

Harsha Reddy

Phoenix, AZ, 85012 | (703)-713-2243 | harsha2108@gmail.com

Education

- Texas A&M University, College Station, TX, USA. August 2015 - May 2023
Ph.D. Graduate in Petroleum Engineering, GPA: 3.77/4.0
Adviser: Dr. Hisham Nasr-El-Din & Dr. Hadi Nasrabadi
- University of Pittsburgh, Pittsburgh, PA, USA. April 2015
M.S in Chemical Engineering, GPA: 3.93/4.0
M.S in Petroleum Engineering, GPA: 3.93/4.0
- National Institute of Technology, Calicut, India. June 2012
Bachelor of Technology in Chemical Engineering.

Research Interests

Reservoir Engineering, Enhanced Oil Recovery, Hydraulic fracturing, Environment and Safety, CO₂ flooding and gas injection. Enhancing well performance through chemical means, Shale oil recovery using surfactant and micro-emulsions. Using different surfactant solutions to improve foam stability in HPHT reservoirs.

Research Experience

- Graduate Research Assistant** February 2016-present
Texas A&M University, Department of Petroleum Engineering
- Foam Acidizing using Chelating Agent.
 - Working on finding a combination of visco-elastic surfactant and gas to improve foam stability using GLDA. Additives like nanoparticles are also used to enhance foam stability at higher temperatures and pressures.
 - Working with high pressure foam generator that helps in forming foam at a wide range of pressures and temperatures upto 250°F
 - Experienced in core flooding experiments for acidizing and diversion.
- Graduate Research** January 2015-April 2015
University of Pittsburgh, Department of Civil Engineering, Dr. Andrew Bungler
- Project: "Delayed Initiation Behavior for Hydraulic Fracture Growing in Pieces of Acrylic".
 - Established a relationship between applied fluid pressure and time so that it could be used for multiple fractures.
- Undergraduate Research** March 2011-April 2012
National Institute of Technology, Calicut, Department of Chemical Engineering
- Major Project: "Comparative Studies on Dye Adsorption Capabilities of Egg Shell Over Commercial Activated Carbon".
 - Estimated the amount of dye adsorbed by different adsorbents, using batch kinetic studies.
 - Optimization of adsorbent was done by comparing the adsorption capabilities of raw egg shell, boiled egg shell and steam activated egg shell with commercial activated carbon.
 - Minor Project: "Role of Viscosity in Drilling Fluids"
 - Studied resistance offered by different fluids and its properties, which included permeability, resistivity, density, porosity. Checked the viscosity behavior in drilling fluids.

Work Experience

- Graduate Teaching Assistant** Aug 2019-present
Petroleum Project Evaluation
Technical Presentations
- Gained teaching experience by taking review classes for class of 75 students monthly.
 - Held weekly office hours to assist students with homework and further explain concepts.
 - Guided students to make professional technical presentations and reports of the data collected and its subsequent analysis.

Grader

Aug 2017-August 2018

Fundamentals of Reservoir Engineering Formation Evaluation and the Analysis of Reservoir Performance Technical Presentations Solving Common Production Engineering Problems

- Help students by clearing their doubts, proctoring exams and grading assignments and exams.

Associate System Engineer

Aug 2012-August 2013

IBM India Pvt. Ltd, Kolkata, India.

- Project for Network Applications (NetApp) USA. Software development in Oracle for supply chain management from order request to deliverability and invoicing.

Field Engineer Trainee

May 2011-June 2011

Schlumberger Asia services Pvt. Ltd.

- QHSE policies, training in MDT lab, Sonde lab, IE lab. Exposed to job responsibilities of a field engineer.
- Gained knowledge and experience with oil industry from pore to pipeline (exploration to products).
- Field visits over night to an HPHT gas well at a depth of 5400m and bottom-hole temperature of 460°F and learnt wireline logging for cement behind casing evaluation.
- Project “Junkyard process for e-waste, assets and hazardous waste” on waste management by abandonment of all tools, e-assets as per procedures.

Intern

Dec 2010-Jan 2011

Oil and Natural Gas Corporation (ONGC).

- Well informed about onshore oil wells and step by step process of drilling and role of drilling fluids.
- Studied properties of drilling fluids using different polymers and optimizing effects on drilling capability.
- Report on “Role of polymers in drilling fluids”

Leadership and Community Involvement

- Coached 500 students with their coursework and exams.
- Mentored 5 undergrad and grad students on 3 projects.
- Part of International Graduate Student Association for mentoring new incoming Graduate students.
- Volunteered to serve and help cancer patients.
- Volunteered in walk to cure Arthritis.

Skills

AutoCAD, PRO E, MATLAB, Python, ImageJ, Visual Basic for Applications (VBA), Engineering Equation Solver (EES), Microsoft Office, LATEX, BASIC Programming (C, JAVA, PL/SQL), Photoshop.

Awards/Scholarships

- Graduate Fellowship in the amount of \$1000 in 2018-19 academic year.
- Graduate Fellowship in the amount of \$1000 in 2017-18 academic year.
- Graduate Fellowship in the amount of \$4000 in 2015-16 academic year.
- Top 2% of people who appeared for AIEEE (All India Engineering Entrance Examination)

Other Interests and Skills

- **Multilingual:** English, Hindi, Telugu, French (Beginner) and Sanskrit (Beginner).
- **Hobbies and Interests:**
 - Sports – State level athlete.
 - Others – Travelling and reading