

UNCONVENTIONAL

DEPARTMENT OF PETROLEUM ENGINEERING QUARTERLY NEWSLETTER

March 2021

Issue I

Winners of the Fall 2020 Geothermal Design Challenge

Congratulations to Jerjes Porlles (Ph.D. student in Petroleum Engineering), Jessica Eagle-Bluestone (M.S. student in Petroleum Engineering) and Moones Alamooti (Ph.D. student in Geophysics) for winning first place at the Fall 2020 geothermal design challenge. Starting in September 2020, teams of graduate and undergraduate students were challenged to use infographics and data visualization to foster understanding of geothermal energy, broadly communicate the benefits of geothermal technologies, and ultimately help overcome key non-technical barriers to geothermal development. Students from across the United States designed powerful, high-quality infographics to illustrate aspects of geothermal energy production, backed by robust technical data and accompanied by communications and outreach strategies to maximize impact.

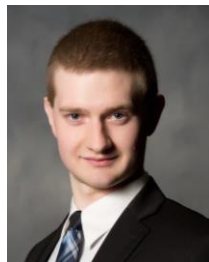
The UND team's winning infographic highlights the benefits of eight common uses of geothermal energy: agricultural drying, cooking, greenhouse heating, aquaculture, electricity generation, space heating, snow melting, and bathing and swimming.



SPE Scholarship Recipients

Congratulations to Nicholas Knapp and Joe Lindemann, PE students for receiving the SPE Scholarship, Denver Chapter. Nicholas from Maplewood, Minnesota, is majoring in petroleum engineering at the University of North Dakota, where he is also a research assistant at the Energy and Environmental Research Center (EERC). Upon graduation in May 2021 he hopes to work as a drilling or reservoir engineer.

Joe is from the upper Midwest. His dream of working in the oil industry began while growing up during the boom in western North Dakota. That dream began to take shape in the Bakken last summer where he had the opportunity to work with an operator on increasing efficiency in their drilling process. In this time when opportunities are especially limited, it is reassuring that the industry is still finding ways to support students. "My sincerest thanks to the Society of Petroleum Engineers for this honor which will support me as I complete my final year of school."



Nicholas Knapp



Joe Lindemann

Faculty

- Dr. Vamegh Rasouli (Chair)
- Dr. Kegang Ling
- Dr. Hadi Jabbari
- Dr. Minou Rabiei
- Dr. Hui Pu
- Dr. Thomas Jo
- Mrs. Bailey Bubach
- Mr. Harry Feilen, Director of DRACOLA

Adjunct Faculty

- Dr. Thomas Gentzis Senior Geoscientist at Core Laboratories
- John Harju Vice President for Strategic Partnerships, EERC
- Charles Gorecki, CEO, EERC
- John Hamling Principal Engineer, EERC
- Larry Pekot Principal Engineer and Reservoir Engineering Group Lead, EERC

Short Course:

Hydraulic Fracturing Theory & Treatment Design Using StimPlan™ Software

Presenter: Vibhas Pandey, Senior Completion Engineer, ConocoPhillips. Jan 29- April 30. For further information contact Ahmed Merzoug: ahmed.merzoug@und.edu



5th Annual 3MT (Three Minute Thesis) Competition Winners

Congratulations to Nidhal Badrouchi, doctoral student in Petroleum Engineering, for winning First Place of the 5th annual 3MT grad school competition for his presentation entitled “Green Gain Solution: Reversing the Impact of CO₂ on the Planet”. Nidhal will continue on to the regional 3MT competition hosted by the Western Association of Graduate Schools’ (WAGS) annual meeting. The meeting, “Graduate Education 360: Supporting the Whole Student,” will be held virtually on March 21-24, with the competition on March 24. We wish all the best for Nidhal.



PE Ph.D. Graduates in Spring 2021

Congratulations to our PhD students who successfully defended their theses during the first quarter of 2021.

- **Foued Badrouchi:** Hole Cleaning and Cuttings Transportation Modelling and Optimization, advisor Dr. Vamegh Rasouli.
- **Hao Fu:** Detecting the Leakage in the Pipeline System through Flow Parameter Analysis, Advisor Dr. Kegang Ling.



Foued Badrouchi(Middle) defending his Ph.D. thesis



Hao Fu (Middle) defending his Ph.D. thesis

Student Chapters Update

ARMA: DR. Thomas Jo has been assigned as the new advisor. A webinar was run on Saturday, February 20th by Ojotobor Sunday on "Designing a modeling procedure for a minimum average reservoir pressure that will sustain tubing requirements in a natural gas well".

SEG: A webinar presented by Dr. Ifeanyi Obi on Jan 20th titled “Meditations on Sequence Stratigraphy! Does it help?”. Also, conducted a webinar on March 10 by Ademola Lanisa, the Senior Exploration Geophysicist with TOTAL on “Seismic Attribute Analysis.”

IADC: UND IADC is preparing students to attend upcoming conferences such as the SPE/IADC Virtual International Drilling Conference and Exhibition in March, as well as the IADC Drilling Onshore Conference and Exhibition and the SPE/IADC Middle East Drilling Technology Conference and Exhibition in May.

SPE: Organized 4 presentations: “Right-size your field production using PIPESIM production optimizer” by Ahmad Shammari from Schlumberger. “PIPESIM Training” three sessions presented by Ahmad Shammari from Schlumberger. “StimPlanTM training” delivered by NSI Technologies. Also, Dr. Alireza Haghighat and Mr. James Ewert presented a virtual workshop on “Harmony Enterprise TM Software Training” on February 22nd.

DRACOLA Update

Further progress has been made on the drilling and completion lab. The second floor mezzanine, which is the driller’s operator room is complete. The isolation of the high bay area, is complete and the drill tower is now raised and is in place. Thanks to Sidney Green for donating additional equipment to the lab including a number of used drill bits.



Department Statistics

- 90 undergraduate students
- 25 Master students
- 71 PhD students
- 2 Visiting Scholars
- 2 Ph.D. graduates in Q1 2021

Upcoming Events, Fall 2021

- April 2: Good Friday
- April 2-5: Easter Break
- April 9: Last day to withdraw from term or drop with record
- April TBD: Industry Advisory Council meeting
- May 10-14: Last week of classes

Contact (WE ARE HERE TO HELP!)

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