

# UNCONVENTIONAL

## DEPARTMENT OF PETROLEUM ENGINEERING QUARTERLY NEWSLETTER

August 2022

Issue I

### Farewell Message to Prof. Vamegh Rasouli

No matter how difficult it is to say goodbye to someone who has put immeasurable time and effort into helping us succeed, we need to take the time to appreciate everything our department chair Prof. Vamegh Rasouli has done for us, our program and all PE industry and community at ND. Vamegh enjoyed his work at UND for the past 7 years in developing the Petroleum Engineering program. The program had only undergraduate students when he joined UND and had no designated labs, few active industry contacts and no research activity. Thanks to his efforts and outstanding strategic planning, the quality of our undergraduate program was recognized and acknowledged by the industry in ND with their nomination of the Department for the most prestigious oil and gas industry award; the Williston Basin American Petroleum Institute (API) Group Achievement Award for 2021 along with their frequent positive feedback regarding the quality of our graduates who work for them compared to other Universities. Also, his effort for the successful outcomes of the 1<sup>st</sup> and 2<sup>nd</sup> ABET accreditation of the program is very admirable.

In nearly 6 years under his leadership, our Ph.D. program, with over 70 students as of summer 2022, has moved to the top 3 largest in the country and our Master program is exponentially growing, and we have many unique labs including the drilling and completion lab (DRACOLA). Most of these labs, and other resources added to the program, were financed from external funding and industry support. The Department's industry advisory council (IAC) with nearly 30 industry representatives is one of the most active and supportive boards among other departments and peers in other Universities.

His valuable contributions to this organization and us as individuals will forever be remembered.

Dr. Rasouli, thank you for being an inspiration to all. Throughout your time with us, you've worked so hard to provide us with all the resources we need to succeed; you've always been there to help and give useful advice. We have spent many wonderful years together; however, now we must bid you adieu as you move on to the next great adventure in your career.

Words cannot express how heartbroken we were when we heard that you were leaving. You have been an inspiration to all of us and a mentor that we always look up to. It's been a great pleasure to be a part of your success. You are a pillar of strength and knowledge. If there were more people like you, the world would be a much better place. We are who we are today in no small part thanks to your efforts as a leader.

On behalf of my colleagues, I wish you all the best in your future endeavors. We will truly miss you.

*Sincerely, your mentee, colleague and friend Foued Badrouchi*

#### Faculty

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

#### Adjunct Faculty

- John Harju, VP for Strategic Partnerships, EERC
- Charles Gorecki, CEO, EERC
- John Hamling, Principal Engineer, EERC
- Larry Pekot, Principal Engineer and Reservoir Engineering Group Lead, EERC
- Mr. Vibhas Pandey, Senior Engineer at ConocoPhillips
- Mr. Kalyan Venugopal, Schlumberger, Innovation FACTORI Manager
- Dr. Siamak Mishani
- Dr. Rahman Ashena
- Dr. Morteza Dejam
- Dr. Neal Nagal
- Dr. Marisela Nagal



Vamegh Rasouli receiving the API OA Award trophy during the Williston Petroleum Banquet



# A word from Prof. Vamegh Rasouli

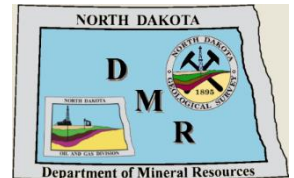
My past 7 years of work at UND PE program has been fully of joy. I am happy that I leave when the department has expanded significantly since its establishment in 2010. My sincere thanks to the NDIC, OGRC, EERC and our industry advisory council (IAC) members for their generous support towards the department and our students. Without their supports we could not be where we are now. My great appreciation also goes to my colleagues and students in the department for their hard work and continuous support to grow the program. I look forward to see future expansion of the program and many talented graduates from UND PE working in the large oil and gas industry both nationally and internationally.



**Congratulations to our recently graduated PhD Student Nidhal Badrouchi. Welcome Yacine!**

## New NDIC Fund, \$2.9M for 2 Years

The North Dakota Industrial Commission approved funding for \$2.9M over 2 years for UND Petroleum Engineering. With this support from NDIC, the PE Department will be able to increase offerings and research. The department will be well positioned to assume their role as leaders in research and education regionally, nationally and globally, working to meet the ever-changing needs within the industry.



**Thank you to NDIC for the continuous support of the PE Program**

## SPE 2022 Presidential Award for Outstanding SC

UND SPE Student Chapter received the 2022 Presidential Award for Outstanding Student Chapter. Honored by the announcement, we were hopeful to be considered for this award as we all saw the team (officers, members, and advisor) making a great success this and last year!



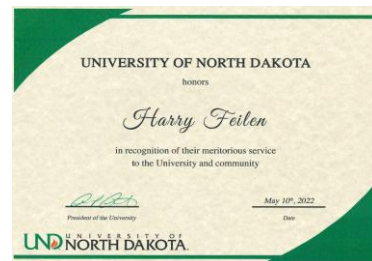
**Congratulations to SPE UND Student Chapter for this honoring award**

## Staff Meritorious Service, UND Proud awards



Congratulations to Mr. Harry Feilen for receiving the UND Meritorious Service Award and 10 Years of Service Recognition.

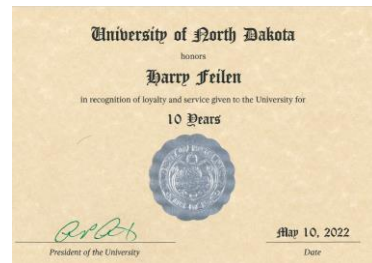
Mr. Feilen has been the essential member of the team who made the establishment and set up of the drilling and completion lab (DRACOLA) happen. The benefits of DRACOLA to the students, research, teaching and services has been acknowledged by the State, industry and ABET.



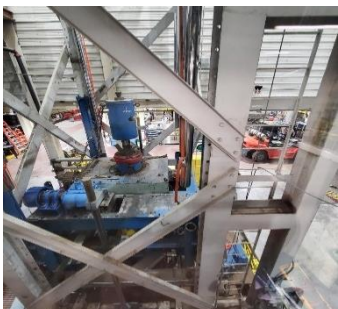
## DRACOLA Lab Updates

As of 06/22/2022, we have the:

- LabVIEW program communicating with the 23 valves for the entire charge pump system.
- Garden Denver pump drive motor installed, wired, and awaiting the VFD which is on back order.
- Top drive motor being worked on and awaiting the VFD which is also on back order.
- Final wiring plan laid out with the electrical inspector to meet his expectations.
- 600V CAT gen set almost done, waiting for the exhaust system and then Butler Machine will start the gen set for the first time in place.



**Thank you Harry for your service and outstanding work in DRACOLA**



## DRACOLA Lab Updates cont.

- Building backup KOHLER gen set installed and are waiting to have Butler Machine start both gen sets on the same visit.
- We have received a donated BOP from Mr. Scott Reid, Area Manager, ND, NE, Wyo and Alaska Districts, Nabors Drilling Technologies USA, Inc. for a static display of a real BOP used in the oil and gas industry.
- We have secured a 10-year lease for the entire building of the Research Facility, which houses the Drill Rig.
- We have our first proposal submitted as a partner with Oklahoma State University for GEO Thermal research.
- We are currently collaborating with many industry partnerships look for work projects for the Drill rig once everything is up and running.

## New PE Ph.D. Graduates in Summer 2022

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

- **Vibhas Pandey:** "Characterization of Vertical Growth of Hydraulic Fractures in Layered Formations", advisor Dr. Vamegh Rasouli.
- **Nidha Badrouchi:** "Evaluation of Co2 Enhanced Oil Recovery in Unconventional Reservoirs", advisor Dr. Hui Pu.

## Student Chapters Update

**New SPWLA University of North Dakota Student Chapter:** The University of North Dakota SPWLA Student Chapter is proud of its member Jerjes W. Porlles Hustado who ranked third in the International Student Paper Contest ISPC (Doctoral Section) held at the 63rd Annual SPWLA Symposium, June 11-15, 2022, in Stavanger, Norway. The SPWLA board members are planning the upcoming academic year's conferences and training related to nuclear and sonic logging in particular and advanced formation evaluation in general.

**SEG:** EG UND submitted a report that has been approved for best student chapter ranking and one of the officers got approved to participate in the student leadership symposium in Houston next August. SEG UND hosted three speakers for technical presentations. SEG members volunteered at the 56th Rock Mechanics symposium in Santa Fe, New Mexico, to help the organizing team with tasks during the event. SEG UND also participated in promoting petroleum engineering and organizing activities for high school students hosted by UND during the summer camp.

**ARMA:** Last month, ARMA student members participated in the Symposium's mentor-student event on June 17th, 2022. It was an important event to meet and talk with professional people from both academia and industry to gain experience and expand our network.

**SPE:** SPE UND received the SPE 2022 Presidential award which is only given to the top 5% best chapters in the world. The team will travel on October to the ATCE in Texas to receive the award from the SPE President in a big ceremony during one of the highly esteemed events in Oil & Gas.

### Contact (WE ARE HERE TO HELP!)

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<https://engineering.und.edu/petroleum/>  
Follow our SPE Student Chapter at: <https://linkedin.com/company/spe.und.sc/>  
Find our College on Facebook: <https://www.facebook.com/UNDCEM>  
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University of North Dakota Leadership Awards

### FOUED BADROUCHI

is presented in spring 2022, with the

### OUTSTANDING ADVISOR AWARD

In recognition of outstanding service, achievement, and commitment  
to the students of the University of North Dakota.



**Congratulations to our Faculty Foued Badrouchi  
for receiving the Outstanding Advisor Award**



*From Nidha Badrouchi's thesis defense on  
Thursday, May 26, 2022*



*From Vibhas Pandey's thesis defense on Thursday,  
May 26, 2022*

### Department Statistics

- 78 undergraduate students
- 7 PE Certificates Students
- 23 Master students
- 70 Ph.D. students
- 1 Visiting Scholars
- 2 Ph.D. graduates in Sum 22

### Upcoming Events

- **July 28:** Last day of classes
- Aug 1-5:** Finals week
- **Aug 5:** Commencement Ceremony
- **Aug 22:** Fall courses start

