, Gottardi R., **Oppo D.** (2019) Sequence stratigraphy and depositional environment of the upper Tuscaloosa sandstone, Washington parish, Louisiana. National Association of Black Geoscientist Convention, 3-7 Sept, Arkansas, USA.
- 32. Fearn M.*, Gottardi R., **Oppo D.** (2019) Petrographic Analysis of Tuscaloosa Marine Shale (Upper Cretaceous) Core Recovered from Eads Poitevent # 1. AAPG ACE 2019, 19-22 May, San Antonio, USA.

Curriculum Vitae

- 33. Che M.*, Maselli V., Moore A., Mulaya E., **Oppo D.**, Tomioka A.* (2018) Stratigraphy of a tidal delta near Mbweni, Tanzania. GSA Annual Meeting in Indianapolis, Indiana, USA.
- 34. Tomioka, A*, Che, M*, Maselli V., Moore A., Mulaya E., **Oppo D.** (2018) SFM Sediment flux estimation on a tidal delta near Mbweni, Tanzania. GSA Annual Meeting in Indianapolis, Indiana, USA.
- 35. **Oppo D.**, Manzari M. (2018) Numerical modelling of mud volcanoes: how do mud chambers control surface fluid emissions? EGU General Assembly, 8-13 April, Vienna, Austria.
- 36. Hurst A.§, Maselli V., **Oppo D.** (2017) A working model for building equitable relationships in international academic partnerships. Third EAGE Eastern Africa Petroleum Geoscience Forum, 7-9 November, Maputo, Mozambique.
- 37. **Oppo D.**§, Capozzi R. (2017) Spatial association of mud volcano and sandstone intrusions, Boyadag anticline, western Turkmenistan. International Meeting of Sedimentology, 10-12 October, Toulouse, France.
- 38. Viola I.*§, **Oppo D.**, Capozzi R. (2017) Carbon, oxygen and strontium isotopes fingerprints of hydrocarbon-rich fluid in marine sediments and authigenic carbonate formation: inferences for the plumbing system. International Meeting of Sedimentology, 10-12 October, Toulouse, France.
- 39. Capozzi R.§, **Oppo D**., Viola I.* (2016) Controls on stable isotope signatures in Methane-Derived Authigenic Carbonates: examples from the Northern Apennines, Italy. 13th International Conference on Gas in Marine Sediments, 19-22 September, Tromsø, Norway.
- 40. Viola I.*§, Capozzi R., **Oppo D**. (2015) Geochemical signatures in the Pliocene-Pleistocene methane-derived authigenic carbonates in the Northern Apennines foothills (Italy). 1st International Carbonate Mound Conference, November 1-5, Zurich, CH.
- 41. Capozzi R.§, **Oppo D**., Picotti V., Ponza A. (2014) Study of the Present and Fossil Cold Seeps in the Northern Apennines (Italy) to Define the Total Petroleum System. EAGE Shallow Anomalies Workshop Indications of prospective petroleum systems?, November 23-26, Malta.
- 42. **Oppo D.**§, Capozzi R., Picotti V. (2013) A new model of the Total Petroleum System in the Northern Apennines and its relationship with the emplacement of MDAC chimneys fields, Italy. FIST GEOITALIA 2013, 16-18 September, Pisa, Italy.
- 43. Dinelli E.§, Liverani B.*, **Oppo D**., Franchi F., Capozzi R. (2013) Petrography, mineralogy and geochemistry of the carbonate chimneys from Enza river. FIST GEOITALIA 2013, 16-18 September, Pisa, Italy.
- 44. **Oppo D.**, Capozzi R., Dinelli E., Negri A., Montagna P., Picotti V., Scarponi S., Taviani M. (2012) Field Analogues of Shallowwater Hydrocarbon Seepages in the Pleistocene Argille Azzurre Formation: the Chimneys Field of Enza River, Northern Apennines, Italy. AGU Fall Meeting, San Francisco, USA.
- 45. Capozzi R.§, Dinelli E., Negri A., Montagna P., **Oppo D**., Picotti V., Scarponi D., Taviani M. (2012) Shallow-water hydrocarbon seepages in the Pleistocene Argille Azzurre Formation: the chimneys field of Enza river, Northern Apennines, Italy. 11th Conference on Gas in Marine Sediments, 4-7 September, Nice, France.
- 46. Picotti V.§, Capozzi R., Minola M., Terazzi F., **Oppo D.**, Ponza A. (2011) Recent reactivation of a Miocene Fold-and-Thrust Belt (Northern Apennines, Italy). Implication for the Petroleum System. in: AAPG Search and Discovery Article #90135 (2011), AAPG International Conference and Exhibition, "Following Da Vinci's Footsteps to Future Energy Resources: Innovation from Outcrops to Assets", 23-26 October, Milan, Italy.
- 47. **Oppo D**. S, Capozzi R., Artoni A., Torelli L., Polonia A. (2009) Relationships between recent tectonic activity, mud diapirism and slope instability in the Gulf of Squillace (Calabrian Arc, Ionian Sea). 27th IAS Meeting of Sedimentologists, 20-23 September, Alghero, Italy.
- 48. Artoni A.§, Capozzi R., Lorenzini S., **Oppo D**., Polonia A., Torelli L. (2009) Active tectonics and mud diapirism in the Gulf of Squillace (Crotone Basin, Calabrian Arc, Italy). Geophysical Research Abstracts, Vol. 11, EGU 2009-3140.
- 49. Artoni A.§, Torelli L., Capozzi R., Polonia A., Lorenzini S., **Oppo D**. and CALARC Group (2008) The Apenninic-Maghrebian prism of inner Calabrian Arc as imaged by subsurface data in the Squillace embayment (Calabria, Southern Italy). Rendiconti online Società Geologica Italiana, Vol. 2, 1-3.

Curriculum Vitae

DIVULGATIVE, FIELD GUIDES, AND REPORTS

- 1. Hurst A., Maselli V., **Oppo D.**, Mshiu E. (2019) Building Local Content Through Education. GEOExPro Magazine, August 2019.
- 2. Capozzi R., **Oppo D.**, Cau S., Taviani M. (2017) Pliocene to recent expressions of hydrocarbon seepages in the Northern Apennine chain. In A. Hurst, J. Kenter, and S. Graham, eds., Outcrops that change the way we practice Petroleum Geology. AAPG Digital Immersive Geoscience Platform. *Digital platform*.
- 3. Capozzi R., Negri A, Reitneir J., Taviani M., Franchi F., **Oppo D.** (2013) Carbonate conduits linked to hydrocarbon-enriched fluid escape. Workshop and field seminar, Bologna, Italy.
- 4. Capozzi R., **Oppo D.** (2013) Field trip on natural seeps in Western Turkmenistan. Prepared for the Turkmenistan Ministry of Deserts.
- 5. Polonia A., G. Bortoluzzi, L. Gasperini, M. Ligi, G. Carrara, M. Cuffaro, F. D'Oriano, F. Riminucci, F. Muccini, M. Gambetta, M. Locritani, S. Carone, A. Laterra, L. Minelli, **D. Oppo**, I. Viola, F. Gallais (2008), CALabrian Arc MARine geophysical Experiment study of active deformation and seismic hazard assessment. Report on the Seismic Reflection, Gravimetric, Morphobathymetric, Magnetometric, and coring investigations during Cruise CALAMARE-08 aboard R/V Urania, CNR ISMAR Bologna Cruise Report.

STUDENT SUPERVISION AND MENTORING

Doctoral candidates - Chair - Current

- 1. Gracie Babineaux: "Investigating the history of seafloor methane seepage through their record in deep-sea sediments"
- 2. Ferdinando Cilenti: "Analysis of gas hydrate dynamics and methane seepage by time-lapse seismic"
- 3. Mainul Kabir: "Post-Messinian structural and stratigraphic architecture of the Levant Basin offshore Lebanon" External supervisor for Univ. of Aberdeen, UK (Originally Chair while I was working at Univ. of Aberdeen; now external member).

<u>Doctoral candidates - Committee member - Current</u>

S M Shamsul Hoque: "TBD"
 Precious Batubo: "TBD"

External examiner or Committee member - Graduated

- Doctoral Zhijua Cui: "Fluid pipe subsurface characterization using seismic modelling methods". University of Aberdeen, UK

 2022
- 2. Master of Sciences Irene Viola: "Mineralogy and geochemistry of authigenic carbonates from the Gulf of Cadiz". University of Aveiro, Portugal 2012

Master of Science - Committee Chair - Graduated

- 1. Joseph Cyle Chapman: "Formation of a Large Field of Sub-circular Depressions due to Fluid Migration in the Gippsland Basin (SE Australia)"
- Gage A. Hendrix: "Rock Property Trend Analysis of South Western Louisiana for the Prediction of Amplitude Responses"
- 3. Kristen Holmes: "Genesis and Architecture of Quaternary Mass Transport Deposits in the Deep-Water Gulf of Mexico: Implications for Seabed Geohazards in the Atlantis Field"
- 4. Mandi Laonde: "Genesis and Architecture of Quaternary Mass Transport Deposits in the Deep-Water Gulf of Mexico: Implications for Seabed Geohazards in the Mad Dog Field"
- 5. Grant Allain: "Log Derived Rock Property Trend Analyses in Southeast Louisiana: A De-Risking Method for Exploration"
- 6. Ernest Antwi: "A Robust Machine Learning Model for Hydrocarbon Seeps in the Gulf of Mexico as an Exploration Tool"
- 7. Gracie Babineaux "The sedimentary records of methane seepage at Woolsey Mound, Gulf of Mexico"
- 8. Juliet Aralu: "Large Pockmark fields point to extensive past fluid expulsion in the Gippsland Basin (SE Australia)"
- 9. Abigail Watson: "Understanding the Relationship Between Subsurface Salt Deformation and Submarine Channel Development in the Levant Basin, Eastern Mediterranean"

Curriculum Vitae

10. David Matte: "Geophysical Analysis of Quaternary Submarine Mass Transport Deposits within the Thunder Horse Field in the Gulf of Mexico"

Master of Science - Committee Chair - Current

- 1. Margaret Dittman "A Bathymetric Study of the Levant Basin, Offshore Lebanon: Identifying the Various Morpho-Structural Features Within the Region"
- 2. Bibi Aseeya Mohammed: TBD
- 3. Peyton Dardeau: TBD

M.Sc. Thesis Committee member - Graduated

- 1. Ross Ledoux: "Fracture Characterization of the Buda Formation, Val Verde County, Texas"
- 2. Landon Newman: "Reservoir Characterization Of The Clearfork Formation, Brooklaw Field, Permain Basin, Texas To Implement Water-Flood Recovery"
- 3. Jack Simmons: "A Geochemical Analysis of Upper Cretaceous Tuscaloosa Marine Shale Core Lambert H-1"
- 4. Christian Spano: "Facies Characterization of the Smackover Formation within the Outer Conecuh Embayment, Southwestern Alabama"
- 5. Conner Spano: "Diagenetic Trends Within the Lower Smackover Thrombolite Facies in West Brooklyn Field, Southwestern Alabama"
- 6. Grace Stone: "An Evaluation of the Cenomanian Turonian Oceanic Anoxic Event, OAE2, through the Tuscaloosa Marine Shale"
- 7. Mary Fearn: "A Petrographic Core Analysis of the Upper Cretaceous Tuscaloosa Marine Shale (TMS), St. Tammany Parish, Louisiana, USA"
- 8. Mark Miella:"Total Organic Carbon Estimation from Well Logs and Seismic using Machine Learning and Seismic Inversion, an example from Cranfield Mississippi"
- 9. Olawale E Ariyibi: "High-Resolution Magnetostratigraphy, Relative Geomagnetic Paleointensity and Paleoenvironmental Change from Pleistocene to Eocene Sediments, IODP Expedition 369, Site U1514 (Mentelle Basin, Australia)"
- 10. Joshua Cecil: "Characterization of Upper Jurassic Shoals Across The Conecuh Embayment, Alabama"
- 11. Abigail Breaux: "Facies Characterization of the upper and middle Smackover Formation encountered in Palmer #1 Caraland 26-9, Manila Embayment, southwest Alabama"
- 12. Samsideen Ajala: "Depositional environment and sequence stratigraphy of the Lower Tuscaloosa Sandstone in Washington Parish Louisiana"
- 13. Silas A Samuel: "Total Organic Carbon Content Estimation of Bakken Formation, Kevin-Sunburst Dome, Montana using Post-Stack Inversion, Passey (DLogR) Method and Multi-Attribute Seismic Analysis"
- 14. Barbara Rodrigues de Almeida: "Reconstruction of Seasonal Temperature in Northeastern Siberia During the Late Miocene Using High-Resolution Oxygen and Carbon Isotopic Analyses of Fossil Wood"
- 15. Precious Batubo: "Inverse Modelling of Tsunami Deposits using a Deep Learning Neural Network: Application to the 1929 Grand Banks Tsunami Deposits"
- 16. Natalie Corinne Helm: "A Petrographic Core Analysis of the Upper Cretaceous Tuscaloosa Marine Shale (TMS), Petroquest Energy, Inc., Lambert H-1, Amite County, Mississippi, USA"
- 17. Ricardo Jose Penaloza: "Micro thermometry investigation of fluid inclusions of the eagle ford and austin chalk system (Val Verde County, TX)"
- 18. Austin Fellmy: "Modeling of Groundwater Flow in the Roosevelt Hydrothermal System and Image Log Analysis of Volcanic Flows and Detachment Fault Near the FORGE Site in Milford Valley, UT"
- 19. Guy Tanner Linacre: "CO₂ Distribution of the Duperow Formation, Kevin-Sunburst Dome, Montana using Multi-Attribute Regression and Probabilistic Neural Networking"
- 20. Wiley Griffin: "Relation of Halokinesis and Associated Faulting to Subsidence and Land Loss in the Chenier Plains, Cameron Parish, Louisiana"
- 21. Bryan McCallister "3D seismic azimuthal anisotropy of a fracture zone at the In Salah CO2 storage project"
- 22. Amber Butler Atwood: "Thermal Maturity of the Tuscaloosa Marine Shale and its Effect on Unconventional Hydrocarbon Production"
- 23. Hannah Hawkins: "Significance of the Carrier Mastodon Locality of Acadia Parish, Church Point, Louisiana, and Descriptions of Mastodon and Bison Fossils"
- 24. Megan Loop: "Investigation of the relationship between faulting, subsidence, and land loss in the Chenier Plains, Louisiana"
- 25. Claire Brovold: "Evaluating the Effects of Salt Diapirism Driven Faulting on the Organic Matter Quality and Quantity of an Intermediate Wetland Ecosystem in Southwest Louisiana"

Curriculum Vitae

- 26. Ryan James Reames: "Analysis of the Hodde Family FX No. 1 Well-core from Caldwell Parish, Louisiana"
- 27. Niya Davis: "Fluid migration pathways in a detachment shear zones"
- 28. Camron Mire: "Stable isotope investigation of fluid-rock-deformation interactions in a detachment shear zone"

M.Sc. Thesis Committee member - Current

1. Savanah Anderson: "TBD"

B.Sc. Research Experience Mentor

- 1. Margaret Dittman
- 2. Neva Powers