

UNCONVENTIONAL

DEPARTMENT OF PETROLEUM ENGINEERING QUARTERLY NEWSLETTER

December 2020

Issue IV

Fall Semester Industry Advisory Council (IAC) Meeting

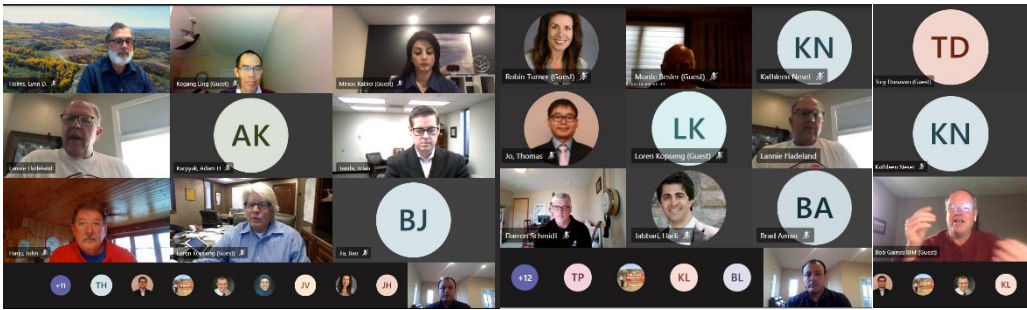
The IAC meeting was held on Oct 30 with presence of over 20 industry representatives. Due to the COVID-19, the meeting was held virtually. Dr. Tande welcomed the industry members and gave them a brief overview of the CEM status after his appointment as the Dean. The members were updated on the status of the undergraduate and graduate students statistics. It was of common agreement that we should continue to do the marketing and outreach activities remotely during the pandemic to keep the potential prospective students aware of the Petroleum Engineering program at UND, its growth and future career opportunity in oil and gas industry in ND. A presentation was delivered by two IBM guests on their Data Analytics and Big Data development and their use in Petroleum Engineering. Also, an update was given on the progress of the DRACOLA (Drilling and Completion Lab) and a virtual tour of the lab was given by Harry Feilen.

Faculty

- Dr. Vamegh Rasouli (Chair)
- Dr. Kegang Ling
- Dr. Hadi Jabbari
- Dr. Minou Rabiei
- Dr. Hui Pu
- Dr. Bao Jia
- 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



The Int. Switch Energy Case Competition

The International Switch Energy Case Competition is a virtual competition organized by Switch Energy Alliance and the Hildebrand Department of Petroleum & Geosystems Engineering at The University of Texas at Austin where self-formed teams of 3-4 university students compete for US\$10,000 in prize money as they develop solutions to an energy poverty-based prompt. The UND PE Team composed of Ahmed Merzoug, Habib Ouadi, Yousri Kenouna and Ait Larbi Kenza secured the second position among the total of 250 teams from all around the world. We extend our big congratulations to the UND team for this great achievement!



UND Team, secured 2nd place, Presenting Virtually on Sat, Nov 14th at the Int. Switch Energy Competition



DRACOLA Update

Thanks to the Nabors Drilling Technology for the donation of the SCR house to the DRACOLA. This "House" is the control center for all of the motors on the drill rig and the support equipment used in the operation of the drill rig. The installment of the overhead crane will be starting soon, the tower is now moved into the building and the triplex pump is serviced and maintained ready for operation. We expect to have the rig to go to initial operational phase in Spring 2021.

PE Ph.D. Graduates in Summer 2020

Congratulations to our PhD students successfully defended their theses in Fall 2020.

- **Karthik Balaji:** Carbon-Dioxide Pipeline Infrastructure Route Optimization and Network Modelling for Carbon Capture Storage and Utilization, advisor Dr. Minou Rabiei.
- **Chuncheng Li:** Molecular Simulation Study of Enhanced Oil Recovery Methods in Tight Formation, Advisor Dr. Hui Pu.
- **Shaojie Zhang:** Enhanced Hydrocarbon Recovery in Tight and Shale Reservoirs Using Surfactants and Supercritical CO₂. Advisor Dr. Hui Pu.

Student Chapters Update

College of Engineering and Mines at the University of North Dakota organized the "Applied Geoscience Conference" on November 18, 2020. The conference was organized as a result of collaboration among geoscience and petroleum related student organizations (AAPG, ARMA, AWG, GWIS, GRC, IADC, SEG, and SPE). Students had the opportunity to showcase their research in a 3MT competition and in addition heard and learned from industry and academic professionals. The virtual conference was divided into 10 segments: 8 webinar sessions, graduate students presentations 3MT, and games..

ARMA: On Oct UND recognized the organization and the first meeting was held in November with all student members. Dr. Taha Husain, from Shell Company presented a talk to the students titled "Geomechanical Support for Drilling Operations: Overview of the Basic & Available Technologies".

IADC: IADC is sponsoring twelve UND students to attend the upcoming IADC World Drilling Conference hosted in Paris, France. UND IADC members have also played a big part in the acquisition and setup of the new Drilling and Completions Lab thanks to the help of Lannie Fladeland. UND IADC Student Chapter holds monthly meetings to welcome new members and looks forward to helping more students interact with industry professionals.

SPE: Four new UND SPE Student Chapter officers were elected on September 3rd. Later a virtual meeting where new PhD students from Algeria Ahmed Merzoug, Abderraouf Chemmakh, and Habib Ouadi shared their internship experiences. The SPE chapter also collaborated with other student organizations in organizing the UND Applied Geoscience Virtual Conference. A team has been assembled for the 2021 Drillbotics competition to model the automated drilling of a directional well.



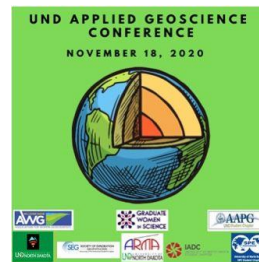
Karthik Balaji (Middle) defending his Ph.D. thesis



Chuncheng Li (Middle) defending his Ph.D. thesis



Shaojie Zhang (Middle) defending his Ph.D. thesis



IADC Members together with Lannie Fladeland touring the Drilling Simulator Lab

Department Statistics

- 141 undergraduate students
- 17 Master students
- 60 PhD students
- 10 Visiting Scholars
- 7 Ph.D. graduates in 2020
- 14 Master graduates in 2020

Upcoming Events, Fall 2021

- **Jan 11:** Registration/Classes start at 4:00 p.m
- **Jan 12:** First full day of classes
- **Jan 18:** Holiday - Martin Luther King Jr. Day
- **Jan 21:** Last day to add course or drop without record
- **Feb 8:** Enrollment census date
- **Feb 15:** Holiday – Presidents' Day
- **March 15-19:** Spring Break

Contact (WE ARE HERE TO HELP!)

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<https://engineering.und.edu/petroleum/>
Follow our SPE Student Chapter at: <https://involvement.und.edu/organization/SPE>
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