

## **SIDDHARTHA GUPTA**

### **EDUCATION**

**Ph.D. Chemical Eng.**, Texas Tech Univ., Lubbock 2014 – 19 (Expected)

**B.S. Chemical Eng.**, Indian Institute of Technology (IIT), Roorkee – 2012

### **AWARDS, GRANTS AND FELLOWSHIPS**

- |  |   |
|--|---|
| • Helen DeVitt Jones Graduate Fellowship         | Awarded from Fall 2017 - 2019                 |
| • Study Abroad Competitive Schl., TTU            | Spring, Summer, Fall – 2016 and Spring – 2017 |
| • WCOE Engineering Scholarship, TTU              | 2016-2017                                     |
| • Parent Fam Relations Schl. (Grant-in-Aid), TTU | Fall – 2016                                   |
| • Grad. School Scholarship, TTU                  | Fall – 2016                                   |
| • Presidential Doctoral TA Scholarship, TTU      | 2015 – 2016                                   |
| • Gene Steel CE Scholarship, TTU                 | Fall – 2015                                   |
| • Graduate Student Travel Award, TTU             | October – 2015                                |
| • State Bank of India Meritorious Schl., IIT     | 2011 – 2012                                   |

### **PROFESSIONAL RESEARCH EXPERIENCE**

Graduate Research Assistant, TTU December 2014 – Ongoing

- Invented an automated-disposable microfluidic viscometer for complex fluids (Prov. Patent).
- Testing an automated system for investigating muscle strength in space.
- Digital holography microscopy of micro capillary flows.

Ganga River Management Project Assistant, Govt. of India March 2012 – October 2012

- Generated reports to aid in better management of the Ganges river basin.

UG Researcher, Dept. of Chemical Eng., IIT August 2011 – November 2011

- Carried CFD simulations of conduits mimicking heat exchangers with inserts using *Ansys<sup>TM</sup> Fluent*.

R&D Intern., Tata Steel (Forbes Global 2000) May 2011 – July 2011

- Analyzed variation in CSR of met-coke using lab testing and thermal modeling.

### **PROFESSIONAL TEACHING EXPERIENCE**

**Teaching Assistant**, Chemical Engineering, TTU August 2014 – Present

- CHE 5310 – Advanced Chem. Eng. techniques (**designed course subsection, lectured and graded**)
- CHE 4232 – Unit Operations laboratory
- CHE 3232 – Chemical Eng. Transport laboratory

**Instructor**, E-girl workshop, A TTU-WCOE & Halliburton event June 2016

- Gave a talk to high school girls about chemical engineering, sustainability and research options.
- Workshop featured on YouTube channel of TTU WCOE at the URL: [www.goo.gl/gGjD26](http://www.goo.gl/gGjD26)

**Instructor**, Explore Engineering workshop, TTU WCOE July 2015, 2016 and June 2017

- Gave a talk to about 100 high schoolers about chemical engineering and research options.

### **PUBLICATIONS**

- 1) **Gupta, S.**, Wang, W. S. and Vanapalli, S. A. Microfluidic viscometers for shear rheology of complex fluids and biofluids. *Biomicrofluidics*, 10, 043402, 2016. (**Special Topic: Microfluidic Rheology**).

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- 2) Monaco, P., Cloutier, A., Henry, Y., Disnayake, K., **Gupta, S.**, Mengel, S., Morse, A., Modification and Assessment of a Residential Summer Program for High School Women (Evaluation), ASEE Annual Conference & Exposition, 2017

## **MANUSCRIPTS IN PREPARATION**

- 1) Neelamegam, R., **Gupta, S.**, and Vanapalli, S. A. Measurement of pressure drop versus flow rate relation due to polymer-induced elastic instability in a serpentine micro channel (in preparation for *Journal of Non-Newtonian Fluid Mechanics*), 2017.

## **PATENTS**

Microfluidic viscometer for continuous shear rate variation based high throughput viscometry of fluid [USPTO Provisional Patent no. 62408065, filed 14 October 2016]

Inventors: Siva A. Vanapalli, **Siddhartha Gupta**, William W. Wang

## **PRESENTATIONS**

- 1) Vanapalli S. A., **Gupta, S.** and Suteria, N.S., Microfluidic Viscometers with Encodable Range of Shear Rates, 16th International Congress on Rheology, 08/2016, Kyoto, Japan.
- 2) **Gupta, S.**, Suteria, N.S. and Vanapalli S. A., Microfluidic Shear Viscometers for Complex Fluid Rheology, 90th ACS Colloid and Surface Science Symp., 06/2016, Harvard Univ., Cambridge, MA.
- 3) **Gupta, S.** and Vanapalli S. A., Continuous shear-rate and disposable microfluidic viscometers for complex fluid rheology, 87<sup>th</sup> annual meeting of the Society of Rheology, 10/2015, Baltimore, MA.

## **PROFESSIONAL ASSOCIATION AND OUTREACH**

- Reviewer for TTU Undergraduate Research Conference (URC) – Oral Presentation Session 2017
- 21<sup>st</sup> International *C. elegans* Conference, UCLA, Los Angeles – Participant 07/2017
- Space Commerce Conference and Exposition, Houston – Representative from research group 11/2016
- Society of Rheology – Student member 2015 – 2016
- Graduate Student Advisory council (GSAC) at Texas Tech – elected member 2015-2017
- Served as member of the Graduate Student Academic and Advisory Commission at TTU
  - 1) Helped organize "Navigating a Career fair" workshop on behalf of GSAC for TTU students.
  - 2) Helped in preparing Thanksgiving dinner for more than 400 graduate students and their families.
- Certification in Intellectual Property Rights, The Indian Law Institute, New Delhi Spring – 2013

## **NON-RESEARCH PROFESSIONAL EXPERIENCE**

- **Student Asst.**, Southwest /Special Collection Libraries, TTU August 2014 – September 2014  
Learning about American history, way-of-life and making new friends
- **Process Engr.**, Ethylene Oxide & Glycol, Reliance Industries Ltd. (Fortune 500) 07/2012 – 06/2014  
**Youngest team member in commissioning** of new unit with capex to the tune of USD \$80 million.
- **In-Plant Trainee**, Coke Oven Battery, Tata Steel (Forbes Global 2000) May 2011 – July 2011
- **Pilot Plant Trainee**, Ipca Labs Ltd. June – 2010

## **ADDITIONAL INFORMATION**

- **Languages:** Fluent in English and Hindi. Sanskrit: basic proficiency.

**References: Available on Request**