Vivek Sharma

Associate Professor of Chemical Engineering

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Education

Massachusetts Institute of Technology, Cambridge, MA.

Post-doc, Mechanical Engineering & Hatsopoulos Microfluids Lab (HML) 09.08-09.12

Mentor, Gareth H. McKinley. *Extensional and interfacial rheology of complex fluids.*

Georgia Institute of Technology, Atlanta, GA.

Ph.D. in Polymer Science & Engineering (MSE), with a Minor in Physics. 08.03-09.08

Advisor, Mohan Srinivasarao. *Breath figures in polymer films, iridescent beetles & colloidal gold.*

M. S. in Chemical Engineering, with a Minor in Nonlinear Dynamics & Chaos. 01.04-12.06

Mentors, Michael Schatz and Roman Grigoriev. *Opto-microfluidics & chaotic mixing.*

University of Akron, Akron, OH.

M. S. in Polymer Science. 08.01-05.03

Thesis Advisor: Shi-Qing Wang. *Dynamics and rheology of polymer solutions and melts.*

Indian Institute of Technology, Delhi, India.

B. Tech. in Textile Technology, with focus on Polymers & Fiber Science. 1997-05.01

Senior Thesis Advisor: Pushpa Bajaj. *Structure-properties of carbon fibers and PET fibers.*

Professional Experience

University of Illinois, Chicago, IL.

Associate Professor, Chemical Engineering 08.16.19-

Assistant Professor, Chemical Engineering 11.12-08.19

University of Chicago, Hyde Park, Chicago, IL.

Visiting Assistant Professor, Institute for Molecular Engineering (IME) 09.17-12.17

Massachusetts Institute of Technology, Cambridge, MA.

Instructor, Mechanical Engineering 01.12-05.12

Post-doctoral Associate, Mechanical Engineering 09.08-08.12

1366 Technologies Inc., Lexington, MA.

Chemical Engineering & Processing Consultant 04.11-10.11

Georgia Institute of Technology, Atlanta, GA

Research Assistant, Materials Science and Engineering 08.03-09.08

Research Assistant, Center for Nonlinear Science & School of Physics 01.04-08.06

University of Akron, Akron OH.

Teaching Assistant, Polymer Science 08.01-08.02

Research Assistant, Polymer Science 08.02-05.03

Indian Institute of Technology.

Research Assistant, P. Bajaj Group, Textile Technology 08.00-08.01

Research Assistant, Anup Ghosh & Ashok Misra, Polymer Science & Eng. 01.00-12.00

Reliance Industries, Barabanki, UP, India.

Summer Intern, Polyester Fiber Plant 08.01-05.03

Scientific Publications

Refereed journal publications (*denotes corresponding author; #undergraduate co-author, ^ M.S. student co-author) includes *fifteen articles published with UIC students, five currently under revision*).

Under review & revision (preprints available on request)

1. C. Martinez Narvaez, J. Dinic, M. Egeler#, D. Rich, P. Chevalier, J. DeGroot Jr. and V. Sharma*, **"**Silicone Coatings with Nearly Matched Viscometric Properties Exhibit Distinct Pinch-off Dynamics, Extensional Rheology Response and Processability", *under revision, Physics of Fluids. (invited article, submitted Feb. 2019). (Collaboration with Dow Silicones)*

2. Y. Zhang, and V. Sharma*, "Domain and Nanoridge Growth Dynamics in Stratifying Foam Films Modeled by Thin Film Equation Amended With Supramolecular Oscillatory Forces", *under revision, Physics of Fluids. (invited article, submitted Jan. 2019)*

3. S. Yilixiati, C. U. Ortiz^, and V. Sharma*, "Supramolecular surface forces, nanoscopic topography and stratification in micellar foam films of bile salts", *under revision, Langmuir (submitted Dec. 2019).*

4. J. Dinic and V. Sharma*, "Flexibility Dictates Pinch-off Dynamics, Coil-Stretch Transition, Extensional Rheology, and Printability of Polymer Solutions", *Under revision, Macromolecules (submitted Nov. 2018).*

5. J. Dinic and V. Sharma*, "Capillary Break-up Dynamics and Extensional Rheology Response of Polysaccharide Solutions Characterization using Dripping-onto-Substrate (DoS) Rheometry", *Under revision, Macromolecules (submitted Nov. 2018).*

Published from UIC (2013-)

6. J. Dinic and V. Sharma*, "Macromolecular Relaxation, Strain and Finite Extensibility Determine Visco-elastocapillary Thinning and Extensional Viscosity of Polymer Solutions", *Proceedings of National Academy of Sciences,* 116 (18), 8766-8774 (2019).

7. V. Sharma*, "Bird of Transport", *Physics of Fluids,* 31, 020902 (2019).
Editorial: a poem dedicated to R. Bryon Bird on his 95th anniversary, special issue.

8. S. Yilixiati, E. Wojcik[#], Y. Zhang and V. Sharma*, "Spinodal Stratification in Ultrathin Micellar Foam Films", *Molecular Systems and Design Engineering,* 4, 626-638 (2019).

9. J. Dinic and V. Sharma*, "Computational analysis of capillary-driven thinning and pinch-off dynamics during dripping using the volume-of-fluids method", *Physics of Fluids*, 31, 021211 (2019).

   Special issue on R. Bryon Bird's 95th anniversary.
   Featured as the Editor's choice.

10. A. V. Walter, L. N. Jimenez, J. Dinic, V. Sharma and K. A. Erk*, "Effect of salt valency and concentration on shear and extensional rheology of aqueous polyelectrolyte solutions for enhanced oil recovery", *Rheologica Acta* (2019).

11. L. N. Jimenez, J. Dinic, N. Parsi^, and V. Sharma*, "Extensional relaxation time, pinch-off dynamics and printability of semi-dilute polyelectrolyte solutions", *Macromolecules,* 51, 5191-5208 (2018).

12. Y. Zhang, and V. Sharma*, "Thickness-dependent phase transition drives nanoridge-to-mesa instability in micellar freestanding films" *Langmuir*, 34(26), 7922-7931 (2018).

13. S. Yilixiati, R. Rafeeq[#], Y. Zhang, and V. Sharma*, "Influence of salt on supramolecular oscillatory structural forces and stratification in micellar freestanding films", *ACS Nano,* 12, 1050-1061 (2018).

14. Y. Zhang and V. Sharma*, "Nanoridge formation and dynamics of stratification in micellar freestanding films", *Langmuir*, 34(3), 1208-1217 (2018).

- Special Issue on *Early Career Authors in Fundamentals Colloid and Interfacial Colloidal Science*.

15. K.W. Hsiao, J. Dinic, V. Sharma and C. M. Schroeder*, "Extensional induced particle migration in semi-dilute polymer solutions", *Physics of Fluids*, 29, 121603, (2017).

16. J. Dinic, M. Biagoli[#] and V. Sharma*, "Pinch-off Dynamics and Extensional Relaxation Times of Intrinsically Semi-Dilute Polymer Solutions Characterized by Dripping-onto-Substrate Rheometry", *J. Polymer Science: Polymer Physics*, 55, 192-1704 (2017).

- Special issue on *Effect of Surface Tension in Polymer Science*.

17. J. Dinic, L. N. Jimenez[#] and V. Sharma*, "Pinch-off dynamics and dripping-onto-substrate (DoS) rheometry of complex fluids", *Lab Chip*, 17, 460-473 (2017).

18. Y. Zhang, S. Yilixiati, C. Pearsall[#] and V. Sharma*, "Nanoscopic terraces, mesas and ridges in stratifying foam films sculpted by supramolecular oscillatory surface forces", *ACS Nano*, 10(4), 4678-4683 (2016).

19. J. Dinic, Y. Zhang, L. N. Jimenez[#] and V. Sharma*, "Extensional relaxation times of aqueous, dilute polymer solutions", *ACS Macro Letters,* 4, 804-808 (2015).

20. Y. Zhang and V. Sharma*, "Domain growth in stratifying foam films: Experiments", *Soft Matter*, 11, 4408-4417 (2015).

21. B. Keshavarz*, V. Sharma, E. C. Houze, M. R. Koerner, J. R. Moore, P. M. Cotts, P. Threlfall-Holmes and G. H. McKinley, "Studying the Effects of Elongational Properties on Atomization of Weakly Viscoelastic Solutions Using Rayleigh Ohnesorge Jetting Extensional Rheometry (ROJER)," *Journal of Non-Newtonian Fluid Mechanics,* 222, 171-189 (2015)

22. V. Sharma*, S. J. Haward, J. G. Serdy, B. Keshavarz, A. Soderland, P. Threlfall-Holmes and G. H. McKinley, "The rheology of aqueous solutions of ethyl hydroxy-ethyl cellulose (EHEC) and its hydrophobically modified analogue (hmEHEC): Extensional flow response in capillary break-up, jetting (ROJER) and in a cross-clot extensional rheometer." *Soft Matter* 11, 3251-3270 (2015).

- Featured among the most assessed articles of 2015 by *Soft Matter*.

23. V. Sharma, M. Crne, J. O. Park and M. Srinivasarao*, "Bouligand structures underlie circularly polarized iridescence of scarab beetles: a closer view," *Materials Today: Proceedings*, 1S, 161-171, (2014).

Published before 2013

24. V. Sharma* and G. H. McKinley, "An intriguing empirical rule for estimating the first normal stress difference from steady shear viscosity data for polymer solutions and melts," *Rheologica Acta*, 51 (6), 487-495 (2012)

25. S. J. Haward*, V. Sharma, G. H. McKinley and S. Rahatekar, "Shear and extensional rheology of cellulose in ionic liquids", *Biomacromolecules,* 13, 1688-1699 (2012).

26. L. Song, V. Sharma, J. O. Park and M. Srinivasarao*, "Characterization of ordered arrays of micropores in a polymer film," *Soft Matter*, 7, 1890-1896 (2011).

27. S.J. Haward*, V. Sharma and J. A. Odell, "Cross-slot Oscillatory Flow Extensional Rheometer (COFER) for Low Volumes and Ultra-dilute Complex Fluids," *Soft Matter*, 7 (21), 9908-9921 (2011).

- Published with Cover Image.
- Selected as a highlighted article by *Soft Matter* & Royal Society of Chemistry.

28. V. Sharma, A. Jaishankar, Y. Wang and G. H. McKinley*, "Apparent yield stress, interfacial viscosity and high shear rate viscosity of Bovine Serum Albumin Solutions," *Soft Matter*, 7 (11), 5150-5160 (2011).

29. A. Jaishankar, V. Sharma and G. H. McKinley*, "Apparent bulk yield stress, interfacial creep ringing and interfacial viscoelasticity of globular protein/surfactant mixtures," *Soft Matter*, 7 (17), 7623-7634 (2011).

30. M. Crne, V. Sharma, J. Blair, J. O. Park, C. J. Summers and M. Srinivasarao*, "Mimicry of Papilio Palinurus Butterfly Optical Effects," *EPL*, 93 (1), 14001 (2011)

31. A. M. Ardekani, V. Sharma and G. H. McKinley*, "Dynamics of bead formation, filament thinning and breakup in weakly viscoelastic jets," *Journal of Fluid Mechanics*, 665, 46-56 (2010).

32. V. Sharma, L. Song, R. L. Jones, P. R. Williams and M. Srinivasarao*, "Effect of solvent choice on breath-figure-templated assembly of 'holey' polymer films," *EPL*, 91, 38001 (2010).

33. V. Sharma, M. Crne, J. O. Park and M. Srinivasarao*, "Structural Origin of Circularly Polarized Iridescence in Jeweled Beetles," *Science*, 325, 449-452 (2009).

Jeweled beetles research featured in

- Perspective "Evolutionary Photonics with a Twist," *Science*, 325, 98, (2009).
- Back Scatter," The Chirality of Beetles," *Physics Today*, 84, Sept (2009).
- Cell Culture, "Carving Corners," *Cell*, 141, 3, 916 (2010).
- NSF webpage, 'audio-visual slides': http://www.nsf.gov/news/newsmedia/beetles/
- Chemical & Engineering News, Technology Review, BBC News, Photonics.com, US News, NBC News, Yahoo News, Georgia Tech News, Azonano.com, etc.

34. V. Sharma, K. Park and M. Srinivasarao*, "Shape Separation of gold nanorods using centrifugation," *Proceedings of National Academy of Sciences*, 106(13), 4981-4985 (2009).

- Press: Featured as research highlight in *Analytical Chemistry*, April 09, 2009.

35. V. Sharma, K. Park and M. Srinivasarao*, "Colloidal dispersion of gold nanorods: Historical background, optical properties, synthesis, separation and self-assembly," *Material Science and Engineering Reports*, 65, 1-38 (2009).

- Published with the Cover Image.

36. R.O. Grigoriev*, M.F. Schatz and V. Sharma, "Chaotic mixing in microdroplets," *Lab Chip*, 6, 1369-1372 (2006).

Book Chapters

37. M. Srinivasarao, M. Crne, V. Sharma and J. O. Park, "Scarab Beetle Iridescence," *McGraw-Hill 2011 Yearbook of Science and Technology*.

38. M. Srinivasarao, V. Sharma, J. O. Park, M. S. Barrow and P. R. Williams, "Fabrication of nano/microstructured organic polymer films using condensation: Self-assembly of breath

figures," in *Evaporative self-assembly of ordered complex structures*, World Scientific Publishing Co (Singapore) 2011.

Dissertations

- Ph. D. (2008): "Colloidal gold nanorods, iridescent beetles and breath figure-templated assembly of ordered arrays of pores in polymer films". [Advisor: Mohan Srinivasarao. Committee: William Koros, Michael Schatz, Paul Neitzel, Jung Ok Park, & David Bucknall]
- M. S. (2003): "Rheological study of anomalous modification of Aroclor dynamics by dissolved 1,2-polybutadiene and the resulting negative intrinsic viscosity". [Advisor: Shi-Qing Wang. Reader: Alexei Sokolov]
- B. Tech. (2001): "Preparation and properties of carbon fibers using PAN-based precursors". [Advisor: Pushpa Bajaj]

Honors/Awards

- 3M Non-tenured Faculty Award, 2019.
- Best Presentation Award for talk on "Computational analysis of pinch-off dynamics and printability of simple and complex fluids", *Flow-3D Users Meeting*, Santa Fe, NM (presented by VS, based on work carried out with Jelena Dinic).
- 2017 COE Faculty Award For Teaching, University of Illinois at Chicago.
- HOPE (Honoring Our Professor's Excellence) Award, University of Illinois at Chicago, 2017.
- Distinguished Young Rheologist Award, TA Instruments, 2015.

  Received before UIC
- Selected/ invited to *APS Opportunities in Energy Research Workshop*, Portland, OR. 2010
- Chair's travel award, *Gordon Research Conference - Polymer Physics.* 2006
- Travel grant, *ACS 6th National Graduate Research Polymer Conference*, UMASS, Amherst. 2005
- Fellowship, *ACS PRF Summer School on Nanoparticle Materials*, Ypsilanti, MI, June 2004
- Chair's travel award, *Gordon Research Conference - Polymer Physics*. 2004
- National Talent Scholarship (NTSE): Awarded by National Council for Educational Research and Training, (NCERT), India to the top 750 students selected by a series of nationwide examinations. 1995-2001
- Himachal Pradesh State Scholarship for Undergraduate Study in Engineering awarded for securing 3rd rank in the H. P. Engineering Entrance Examination. 1997-2001
- National Science Talent Scholarship, awarded by Universal Trust. 1996 & 1997

Mentoring Experience & Students Mentored

Students: Awards/ Recognitions

- Carina Martinez, **Second Prize in GSOFT (Group on Soft Matter) Poster competition**, APS March Meeting, Boston, 2019.
- Jelena Dinic, **Winner of the Frank Padden Jr. Award in 2018 for** ***"Excellence in Polymer Physics Research"***, Division of Polymer Physics, APS March Meeting, Los Angeles, 2018. Probably the highest honor for a graduate student in Polymer Physics & Engineering. https://www.aps.org/units/dpoly/awards/padden-winner.cfm
- Jelena Dinic, **Invited Speaker**, Gordon Research Symposium on Polymer Physics, Mount Holyoke College, MA. 2018.
- Jelena Dinic, **Finalist and Winner of the Third Prize,** ***"AIChE Graduate Excellence in Polymer Research Symposium"***, AIChE Annual Meeting, Minneapolis, MN. 2017.
- Jelena Dinic, ***Travel Award*** from Society of Rheology Student, 2017.
- Subinuer Yilixiati, ***Finalist*** **for the Langmuir Student Award**, ACS Colloids and Suface Science Symposium, CCNY, New York, 2017.
- Subinuer Yilixiati, **First Prize at GSOFT Poster Competition**, APS March Meeting 2017.
- Jelena Dinic, **Invited Speaker**, Gordon Research Symposium, on Colloidal, Macromolecular and Polyelectrolyte Solutions, Ventura, CA. 2016.
- Yiran Zhang, **Student Travel Award**, Society of Rheology, Fall 2015.
- Collin Pearsall (UG), Image featured in APS March Meeting Gallery 2014.

Student awards at University of Illinois at Chicago.

- Subinuer Yilixiati, ***High Impact Student Award***, Chemical Engineering, UIC, 2018.
- Jelena Dinic, ***Most Productive Student Award***, Chemical Engineering, UIC, 2017.
- Subinuer Yilixiati, ***High Impact Student Award***, Chemical Engineering, UIC, 2017.
- Prerana Rathore, **Best T.A. in Chemical Engineering** (for Transport Phenomena, 2016).
- Jelena Dinic, **Honorable Mention, Excellence in Undergraduate Mentoring by Graduate Students Awards**, University of Illinois at Chicago, IL. 2015.
- Subinuer Yilixiati, **Finalist, Image of Research Competition**, UIC 2014.
- William Abbott-Klostermann, Joseph Guido and Andrew Rassmussen, **Chancellor Undergraduate Research Award** (CURA).

University of Illinois, Chicago, IL

Graduate students

[*Current*: 4 Ph. D. + 5 M.S. *Alumni*: 3 Ph. D. + 10 M.S. (3 Thesis + 6 Project + 1 Non-thesis)]

Student Name	*Degree*	*Years*	*Position after graduating from ODES-lab*
Yiran Zhang	Ph.D.	2012-2016	Post-doctoral associate, Susan Muller, University of California, Berkeley, CA.
Jelena Dinic	Ph.D.	2014-2018	Post-doctoral associate, Matt Tirrell, IME,

			University of Chicago, IL.
Subinuer Yilixiati	Ph.D.	2014-2018	
Liedy Nallely Jimenez	Ph.D.	2014-	(Prelim on 01/18/19)
Chrystian Ochoa	Ph.D.	2018-	
Chenxian Xu	Ph.D.	2018-	
Carina Martinez	Ph.D.	2018-	
Eason Zeng	M.S.	2018-	
Mark Murowski	M.S.	2019-	
Lena Hassan	M.S.	2019-	
Alexander Kubinski	M.S.	2019-	
Fahed Albreiki	M.S.	2019-	
Prasanth Narayanan	M.S.	2012-2014	CB&I, Houston
Norman Moreno Moreno	M.S.	2014-2016	Codecocho, Colombia
William Yang	M.S.	2014-2016	Fresenius Kabi, Chicago
Nguyet (Luna) Le	M.S.	2015-2017	Zyleris Pharmatech
Christopher Norgbey	M.S.	2016-2017	Texas Environmental Agency, TX
Ivan Akhremitchev	M.S.	2016-2017	Medcision, San Rafael, CA
Mahmoud Abdel-Latif	M.S.	2016-2017	Ph. D. Student, IIT Chicago
Prerana Rathore	M.S.	2015-2018	Ph.D. Student, UMASS Amherst
Camila A. Uribe Ortiz	M.S.	2015-2017	Abbvie, Chicago.
Nikhila Parsi	M.S.	2015-2017	Bajaj Medical LLC

Undergraduates advised and mentored*

**Hundred plus undergraduate students have participated in research projects and mentored professional development summer programs that involve presentations from or panel discussions led by industry and academia professionals.* Five out of ten published journal publications have included UG co-authors. Five UG researchers have presented at national meetings (APS March Meetings and the AIChE Annual Meeting) and twelve UGs have contributed to talks and posters.

Name (Timeline), Project, Employment. ***Papers or Conference Talks.***

1. Leidy Nallely Jimenez, (05/13-08/14) DoS rheometry & CHE 392: UG research, PhD student, UIC. *Co-authored two papers as an UG student.*
2. Will-Abbott-Klosterman, (05/13-08/14) 3-D printer design, and design of apparatus to study bubble rafts and oscillate bubbles & CHE 392: UG research, Shamrock Foods, AZ. *Chancellor Undergraduate Research Award recipient.*
3. Jana Rush, (05/13-12/13) Spectroscopic analysis of foam films & CHE 392: UG research, Loders Croklaan, Chicago, IL.
4. Ethan Rendlen, (05/13-12/13) High shear rate viscometer design & CHE 392: UG research, Pelstar, Chicago, IL.
5. Collin Pearsall, (05/13-05/14) Vertical foam film drainage, HDI-Gerling America Insurance Company, Chicago. *Gave the first conference talk from the group at APS March Meeting in 2013 (&*

had an image featured by APS), co-authored a paper, and did the first foam experiments in the group.

6. Steven Priest, (05/13-05/14) Rod climbing, Sonoco, Chicago, IL.
7. Sandy Younan, (05/13-05/14) Megasize bubbles and soap films & CHE 392: UG research, NALCO EcoLab, Chicago, IL.
8. Ewelina Wojcik, (05/14-05/17) Drainage of vertical foam films & CHE 392: UG research, CSI Behring, Chicago, IL. *Presented oral talks twice and a poster at the APS March Meeting, posters twice at the AIChE Meeting, co-author on a dozen talks, and to be a coauthor on a couple of papers.*
9. Molly Somploski, (08/13-12/14) Bubble rafts & CHE 392: UG research, Peoples Gas, Chicago.
10. Paulina Szadkowska, (05/14-08/14) Bubble pressure tensiometry. Pursuing PhD in Poland
11. Aesha Talia, (05/14-08/14) Foam film drainage, Rogers Corporation, Chicago, IL.
12. Arwa Hasan, (05/14-08/14) Colors of soap films, Navistar Inc., Chicago, IL.
13. Pedro Lopez, (05/14-08/14), Bubble rafts, Spraying Systems Co., Chicago, IL.
14. Omatseye Ugen, (05/14-08/14), Bubble rafts.
15. Kerolos Gadallah, (05/14-08/14) Maximum bubble pressure tensiometry,
16. Swaroop Bhagavatula, (05/14-08/14) Rod climbing, McKinsey and Co., Houston, TX.
17. Mickey Getz, (05/14-12/14) Pendant drop tensiometry & CHE 392: UG research, PhD student at University of California, San Diego, CA.
18. Anwar Beker, (05/14-08/14) Maximum bubble pressure tensiometry & CHE 392: UG research,
19. Adam Lewis, (05/14-08/14) Protein-based foams, Medical School.
20. Steven Kowinski, (05/14-08/14) 2D hydrodynamics in soap film, EN Engineering, Chicago, IL.
21. Anthony Taphanand, (05/14-08/14) 3D printing, Honeywell UOP, Chicago, IL.
22. Vicky Mei, (05/14-08/14) DoS rheometry, M.S. in Chemical Engineering, UIC.
23. Mariglen Isufi, (05/14-08/14) Hydrodynamics in foam films,
24. Diana Bernatek, (05/14-08/14) Foam film drainage, BP Chicago, IL.
25. Cesar Moreno, (05/14-08/14) Bubble rafts,
26. Nick Kowolski, (07/14-08/14) Mars, Chicago, IL.
27. Adam Burshan, (05/15-08/16 & 01/18-) Maximum Bubble pressure tensiometry.
28. Owen Beale, (05/15-08/15) Protein-stabilized foam films, W.R. Grace & Co.
29. Madeleine Biagloni, (05/15-05/16) DoS rheometry of semi-dilute polymer solutions & CHE 392: UG research, PhD candidate in University of Illinois at Urbana-Champaign, IL. *Co-authored a paper with Jelena Dinic and presented at the APS March Meeting in 2016.*
30. Alexandro Estrada, (05/15-05/16) DoS rheometry of HEC solutions,
31. Andrew Castille, (05/15-08/15) Foam Films,
32. Afolabi George, (05/15-08/15) Petroleum emulsions,
33. Andrei Ivanov, (05/15-12/15) Petroleum emulsions & micropipette tensiometry, Viscofan, IL.
34. Alvin Lee, (05/15-08/15) Vertical foam films,
35. Leah Klein-Borden, (05/16-05/17), Lipid-drug interactions, PhD candidate in University of Maryland at College Park, MD.
36. Andrew Rasmussen, (05/15-12/16), Foam films, bubble rafts and viscous fingering (designed apparatus) & CHE 392: UG research, Abbvie Pharmaceuticals, Chicago, IL. *Chancellor Undergraduate Research Award recipient.*

37. Shiju Jacob, (05/16-08/16), Viscous fingering, ProLeiT, Chicago, IL.
38. Rabees Rafiq, (05/15-12/15), Effect of salt on stratification in foam films, Peoples Gas, Chicago, IL. *Co-authored a paper with Subinuer Yilixiati and presented at the AIChE Midwest conference.*
39. Krupa Shah, (05/15-08/15), Vertical foam films,
40. Brooke Seger, (05/15-08/16), Iridescence in soap films & CHE 392: UG research, Valeo, Seymour, IN.
41. Theodore Walker, (08/15-05/16), Maximum bubble pressure tensiometry & CHE 392: UG research, PhD Candidate at University of Wisconsin-Madison. *Presented at the APS March Meeting in 2016, and will be a co-author on a future manuscript.*
42. Amatul Salam, (05/16-08/16), Lipid-drug interactions,
43. Cameroon, (05/16-08/16), Vertical foam film drainage,
44. Chimuka Hiley, (05/16-08/16), Drainage of 3D foam, United States Steel Corporation
45. Jannice Lee, (05/16-08/16), Foam drainage in 3D foam. MS, UIC-Chemical Engineering.
46. Yumna El-Hakim, (05/16-08/16), Protein rheology and spectroscopy,
47. Ashkan Khalili, (05/16-08/16), Porous carbon structures, Baxter Healthcare.
48. Joseph Guido, Rod Climbing. *Chancellor Undergraduate Research Award recipient.*
49. Elizabeth John, (05/16-08/16), Structural color in foam films.
50. Ekaterina Ivanov, (05/17-), Tensiometry and Foam Drainage,
51. Ngan Tran, (05/17-08/17), Pendant drop tensiometry. Smith and Burgess, Houston TX
52. Emmanuel Ampo, (05/17-08/17), DoS rheometry.
53. Reshma Ravi, (05/17-08/17), Beads-on-a-string structure.
54. Ryan Basse, (05/17-08/17), DoS Rheometry of polyelectrolyte solutions.
55. Zanub Hassan, (05/17-08/17), Lipid-drug interactions.
56. Justina Mei, (05/17-08/17), WISEP program and 3D printing.
57. Faizan Chowdhury, (05/17-08/17), WISEP program and 3D printing
58. Nedyalkov Vazlev, (05/17-08/17), WISEP program and 3D printing, Nestle.
59. Fahed Al-breiki, (05/17-05/18), Viscoelastic fingering
60. Christopher Mecinski, (05/17-08/17), WISEP program and 3D printing
61. Arun Jospeh, (05/17-08/17), Centrifugal spinning,
62. Demetrios Galanos, (05/17-08/17), Centrifugal spinning,
63. Ahmad Judeh, (05/17-08/17), Lipid-drug interactions
64. Munira Jimjhimo, (05/17-), 3D foam drainage
65. Amanda Hy, (05/17-), 3D Foam Drainage,
66. Ana Hernandez, (08/17-), Antifoaming and 3D Foam drainage, L'Oreal.
67. Reem Khoury, (08/17-12/17), Viscous fingering,
68. Erica Caruso, (01/18-), Adsorption Kinetics
69. Daniel Kim, (05/16-08/16), Foam film drainage.
70. Boi Trinh, (08/16-12/16), Maximum bubble pressure & CHE 392: UG research, EMT Inc.
71. Chenxian Xu, (08/17-), Tears of Wine. PhD student, UIC.
72. Trisha Ann, (08/16-12/16), Beads-on-a-string structure,
73. Michelle Powers (08/17-), CHE392: Membrane engineering

74. Hope Ilhaza (08/15-12/15), Foam Films, Transferred to UIUC Chemical Engineering.
75. Adisa Hazdic (05/18-), Food emulsions and foams
76. Matthew Wagener (05/18-), Foamability and Adsorption Kinetics
77. Alexander Kubinski (05/18-), Viscoelastic fingering and fractals
78. Maurice Smith (05/18-), Lipid-drug interactions
79. Vrushant Patel (05/18-), Spider webs
80. Erin Dwar (05/18-), Engineering art and sculpture using transfer printing
81. Peter Durosinmi (05/18-), Engineering art using transfer printing
82. Fatima Saeed (05/18-), Foam science and engineering
83. Sofia Sarefian (05/18-), Coffee foams
84. Maria Garcia-Hernandez (05/18-)
85. Erica Li (05/18-), 2d Flows in soap films
86. Mahamat Ibrahim (05/18-), DoS Rheometry
87. Susana Gonzalez (05/18-), Emulsions and Foams
88. Osama Al-Maskati (05/18-), Langmuir Films
89. Matt Egeler (06/18-), Pendant Drop Tensiometry.
90. Mark Murawski (06/18-12/18), Tack and Adhesion Testing
91. Yier Li (01/19-) Vertical foam films
92. Daniela Estarita (06/19-), Viscous fingering
93. Javier Castilla (06/19-), Stickiness.
94. Thomas Mazur (06/19-), Polymer-Surfactant complexes.
95. Velia Pelma (06/19-), Vertical foam films
96. Yusuf Sorunke (06/19-), Viscoelastic Fingering.
97. Christian Sanchez (06/19-), Polymer-surfactant complexes.
98. Jasmine Villegas (06/19-), Bile micelles.
99. Sandra Hernandez (06/19-), Stratifying Films.
100. Tianna Mitchell (06/19-), Stratifying Films.
101. Patrycja Kotwis (06/19-), Foams. GFIP Intern.
102. Cheryl Skyles (06/19), Foams. GFIP Intern.

<u>High School Student Interns</u>

103. Vivek Vermani, IMSA, Summer 2014. UG in Chemical Engineering, UIUC.
104. Sophia Horowicz, Summer 2018. UG in PME, University of Chicago.

Massachusetts Institute of Technology, Cambridge, MA

Research Mentor for Olivia Pessinet (summer intern, now at Saint Gobain),
Aditya Jaishankar (Ph. D. student, now at Exxon-Mobil, NJ)
Ken Park (Ph. D. student, now faculty member at Northwestern University)
Mike Wheeler (a high school student intern, pursued UG degree at Swarthmore College).

Georgia Institute of Technology, Atlanta, GA

Research Mentor: Sai M. Gogineni (UG student, now a MD, practicing Internal Medicine).

Teaching Experience

University of Illinois, Chicago, IL

Course ratings and instructor ratings are on a scale from 1(low) to 5 (high)

CHE494 "Molecular and Macromolecular Engineering". (Developed a new course)
Spring 2019, (G: 12, UG: 6) Course: 4.38 Instructor: 4.5

CHE312 "Transport Phenomena II". (Heat and mass transfer)
Fall 2019, (UG: 20) Course: Instructor:
Spring 2019, (UG: 58) Course: 4.18 Instructor: 4.24
Spring 2018, (UG: 61) Course: 4.58 Instructor: 4.60
Spring 2017, (UG: 78) Course: 4.52 Instructor: 4.60
Spring 2016, (UG: 76) Course: 4.31 Instructor: 4.31
Spring 2015, (UG: 71) Course: 4.24 Instructor: 4.37
Spring 2014, (UG: 65) Course: 4.25 Instructor: 4.46
Spring 2013, (UG: 46) Course: 4.18 Instructor: 4.58

CHE410 "Transport Phenomena"
Fall 2018, (G: 20) Course: 3.81 Instructor: 3.88
Fall 2017, (G: 22) Course: 3.86 Instructor: 3.59
Fall 2016, (G: 28) Course: 4.35 Instructor: 4.25
Fall 2015, (G: 21) Course: 4.08 Instructor: 4.25

CHE494 "Fizzics and Interfacial Phenomena". (Developed a new course)
Spring 2018, (G: 7, UG: 1) Course: 4.43 Instructor: 4.57
Spring 2016, (G: 23, UG: 4) Course: 3.95 Instructor: 3.91
Fall 2013, (G: 9, UG: 6) Course: 4.0 Instructor: 4.0

CHE301 "Chemical Engineering Thermodynamics"
Fall 2014, (UG: 75 students) Course: 3.96 Instructor: 3.94

CHE 595 "Chemical Engineering Seminar"
Fall 2015, Spring 2016, Fall 2016, Spring 2017, Fall 2017, Spring 2018, Fall 2019, Spring 2019

CHE 392 "Undergraduate research"
Supervisor for twenty-one UG projects (listed with undergraduates mentored)
Fall 2018, (UG: 8) Course: 5.0 Instructor: 5.0

University of Chicago, Hyde Park, Chicago IL

MENG36300 "Transport Phenomena" (G)
Fall 2017, (G: 16 Students)

Massachusetts Institute of Technology, Cambridge, MA

"Macromolecular Hydrodynamics" (G). Co-instructor with G. H. McKinley
Spring 2011, Instructor rating: 6.0/7.0

Georgia Institute of Technology, Atlanta, GA

"Physical Chemistry of Polymer Solutions" offered by Prof. Mohan Srinivasarao.
2004-2008, Guest Lecturer, in undergraduate and graduate course

"Structure Properties of Polymers/Fibers".
Spring 2006, Instructor, laboratory course (UG)

University of Akron, Akron, OH

"Polymer Science Laboratory".
2001-2002, Teaching Assistant.

"Upward Bound Summer Program for High School Students".
2012, Math & Computing Instructor.

Indian Institute of Technology, Delhi, India

Summer 2000, Volunteer teacher for underprivileged children in slums in New Delhi.

Professional Service

Conferences and Meetings

Short Course Organizer

1) Structure and Rheology of Emulsions and Foams, co-taught with Sibani Lisa Biswal, at the Society of Rheology Meeting, Houston, TX.

Session co-organizer and chair

2) *Invited Session* – Dynamics and Rheology of Polyelectrolytes and Biopolymers, APS March Meeting, Boston, MA 2019.
3) *Focus Session* – Polymer and Polyelectrolyte Rheology, APS March Meeting, Boston, MA. 2019.
4) Colloids 1, APS March Meeting, Boston, MA. 2019.
5) *Invited Session* – Novel Complex Flows, AIChE Meeting, Pittsburgh, PA 2018.
6) Charged and Ion Containing Polymers, AIChE Meeting, Pittsburgh, PA 2018.
7) Interfacial Transport Phenomena, AIChE Meeting, Pittsburgh, PA 2018.
8) Gallery of Rheology Contest, Society of Rheology Meeting, Houston, TX 2018.
9) *Focus Session* – Structure & Rheology of Hydrogels, APS March Meeting, Los Angeles, CA 2018.
10) *Focus Session* – Thermocapillary and Solvocapillary Methods for the Manipulation of Soft Matter, APS March Meeting, Los Angeles, CA 2018.
11) Rheology and Adhesion, 41st Adhesion Society Meeting, San Diego, CA 2018
12) Interfacial & Nonlinear Flows, AIChE Annual Meeting, Minneapolis, MN 2017.
13) Polymer Rheology and Processing, AIChE Annual Meeting, Minneapolis, MN 2017.
14) Interfacial and Nonlinear Flows, UNC/TAM Meeting, Chicago, CA 2018.
15) Emulsions, Foams and Interfacial Rheology, Society of Rheology Meeting, Denver, CO 2017.

16) *Invited session* – Polymer Rheology: Flexibility, Charge and Extensibility, APS March Meeting, New Orleans, LA 2017.
17) *Focus Session* – Tuning Polymer Rheology for Printing, Spinning and Coating Applications, APS March Meeting, New Orleans, LA 2017.
18) Interfacial & Nonlinear Flows I & II, AIChE Annual Meeting, Salt Lake City, Utah 2015.
19) Interfacial and Nonlinear Flows I & II, AIChE Annual Meeting, Atlanta, GA 2014.
20) Spectroscopic & Imaging Methods in Interfacial Phenomena, ACS Fall Meeting, San Francisco, 2014.
21) Interfacial and Nonlinear Flows, AIChE Annual Meeting, San Francisco, 2013.
22) Non-Newtonian Flows, Society of Rheology Annual Meeting, Montreal, Canada, 2013.

Session chair

23) Biopolymer Solutions and Gels, International Symposium on Food Rheology and Structure, ISFRS 2019, Zurich 2019.
24) Colloids I, APS March Meeting, Boston. 2019.
25) Emulsions and Foams, ACS Colloids, Penn State University. 2018.
26) Evaporation, Droplets 2017, UCLA, Los Angeles. 2017.
27) Basic Research in Colloids, Surfactants and Nanomaterials: Interfacial Interactions, ACS Fall Meeting, Washington D. C. 2017.
28) Microfluidics: Multicomponent or Active Particle systems, 90th ACS Colloids, and Surface Science Symposium, Harvard University, Cambridge, MA. 2016.
29) Advanced Experimental and Simulation Techniques in Colloid and Interface Science, 90th ACS Colloids, and Surface Science Symposium, Harvard University, Cambridge, MA. 2016.
30) Rheology of Complex Fluids, 90th ACS Colloids, and Surface Science Symposium, Harvard University, Cambridge, MA. 2016.
31) Non-Newtonian Flows: Rheometry and Applications, APS Division of Fluid Dynamics Meeting, Boston, MA 2015.
32) Emulsions & Foams, APS March Meeting, San Antonio, TX 2015.
33) Focus Session: Microfluidics and Nanofluidics IV: Hydrodynamics, Separations and Slip, APS March Meeting, Denver, 2014.
34) Dynamics of Nanostructured Polymers, ACS Fall Meeting, Denver CO 2011.
35) Jets and Wakes. APS DFD Meeting, Long Beach, CA. 2010.
36) New Experimental, Theoretical and Computational Methods in Polymer and Soft Matter Physics. APS March Meeting, Portland, OR. 2010.

Judge

37) Judge for the DPOLY Padden Award, APS March Meeting, Boston, MA 2019.

38) Judge for the SOR Poster Competition, SOR Meeting, Houston, TX 2018.
39) Judge for the DPOLY Poster Session, APS March Meeting, New Orleans, LA 2017.
40) Judge for the DPOLY Poster Session, APS March Meeting, Los Angeles, LA 2018.
41) Judge for the Graduate Polymer Symposium at AIChE Meeting, 2016.

Professional Societies

Member: American Physical Society (DPOLY, DFD & GSOFT), American Institute of Chemical Engineers, American Chemical Society, Society of Rheology, Society of Plastic Engineers.

Offices Held:

Chair, Membership Committee, GSOFT (2016-2020); Helped in GSOFT-DSOFT transition!
Membership Committee & Social Media Chair, Society of Rheology (2017-)
Programming Committee, Area 1J: Fluids, AIChE (2017-)
Education Committee, DPOLY (2018)

Reviewer (Research Proposals)

National Science Foundation (8), ACS-PRF, Research Foundation Flanders (Belgium).

Reviewer (Journals)

Soft Matter, Journal of Fluid Mechanics, Physical Review Letters, Advanced Materials, Macromolecules, Journal of Rheology, International Journal of Multiphase Flow, Applied Rheology, RSC Advances, Rheologica Acta, Journal of Chemical Physics, Physical Review Fluids, Physical Review E, Chemical Communications, Langmuir, Lab Chip, Polymer Chemistry, Experiments in Fluids, Journal of Chemical Physics, Journal of Dispersion Science.

Department, College, University of Illinois at Chicago Service (11.12-current)

Member of the graduate committee, chemical engineering (2014-2016 & 2017-)
Seminar organizer for the department of chemical engineering, (2015-current)
Website committee for the department of chemical engineering (2015-current)
Chair, Molecular Engineering Strategic Committee, for chemical engineering (2016-current)
Faculty search committee (2015-2016)
Undergraduate academic advising (>25 students each semester)

Member, Graduate Thesis Committee (Student, Degree, Year, Adviser, Department):

Student	*Degree Year*	*Advisor*	*Department*
• Yuan Zhang	M. S. 2013	Ying Liu	Chemical Eng.
• Ross Ransom	M. S. 2013	Ying Liu	Chemical Eng.
• Rubin Torf	M.S. 2013	Belinda Akpa	Chemical Eng.
• Justin Carlson	M.S. 2014	Belinda Akpa	Chemical Eng.
• Lun Gao	M. S. 2015	Brian Chaplin	Chemical Eng.
• Qiang (George) Zhang	M. S. 2015	Randall Meyer	Chemical Eng.

• Adam Schuman	Ph. D. 2015	Mark Schlossman	Physics
• Miroslav Miyahov	Ph. D. 2015	Mark Schlossman	Physics
• Mary Ye Tang	Ph. D. 2015	Richard Geimanhart	Biopharmaceutical Sci.
• Kevin Hinkle	Ph. D. 2015	Sohail Murad	Chemical Eng.
• Priyanka Oroskar	Ph. D. 2016	Sohail Murad	Chemical Eng.
• Martin Brennan	Ph. D. 2017	David Eddington	Bioengineering
• Sean Hyan Dubina	Ph. D. 2016	Lewis Wedgewood	Chemical Eng.
• Pin Zhang	Ph. D.	Ying Liu	Chemical Eng.
• Akshaya Polaepalli	M. S. 2016	Belinda Akpa	Chemical Eng.
• Daniel Amoanu	Ph. D. 2018	Mark Schlossman	Physics
• Taylor D. Jones	Ph. D. 2018	Satish Alapati	Bioengineering
• Pardis Rofouie	Ph. D. 2017	Alejendro Rey	Chemical Engineering, McGill University
• Alex Donovan	Ph. D. 2017	Ying Liu	Chemical Eng.
• Caleb Steele	M.S. 2017	Ying Liu	Chemical Eng.
• Umme Urmee	Ph. D. 2017	Mark Schlossman	Physics/ Chemical Eng.
• Zhu Liang	Ph.D.	Mark Schlossman	Physics
• Mohammed Hamza	Ph.D. 2019	G. Mansoori	Bioengineering
• Huifeng Wang	Ph.D.	Gang Cheng	Chemical Eng.
• Irene Lin	Ph.D.	Brian Chaplin	Chemical Eng.
• Jannice Lee	M.S. 2019	Sangil Kim	Chemical Eng.

Invited Presentations, Talks and Colloquia

Includes talks in industries, conferences (including ACS, AIChE and GRC) & universities.

1. "Stretched Polymer Physics, Extensional Rheology and Free Surface Flows", Gordon Research Conference on Polymer Physics. July 2020.
2. "Stretched Polymer Physics, Extensional Rheology and Free Surface Flows", Chemical Engineering, Stanford. Spring 2020.
3. "Stretched Polymer Physics, Extensional Rheology and Free Surface Flows", Compflu-2019, Bhopal, India. December 2020.
4. "Pinch-off Dynamics, Rheology and Printability of Polyelectrolyte Solutions", University of Illinois at Urbana-Champaign, Fall 2019.
5. "Stratification in Micellar Foam Films", in Symposium on "Equilibrium and Beyond-Equilibrium Self-Organization in Soft Materials" at the International Materials Research Congress (IMRC), Cancun, Mexico. August 2019.
6. "Stickiness, Elasticity and Extensional Rheology", Gordon Research Conference on Adhesion. July 2019.
7. "Stretched Polymer Physics, Pinch-off Dynamics, and Printability of Polymeric Complex

Fluids", 2019 Materials Science Lecture Series, University of Hasselt, Belgium, July 2019.

8. "Nanoscopic Thickness Transitions and Variations in Stratifying Micellar Foam Films", Forschungszentrum Jülich, Germany. July 2019.
9. Plenary Talk: "Molecular and Macromolecular Engineering of Foams: Drainage Kinetics and Rheology", International Symposium on Food Rheology and Structure, Zurich, June 2019
10. "Nanoscopic Thickness Transitions and Variations in Stratifying Micellar Foam Films", Argonne National Lab, June 2019.
11. "Stretched Polymer Physics, Pinch-off Dynamics, and Printability of Polymeric Complex Fluids", 3M, Minneapolis, MN. June 2019
12. "Stretched Polymer Physics, Pinch-off Dynamics, and Printability of Polymeric Complex Fluids", Chemical Engineering, Northwestern University, Evanston, IL. May 2019
13. "Stretched Polymer Physics, Pinch-off Dynamics, and Printability of Polymeric Complex Fluids", UMASS Polymer Science and Engineering, Amherst, MA. February 2019.
14. "Dynamics of Stratification in Micellar Foam Films", Mechanical Science and Engineering, University of Illinois at Urbana-Champaign, IL. Jan. 2019
15. Plenary Talk: "Dynamics of Stratification in Micellar Foam Films", Society of Engineering Science, (SES) Meeting, Madrid, Spain. Oct 2018.
16. "Stretched Polymer Physics, Pinch-off Dynamics, and Printability of Polymeric Complex Fluids", Polymer Science, University of Akron, Akron, OH. Sept. 2018
17. "Stretched Polymer Physics, Pinch-off Dynamics, and Printability of Polymeric Complex Fluids", Chemical Engineering, University of California – Los Angeles, CA. June 2018
18. "Pinch-off Dynamics, Extensional Rheology, and Printability of Polymeric Complex Fluids", Webinar for Adhesives and Sealants Council, June 2018.
19. "Pinch-off Dynamics, Dripping-onto-Substrate (DoS) Rheometry, and Printability of Polymeric Complex Fluids", Chemical Engineering, Lehigh University, PA. April 2018
20. "Extensional Relaxation Times, Pinch-off Dynamics, and Printability of Polyelectrolytes Solutions", Chemical Engineering, University of Delaware. April 2018.
21. "Dynamics of Stratification in Micellar Foam Films", UPenn, Philadelphia, April 2018.
22. "Rheometry and Printability of Complex Fluids", Smart Flow 2018. Houston TX. March 2018
23. "Pinch-off Dynamics, Extensional Rheology, and Printability of Polymeric Complex Fluids", Society for Plastics Engineers, University of Houston, Houston, TX. March 2018.
24. "Pinch-off Dynamics, Dripping-onto-Substrate (DoS) Rheometry, and Printability of Polymeric Complex Fluids", DDGIS (Dow Discussion Group on Interfacial Science), Dow Chemicals, Midland, MI. Feb. 2018.
25. "Dynamics of Stratification in Micellar Foam Films", Soft Matter Lunch Bag Seminar Series, Georgia Institute of Technology, Atlanta, Jan. 2018.
26. "Pinch-off Dynamics, Extensional Rheology, and Printability of Polymeric Complex Fluids",

Materials Science and Engineering, Georgia Institute of Technology, Atlanta, Jan. 2018.

27. "Dynamics of Stratification in Micellar Foam Films", Chemical Engineering, Rice University, Houston, TX. Nov. 2017.
28. "Dynamics of Stratification in Micellar Foam Films", Halliburton, Houston, TX. Nov. 2017.
29. "Pinch-off Dynamics, Extensional Rheology, and Printability of Polymeric Complex Fluids", Nestle, Lausanne, Switzerland.
30. "Dynamics of Stratification in Micellar Foam Films", Mechanical Engineering, Rutgers University, September 2017.
31. "Pinch-off Dynamics, Extensional Rheology, and Printability of Polymeric Complex Fluids", Chemical Engineering, University of South Florida, Tampa Aug. 2017.
32. "Dynamics of Stratification in Micellar Foam Films", Emulsions, Foams and Dispersions: Symposium honoring Dominique Langevin at 70, ACS Fall Meeting, Washington D. C. Aug. 2017.
33. "Dynamics of Stratification in Micellar Foam Films", Coty, Darmstadt, Germany. Aug 2017.
34. "Pinch-off Dynamics, Extensional Rheology, and Printability of Polymer Solutions", Chemical Engineering, KU Leuven, Belgium Aug 2017.
35. "Pinch-off Dynamics, Extensional Rheology, and Printability of Polymeric Complex Fluids", Mechanical Engineering, TU Eindhoven, The Netherlands Aug 2017.
36. "Pinch-off Dynamics, Extensional Rheology, and Printability of Complex Fluids", Procter & Gamble, Cincinnati Aug 2017.
37. "Dynamics of Stratification in Micellar Foam Films", Procter & Gamble, Cincinnati Aug 2017.
38. "Dynamics of Stratification in Micellar Foam Films", Telluride Science Research Center Workshop titled: Molecular Engineering of Soft Matter: Spanning Small Molecules to Macromolecules. June 2017.
39. "Pinch-off Dynamics, Extensional Rheology and Printability of Complex Fluids", PPG Industries, June 2017.
40. "Printability, Pinch-off Dynamics and Extensional Rheology of Complex Fluids", Mechanical Engineering and Science, University of Illinois at Urbana Champaign. May 2017.
41. "Printability, Pinch-off Dynamics and Extensional Rheology of Complex Fluids", Chemical Engineering, University of Nebraska, Lincoln NE. March 2017.
42. "Dynamics of Stratification in Micellar Foam Films", Mechanical Engineering, University of Minnesota, MN. Feb 2017
43. "Printability, Pinch-off Dynamics and Extensional Rheology of Complex Fluids", 3M, Minneapolis, MN. Feb 2017.
44. "Printability, Pinch-off Dynamics and Extensional Rheology of Complex Fluids", AIChE Annual Meeting, San Francisco, CA. Nov 2016.
45. "Domain and Nanoridge Growth Dynamics in Stratifying, Micellar Freestanding Films",

Engineering Sciences and Applied Mathematics (ESAM), Northwestern University, Evanston, IL, Nov. 2016.

46. "Pinch-off Dynamics, Extensional Rheology and Printability of Complex Fluids", Notre Dame-Purdue Symposium on Polymers and Soft Matter, South Bend IN. Oct 2016.
47. "Printability, Pinch-off Dynamics and Extensional Rheology of Complex Fluids", Materials Science and Engineering, Purdue University, West Lafayette, IN. April 2016.
48. "Drainage and Stratification Kinetics of Foam Films", Chemical Engineering, Illinois Institute of Technology, Chicago, February 2016.
49. "Drainage and Stratification Kinetics of Foam Films", Physics, University of Illinois Chicago, February 2016.
50. "Printability, Pinch-off Dynamics and Extensional Rheology of Complex Fluids", Mechanical Engineering, University of Colorado - Boulder. September 2015.
51. "Drainage and Stratification Kinetics of Foam Films", Mechanical Engineering, University of Illinois at Urbana-Champaign, Oct 2014.
52. "Kinetics of Drainage and Stratification in Foam Films", Industrial Partnership for Research in Interfacial and Materials Engineering (I-PRIME), University of Minnesota, May 2014.
53. "Rheology and Fizzics of Protein-Surfactant Mixtures", Department of Biopharmaceutical Sciences, University of Illinois at Chicago, September 2013.

(Invited talks before 2012)

54. "Jetting of complex fluids: Associative polymers as rheology modifiers", Department of Mechanical Engineering, Tufts University, August 2012.
55. "To bounce or not to bounce: drop impact of complex fluids on textured surfaces," Squishy Physics, Harvard University, July 2012.
56. "Functional soft materials for jetting and spraying applications: associative polymers as rheology modifiers," Department of Chemical Engineering, University of Illinois, Chicago May 2012.
57. "Optics, dynamics, elasticity and self-assembly (ODES) of complex fluids and functional soft materials," Shiv Nadar University, Noida, India. April 2012.
58. "To bounce or not to bounce: drop impact of complex fluids on textured surfaces," Brown University, April 2012.
59. "Functional soft materials for jetting and spraying applications: associative polymers as rheology modifiers," Department of Chemical Engineering, Stanford University, March 2012.
60. "Designing complex fluids for jetting and spraying applications: associative polymers as rheology modifiers," Department of Chemical Engineering, California Institute of Technology, Pasadena, CA, Feb 2012.
61. "Functional soft materials for jetting and spraying applications: associative polymers as rheology modifiers," Department of Materials Science & Engineering, University of Illinois at

Urbana-Champaign, Feb 2012.

62. "Functional soft materials for jetting and spraying applications: associative polymers as rheology modifiers," Mechanical Engineering, Georgia Institute of Technology, Atlanta, GA, Feb 2012.
63. "Functional soft materials for jetting and spraying applications: associative polymers as rheology modifiers," Chemical Engineering, Rensselaer Polytechnique Institute, Troy, NY March 2012.
64. "Jetting, spraying and spinning complex fluids," AkzoNobel Slough, UK. Dec 2011
65. "Jetting, spraying and spinning complex fluids," Department of Textile Technology, Indian Institute of Technology Delhi, New Delhi, India. Dec 2011
66. "Jetting of complex fluids," Lilliputian Systems Inc, Wilmington, MA. Nov 2011.
67. "Drop impact dynamics of complex fluids on dry, textured surfaces," Physical Math, Massachusetts Institute of Technology, Cambridge, MA Fall 2011.
68. "Rheology of globular proteins: Apparent yield stress & interfacial viscoelasticity of bovine serum albumin solutions," ACS Meeting, Denver, CO 2011.
69. "Capillary break-up during jetting of weakly viscoelastic fluids," Nanotech Conference and Expo 2011, Boston 2011.
70. "Life and death of a weakly viscoelastic jet: from fluid mechanics to rheometry," Chemical Engineering, Johns Hopkins University, Baltimore, MD Spring & Fall 2011.
71. "Life and death of a weakly viscoelastic jet: from fluid mechanics to rheometry," Schlumberger Doll Research Center, Cambridge, MA 2011.
72. "Rheology of globular proteins: Apparent yield stress and interfacial viscoelasticity of bovine serum albumin solutions," MedImmune Inc, Gaithersburg, MD 2011.
73. "Rheology of globular proteins: Apparent yield stress and interfacial viscoelasticity of bovine serum albumin solutions," National Institute of Standards in Technology (NIST), Gaithersburg, MD 2011.
74. "Life and death of a weakly viscoelastic jet: from fluid mechanics to rheometry," Physical Math, Massachusetts Institute of Technology, Cambridge, MA Spring 2011.
75. "Life and death of a weakly viscoelastic jet: from fluid mechanics to rheometry," Chemical Engineering, University of Massachusetts, Amherst, MA 2011.
76. "Soft Matter ODES: From life and death of a weakly viscoelastic jet to the structured color of jeweled beetles," Physics, Georgia Institute of Technology, Atlanta, GA. 2011
77. "Soft Matter ODES: From life and death of a weakly viscoelastic jet to the structured color of jeweled beetles," Harvard Squishy Physics. 2010
78. "Spraying of Complex Fluids: Structural Color and Capillary Break- up," Procter and Gamble (P&G), Darmstadt, Germany. 2010.

Literary Publications and Awards

- Book: "Saga of a Crumpled Piece of Paper" (63 Poems) Writers Workshop, Calcutta, 2009.
- Journals: (English >60 published) Poetry; The Cortland Review; Atlanta Review; Bateau; Lumina, Mythium; Muse India; Reading Hour; Breakwater Review; Nefarious Bellarina; The Ghazal Page, Nilab, Contempoary Ghazals, Terminus, The Indian Review, etc.
- Nominated for Pushcart Prize in poetry, 2008.
- Shortlisted for the Muse India Young Writer Award 2011 for my first poetry collection (among the seven finalists).