Andrew Peters

Assistant Professor, Chemical Engineering
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EDUCATION

Georgia Institute of Technology *August 2015*
Ph.D. Chemical and Biomolecular Engineering

- Advisor: Clifford L. Henderson
- Thesis topic: Mesoscale simulation of diblock copolymer phase separation and directed self-assembly processes for semiconductor manufacturing.

University of Maryland *May 2010*
B.S. Chemical Engineering; Philosophy Minor

- Advisor: Michael Zachariah
- Research Topic: Propagation velocities of thermite reactions using aluminum nanoparticles.

APPOINTMENTS

Assistant Professor *September 2017 -*
Louisiana Tech University
Department of Chemical Engineering
Research in polymers, block polymers, experiment and simulation.

Postdoctoral Research Associate *2015-2017*
University of Minnesota
Department of Chemistry
Advisor: Timothy P. Lodge
Dynamics of Block copolymer micelles using rheology, x-ray scattering, NMR, and simulation.

PUBLICATIONS

1. Nduka D. Ogbonna, Michael Dearman, Bhuvnesh Bharti, **Andrew J. Peters**, and Jimmy Lawrence "Elucidating the impact of side chain dispersity on the assembly of bottlebrush polymers at the air-water interface" Journal of Polymer Science, 1 (2021).

2. Cheng Yan, Xiaming Feng, Collin Wick, **Andrew J. Peters**, and Guoqiang Li "Machine learning assisted discovery of new thermoset shape memory polymers based on a small training dataset" Polymer, 214, 123351 (2021).

3. Collin Wick, **Andrew J. Peters**, and Guoqiang Li "Molecular Dynamics Simulation of Bisphenyl-A Diglycidyl Ether Cured by Isophorone Diamine" Polymer, 213, 123319 (2021).

4. S.M. Islam Ovy, Joshua Obinwa, and **Andrew J. Peters** "The Effect of Graft Density on the Ordering of Block Copolymer Grafted Nanoparticles" Macromolecules, 53, 10655-10663 (2020).

5. Iman Ahmadian and **Andrew J. Peters** "Phase Behavior of AB/CD Diblock Copolymer Blends via Coarse-Grained Simulation" Soft Matter, 16, 3069-3081 (2020).

6. **Andrew J. Peters** "Implementation and Optimization of Protracted Colored Noise Dynamics to Block Copolymer Grafted Nanoparticles" Comp. Mater. Sci., 167, 248-256 (2019).

7. **Andrew J. Peters**, Benjamin D. Nation, Daniel Nicoloso, Peter J. Ludovice, Clifford L. Henderson, "Protracted Colored Noise Dynamics in Molecular Dynamics Simulations of Block Copolymers" Macromol. Theory Simul., 1700062 (2018).

8. Benjamin D. Nation, **Andrew J. Peters**, Richard A. Lawson, Peter J. Ludovice, Clifford L. Henderson. "Effect of chemoepitaxial guiding underlayer design on the pattern quality and shape of aligned lamellae for fabrication of line-space patterns" J. Micro-Nanolith. Mem., 16, 043502 (2017).

9. **Andrew J. Peters**, Timothy P. Lodge, "Chain Exchange Kinetics of Symmetric and Asymmetric BAB and ABB' Triblock Polymers" Macromolecules, 50, 3303-3130 (2017).

10. **Andrew J. Peters**, Timothy P. Lodge, "Comparison of Gel Relaxation Times and End-block Pullout Times in ABA Triblock Copolymer Networks" Macromolecules, 49, 7340-7349 (2016).

11. **Andrew J. Peters**, Richard A. Lawson, Benjamin D. Nation, Peter J. Ludovice, Clifford L. Henderson, "Calculations of the free energy of dislocation defects in lamellae forming diblock copolymers using thermodynamic integration" J. Micro-Nanolith. Mem. 15, 023505 (2016). (**Featured Article**)

12. **Andrew J. Peters**, Richard A. Lawson, Benjamin D. Nation, Peter J. Ludovice, Clifford L. Henderson, "Coarse-grained molecular dynamics modeling of the kinetics of lamellar block copolymer defect annealing" J. Micro-Nanolith. Mem. 15, 013508 (2016). (**Cover Article**)

13. **Andrew J. Peters**, Richard A. Lawson, Benjamin D. Nation, Peter J. Ludovice, Clifford L. Henderson, "Simulation study of the effect of molar mass dispersity on domain interfacial roughness in lamellae forming block copolymers for directed self-assembly" Nanotechnology, 26, 385301 (2015).

14. **Andrew J. Peters**, Benjamin D. Nation, Richard. A. Lawson, Peter J. Ludovice, Clifford L. Henderson, "Free energy difference of pitch variation and calculation of the order–disorder transition in block copolymer systems using thermodynamic integration" Mat. Res. Express, 2, 075301 (2015).

15. Richard Lawson, **Andrew Peters**, Benjamin Nation, Peter Ludovice, Clifford Henderson, "Simulation study of the effect of differences in block energy and density on the self-assembly of block copolymers" J. Micro-Nanolith. Mem., 13, 031308, (2014).

16. **Andrew J. Peters**, Richard A. Lawson, Peter J. Ludovice, Clifford L. Henderson, "Detailed molecular dynamics studies of block copolymer directed self-assembly: Effect of guiding layer properties" J. Vac. Sci. Technol. B, 31, 06F302, (2013).

INVITED RESEARCH TALKS

1. "Nanopattering with block copolymers" Andrew J. Peters, *IfM Nanoseminar*, Louisiana Tech University, January 2021.
2. "Nanoscale Arrangement of Metal Nanoparticles via Grafted Block-Copolymers" Andre J. Peters, *CIMM Technical Meeting 2019*, Baton Rouge, LA, March 2019.
3. "Advanced Sampling of High Energy Barriers in Block Copolymers and Block Copolymer Grafted Nanoparticles: Protracted Colored Noise Dynamics" Andrew J. Peters, *Macromolecular Seminar*, Louisiana State University, March 2019.
4. "Advanced Sampling of Higher Energy Barrier Systems: Protracted Colored Noise Dynamics applied to Polymers and Nanocomposites" Andrew J. Peters, *Computational Chemistry Meeting*, ERDC Vicksburg, MS, August 2018.
5. "Block Copolymers and Nanoscale Order Fundamentals and Applications" Andrew J. Peters, *Molecular Sciences and Nanotechnology Seminar*, Louisiana Tech University, April 2018.

6. "Nanoscale Ordered Soft Matter: Advanced Simulations Supplemented by Experiment" Andrew J. Peters, *Department of Chemical Engineering and Materials Science Seminar*, Michigan State University, March 2017.
7. "Nanoscale Ordered Soft Matter: Advanced Simulations Supplemented by Experiment" Andrew J. Peters, *College of Engineering and Science Seminar*, Louisiana Tech University, February 2017.
8. "Molecular Dynamics Simulations of Block Copolymer Directed Self-Assembly Defects : Free energy, Kinetics, and Advanced Sampling Techniques" Andrew J. Peters, *Kumar Research Lab Seminar*, Columbia University, January 2015.
9. "Material Considerations in Designing a Low-Defectivity Block Copolymer Directed Self Assembly Process" Andrew J. Peters, *University of Minnesota Polymer Group Seminar*, University of Minnesota, December 2014.

CONTRIBUTED RESEARCH PRESENTATIONS

1. "Precise Ordering of Block Copolymer Grafted Nanoparticles: Coarse-Grained Simulations" S.M. Islam Ovy, Andrew J. Peters. *American Institute of Chemical Engineers Annual Conference 2020*, Online, November 2020.
2. "Protracted colored noise dynamics in polymer simulation." S.M. Islam Ovy, Andrew J. Peters. *Applied Polymer Technology Extension Consortium Annual Meeting*, Baton Rouge, LA, November 2019.
3. "Protracted colored noise dynamics in polymer simulation." Andrew J. Peters, Benjaming D. Nation, Clifford L. Henderson, Peter J. Ludovice. *American Chemical Society National Meeting*, San Diego, CA, August 2019.
4. "Simulation of structure/property relationships in block copolymer photoresists for directed self-assembly." A. Peters, B. Nation, C. Breaux, J. Delony, C. Henderson, P.J. Ludovice. *American Chemical Society National Meeting*, San Diego, CA, August 2019.
5. "Phase Behavior of AB/CD Diblock Copolymer Blends Via Coarse-Gained Simulations" Iman Ahmadian, Andrew J Peters. *American Institute of Chemical Engineers Annual Conference 2018*, Pittsburgh, PA, November 2018.
6. "Accessing Phase Behavior of Block Copolymer Grafted Nanoparticles Using Coarse-Grained Simulations and Protracted Colored Noise Dynamics" Andrew J. Peters. *American Institute of Chemical Engineers Annual Conference 2018*, Pittsburgh, PA, November 2018.
7. "Molecular Simulation of Micellar Chain Exchange Kinetics of Asymmetric B_1AB_2 Linear Triblock and AB_1B_2 Branched Triblock Copolymers" Andrew J. Peters, Timothy P. Lodge. *American Institute of Chemical Engineers Annual Conference 2018*, Pittsburgh, PA, November 2018.
8. "Applying Protracted Colored Noise Dynamics to Dramatically Increase the Simulation Efficiency of Linear Polymer Systems" Andrew J. Peters, Benjamin D. Nation, Daniel Nicoloso, Peter J. Ludovice, Clifford L. Henderson. *American Institute of Chemical Engineers Annual Conference 2018*, Pittsburgh, PA, November 2018.
9. "Rapid End-Block Pullout in ABA Triblock Polymer Gels" Andrew J. Peters, Timothy P. Lodge. *American Institute of Chemical Engineers Annual Conference 2016*, San Francisco, CA, November 2016.
10. "Using rheology to study the relaxation times and chain exchange kinetics in an ABA triblock polymer gel" Andrew J. Peters, Timothy P. Lodge. *IPRIME Annual Meeting 2016*, Minneapolis, MN, May 2016.
11. "Rheology and Relaxation Timescales of an ABA Triblock Polymer Gel" Andrew J. Peters, Timothy P. Lodge. *American Physical Society March Meeting 2016*, Baltimore, MD, March 2016.
12. "Protracted Colored Noise Dynamics for Polymer Systems" Andrew J. Peters, Benjamin D. Nation, Peter J. Ludovice, Clifford L. Henderson. *American Institute of Chemical Engineers Annual Conference 2014*, Atlanta, GA, November, 2014.
13. "Free Energy of Defects in Aligned Block Copolymer Systems Via Thermodynamic Integration of

a Coarse Grained Block-Copolymer Model" Andrew J. Peters, Benjamin D. Nation, Richard Lawson, Peter J. Ludovice, Clifford L. Henderson. *American Institute of Chemical Engineers Annual Conference 2014*, Atlanta, GA, November, 2014.

14. "Understanding Defect Annealing Kinetics in Self-Assembled Block Copolymers Using a Coarse Grained Block-Copolymer Model"Andrew J. Peters, Benjamin D. Nation, Richard Lawson, Peter J. Ludovice, Clifford L. Henderson. *American Institute of Chemical Engineers Annual Conference 2014*, Atlanta, GA, November, 2014.
15. "Mesoscale Molecular Dynamics Simulations and Their Application to Understanding Block Copolymer Self-Assembly" Andrew J. Peters, Benjamin D. Nation, Richard Lawson, Peter J. Ludovice, Clifford L. Henderson. *Colloid & Soft Matter Bag Lunch Seminar Series at Georgia Tech*, April 2014.
16. "Self Assembling Systems for Semiconductor Fabrication" Andrew J. Peters, Benjamin D. Nation, Richard Lawson, Peter J. Ludovice, Clifford L. Henderson. *Foresight Technical Conference: Integration*, Palo Alto, CA, February 2014.
17. "Diblock Copolymer Directed Self-Assembly Line Roughness: Effects of Polydispersity and χN" Andrew J. Peters, Richard Lawson, Peter J. Ludovice, Clifford L. Henderson. *American Institute of Chemical Engineers Annual Conference 2013*, San Francisco, CA, November 2013.
18. "Detailed Molecular Dynamics Studies of Block Copolymer Directed Self-Assembly: Effect of Guiding Layer Properties" Andrew J. Peters, Richard Lawson, Peter J. Ludovice, Clifford L. Henderson. *Conference on Electron, Ion, and Photon Beam Technology and Nanofabrication 2013*, Nashville, TN, May 2013.
19. "Free Energy of Block Copolymer Systems Via Thermodynamic Integration of a Mesoscale Block-Copolymer Model" Andrew J. Peters, Richard Lawson, Peter J. Ludovice, Clifford L. Henderson. *American Institute of Chemical Engineers Annual Conference 2013*, San Francisco, CA, November 2013.
20. "Topographic Effects On Chemo-Epitaxy in Directed Self-Assembly of Block Copolymer Films" Andrew J. Peters, Richard Lawson, Peter J. Ludovice, Clifford L. Henderson. *American Institute of Chemical Engineers Annual Conference 2013*, San Francisco, CA, November 2013.
21. "Coarse Grained Molecular Dynamics Model of Block Copolymer Directed Self-Assembly" Richard Lawson, Andrew J. Peters Peter J. Ludovice, Clifford L. Henderson. *American Institute of Chemical Engineers Annual Conference 2013: Modeling and Simulation of Polymers* , San Francisco, CA. November 2013.
22. "Tuning the Domain Size of Block Copolymers for Directed Self-Assembly Using Polymer Blending." Richard Lawson, Andrew J. Peters Peter J. Ludovice, Clifford L. Henderson. *American Institute of Chemical Engineers Annual Conference 2013*, San Francisco, CA, November 2013.
23. "Fabrication of Complex Nanostructures using Directed Self Assembly of Block Copolymers" Andrew J. Peters, Richard Lawson, Nathan Jarnigan, Clifford L. Henderson. *Georgia Tech Center for Organic Photonic and Electronics Industry Partners' Day*, Atlanta, GA, April 2013.
24. "Simulation of Diblock Copolymer Directed Self Assembly Processes: Applications for Semiconductor Manufacturing" Andrew J. Peters, Richard Lawson, Peter J. Ludovice, Clifford L. Henderson, *Georgia Tech Chemical and Biomolecular Engineering Graduate Research Symposium*, Atlanta, GA, March 2013.
25. "Investigation of High χ Block Copolymer PS-b-PHOST: Sub 20 nm Patterning, Directed Self Assembly, and Selective Block Removal" Nathan Jarnigan, Wei-Ming Yeh, Andrew J. Peters, Clifford L. Henderson, *Georgia Tech Chemical and Biomolecular Engineering Graduate Research Symposium*, Atlanta, GA, March 2013.
26. "Nanolithography Based on the Directed Self-Assembly of Block Copolymers: Using Molecular Dynamics Simulations as a Predictive Learning Tool" Andrew J. Peters, Richard Lawson, Peter J. Ludovice, Clifford L. Henderson, *Colloid & Soft Matter Bag Lunch Seminar Series at Georgia Tech*, Atlanta, GA, January 2013.

27. "Molecular dynamics simulations of block copolymer directed self-assembly: Understanding the limits and guiding materials design" Clifford L. Henderson, Richard Lawson, Andrew Peters. Peter J. Ludovice. *2012 Litho Workshop*. June 2012.
28. "Detailed Mesoscale Molecular Dynamics Simulation of Block Copolymer Phase Separation: Probing the Fundamentals of Directed Self-Assembly Processes" Andrew J. Peters, Richard Lawson, Peter J. Ludovice, Clifford L. Henderson, *American Institute of Chemical Engineers Annual Conference 2012*, Pittsburgh, PA, November 2012.
29. "Fundamentals of Diblock Copolymer Phase Separation and Directed Self-Assembly Processes: Detailed Analysis of Lamellae Formation" Andrew J. Peters, Richard Lawson, Peter J. Ludovice, Clifford L. Henderson, *American Institute of Chemical Engineers Annual Conference 2012*, Pittsburgh, PA, November 2012.
30. "Investigation of High χ Block Copolymers for Directed Self-Assembly: Selective Block Removal of PS-b-PHOST Patterns Via Selective ALD and Etch" Nathan Jarnagin, Wei-Ming Yeh, Andrew Peters, Richard Lawson, Jing Cheng, Laren M. Tolbert, Clifford Henderson, *American Institute of Chemical Engineers Annual Conference 2012*, Pittsburgh, PA, November 2012.
31. "Poly(styrene)-*b*-Poly(acrylic acid) Block Copolymers: Phase Separation Behavior and Directed Self Assembly" Jing Cheng, Richard Lawson, Wei-Ming Yeh, Nathan Jarnagin, Andrew Peters, Laren M. Tolbert, Clifford Henderson, *American Institute of Chemical Engineers Annual Conference 2012*, Pittsburgh, PA, November 2012.
32. "Detailed mesoscale dynamic simulation of block copolymer directed self-assembly processes: application of protracted colored noise dynamics" Andrew J. Peters, Richard Lawson, Peter J. Ludovice, Clifford Henderson, *Georgia Tech Research and Innovation Conference*, Atlanta, GA, February 2012.
33. "Directed Self-Assembly for sub-20 nm Pitch Patterning: Uncovering the Fundamentals and Developing Materials and Methods for High Resolution Patterning" Clifford Henderson, Laren M. Tolbert, Andrew Peters, Richard Lawson, Jing Cheng, Weh-Ming-Yeh. SEMATECH 2011 Symposium on Lithography Extension, Miami, FL, November 2011.

CONFERENCE PROCEEDINGS

1. Andrew J. Peters, Richard A. Lawson, Benjamin D. Nation, Peter J. Ludovice and Clifford L. Henderson, "Coarse-grained molecular dynamics modeling of the kinetics of lamellar BCP defect annealing" Proc. SPIE, 9423, 94231Y, (2015).
2. Richard A. Lawson, Andrew J. Peters, Benjamin D. Nation, Peter J. Ludovice and Clifford L. Henderson, "Effect of χN and underlayer composition on self-assembly of thin films of block copolymers with energy asymmetric block" Proc. SPIE, 9423, 94231L, (2015).
3. Benjamin D. Nation, Andrew J. Peters, Richard A. Lawson, Peter J. Ludovice and Clifford L. Henderson, "Effect of chemoepitaxial guiding underlayer design on the pattern quality and shape of aligned lamellae for fabrication of line-space patterns" Proc. SPIE, 9423, 94231J, (2015).
4. Andrew J. Peters, Richard Lawson, Benjamin D. Nation, Peter J. Ludovice, Clifford L. Henderson, "Understanding defects in DSA: Calculation of free energies of block copolymer DSA systems via thermodynamic integration of a mesoscale block-copolymer model" Proc. SPIE, 9049, 90492E, (2014).
5. Benjamin Nation, Andrew J. Peters, Richard A. Lawson, Peter J. Ludovice, Clifford L. Henderson, "Effect of guiding layer topography on chemoepitaxially directed self-assembly of block copolymers for pattern density multiplication" Proc. SPIE, 9049, 90492K, (2014).
6. Benjamin Nation, Andrew J. Peters, Richard A. Lawson, Peter J. Ludovice, Clifford L. Henderson, "Predicting process windows for pattern density multiplication using block copolymer directed self-assembly in conjunction with chemoepitaxial guiding layers" Proc. SPIE, 9049, 90491C, (2014).
7. Richard A. Lawson, Andrew J. Peters, Benjamin Nation, Peter J. Ludovice, Clifford L. Henderson, "Simulation study of the effect of differences in block energy and density on the self-assembly of block copolymers" 9049, 90490S, (2014).

8. Andrew J. Peters, Richard Lawson, Peter J. Ludovice, Clifford L. Henderson, "Effects of block copolymer polydispersity and χN on pattern line edge roughness and line width roughness from directed self-assembly of diblock copolymers" Proc. SPIE, 8680, 868020, (2013).
9. Richard A. Lawson, Andrew J. Peters, Peter Ludovice, Clifford L. Henderson, "Tuning the domain size of block copolymers for directed self assembly using polymer blending: molecular dynamics simulation studies" Proc. SPIE, 8680, 86801Z, (2013).
10. Richard A. Lawson, Andrew J. Peters, Peter Ludovice, Clifford L. Henderson, "Coarse grained molecular dynamics model of block copolymer directed self-assembly" Proc. SPIE, 8680, 86801Y, (2013).
11. Nathan D. Jarnagin, Wei-Ming Yeh, Jing Cheng, Andrew J. Peters, Richard A. Lawson, Laren M. Tolbert, Clifford L. Henderson, "PS-b-PHOST as a high χ block copolymer for directed self-assembly: Properties, DSA, and novel methods for selective bock removal " Proc. SPIE, 8680, 86801X, (2013).
12. Andrew J. Peters, Richard Lawson, Peter J. Ludovice, Clifford L. Henderson, "Detailed mesoscale dynamic simulation of block copolymer directed self-assembly processes: application of protracted colored noise dynamics," Proc. SPIE, 8323, 83231T, (2012).
13. Nathan D. Jarnagin, Jing Cheng, Andrew J. Peters, Wei-Ming Yeh, Richard A. Lawson, Laren M. Tolbert, Clifford L. Henderson, "Investigation of highχ; block copolymers for directed self-assmebly: synthesis and characterization of PS-b-PHOST," Proc. SPIE, 8323, 832310, (2012).
14. Jing Cheng , Richard A. Lawson , Wei-Ming Yeh , Nathan D. Jarnagin ,Andrew J. Peters , Laren M. Tolbert , Clifford L. Henderson, "Directed self-assmebly of poly(styrene)-block-poly(acrylic acid) copolymers for sub-20nm pitch patterning," Proc. SPIE, 8323, 83232R, (2012).

AWARDS and HONORS

- Cover Art Journal of Micro/Nanolithography, MEMS, and MOEMS *2016*
- Featured Article Journal of Micro/Nanolithography, MEMS, and MOEMS *2016*
- Georgia Tech Research and Innovation Conference Fellowship *2012*
- Best Paper at International Symposium on Lithography Extensions *2011*

GRANTS

Grants Obtained

1. *Title:* Improving the compatibility of waste plastic and asphalt binder via theoretically justified identification of compatible blends *Agency:* Federal Highway Administration *Award Number:* 693JJ320C000024 *Total Awarded:* $461,641 *Time Period:* 10/1/2020 - 9/30/2023.

2. *Title:* RII Track-1: Louisiana Materials Design Alliance (LAMDA) *Agency:* National Science Foundation: OIA EPSCoR Research Infrastructure *Award Number:* OIA-1946231 *Total Awarded:* $20,000,000 As a contributer, my share is $250,000 *Time Period:* 7/1/2020 - 6/30/2025.

3. *Title:* Precise Arrangement of Nanoparticles via Block Copolymer Grafts *Agency:* Louisiana Board of Regents *Award Numbe*r: LEQSF(2020-23)-RD-A-18 *Total Awarded:* $129,160 *Time Period:* 7/1/2020 - 6/30/2023.

4. *Title:* Improving Asphalt Binder Properties Using Recycled Plastics and Crosslinking Agents/Additives *Agency:* Louisiana Department of Transportation *Total Awarded:* $30,000 *Time Period:* 7/1/2020 - 6/30/2021.

5. *Title:* Enhancement of IfM Innovation via AFM Wet Cell Capabilities and Studies of Nanoscale Hydrogel Swelling *Agency:* Institute for Micromanufacturing (IfM) *Total Awarded:* $4,800 *Time Period:* 5/2/2019-4/31/2020.

6. *Title:* Coarse Grained Molecular Dynamics Simulations of Raster Solvent Annealing *Agency:* Louisiana

Space Grant Consortium (LaSPACE) *Total Awarded:* $6,000 *Time Period:* 9/1/2018 - 8/31/2019.

7. *Title:* Nanoscale Arrangement of Metal Nanoparticles via Grafted Block Copolymers for Improved Manufacturing Materials *Agency:* Subaward under Re- search Infrastructure Improvement (RII) Track-1, Award Number: OIA-1541079 *Total Awarded:* $10,000 *Time Period:* 6/1/2018 - 12/31/2019.

8. *Title:* Travel to the 2018 GSFC TIM *Agency:* Louisiana Space Consortium (LaSPACE) *Total Awarded:* 1,500 *Time Period:* 6/26/2018 - 6/28/2019.

9. *Title:* Protracted Colored Noise Dynamics for Polymer Systems *Agency:* NVIDIA *Total Awarded:* $1500 *Time Period:* One time equipment award, 9/2017.

TEACHING

CMEN 413: Unit Operations-Design III (Separations) *Fall 2017, Spring 2018, Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020, Fall 2021*
CMEN 213: Unit Operations-Design I (Fluids) *Spring 2021*
CMEN 432: Chemical Plant Design II *Winter 2017*
CMEN 435: Polymer Science and Engineering *Winter 2018, Spring 2020, Winter 2021*
MEEN 480 Capstone Design Project Advisor *Fall 2020-Spring 2021 Louisiana Tech University*

MPACT (Mentorship Program for Aspiring Chemistry Teachers) Mentee *2017*
University of Minnesota; Chemical Principles II

Teaching Fellow *2015*
Georgia Institute of Technology; Numerical Methods

Science Tutor for Underprivileged Students *2015*
Atlanta Georgia; Various Science Topics

Teaching Assistant *2012-2014*
Georgia Institute of Technology;
Chemical Process Control 2012, Unit Operations Laboratory 2013, Chemical Process Control 2014

PERSONNEL ADVISED

Graduate Students

Name	***Department***	***Degree***	***Period***
Azmain Akib Akash	Engineering (LaTech)	Ph.D.	9/2021 - Current
Anwar Shafe	Engineering (LaTech)	Ph.D.	3/2021 - Current
Aniruddha Chowdhury	Engineering (LaTech)	Ph.D.	9/2020 - Current
S.M. Islam Ovy	Engineering (LaTech)	Ph.D.	9/2018 - 7/2020
Iman Ahmadian	Engineering (LaTech)	Ph.D.	12/2017 - 8/2019
Joshua Obinwa	CMEN (LaTech)	M.S.	9/2017 - 3/2020

Undergraduate Students

Name	*Department*	*Degree*	*Period*
Dominique Anderson	CMEN (LaTech)	B.S.	9/2018 - 9/2019
Trevett Young	CMEN (LaTech)	B.S.	5/2018 - 5/2019
Brady Walker	CMEN (LaTech)	B.S.	5/2018 - 5/2019
Devin Savoy	CMEN (LaTech)	B.S.	9/2017 - 4/2018
Anirudh Raghavendran	CEMS (UMN)	B.S.	6/2016-06/2017
Daniel Nicoloso	ChBE (GT)	B.S.	5/2014-05/2015
Kevin Park	ChBE (GT)	B.S.	7/2014-05/2015
Alykhan Lalani	ChBE (GT)	B.S.	7/2014-05/2015
Austin Bailie	ChBE (GT)	B.S.	5/2012-05/2013

Postdoctoral Associates

Name	*Department*	*Period*
Pouria Nourian	Engineering (LaTech)	5/2021 - Current
Sumegha Godara	Engineering (LaTech)	3/2021 - Current

Committee Member for:

Name	*Department*	*Degree*	*Period*
Gabriel Zahm	Biomedical Engineering (LaTech)	M.S.	9/2017 - 08/2019
Ashique Akond	Engineering (LaTech)	Ph.D.	11/2018 - Current
Femi Alakija	Molecular Science and Nanotechnology (LaTech)	Ph.D.	11/2019 - Current
Sean Nations	Engineering (LaTech)	Ph.D.	3/2019 - Current

AWARDS TO STUDENTS MENTORED

Daniel Nicoloso Second place in the subdivision poster competition at the 2014 AICHE conference.

PROFESSIONAL SERVICE ACTIVITIES

Reviewer for:

Journals: Journal of the American Chemical Society, Physical Review Letters, Macromolecules, Polymer, Optical Engineering, Papers in Physics, Structural Chemistry, RSC Advances, Computational Materials Science

See more details at ORCID (https://orcid.org/0000-0001-5031-2828) and Publons (https://publons.com/researcher/3218421/andrew-peters/peer-review/)

Grants: NSF DMR Polymers Program

Competitions:

Louisiana Tech Undergraduate Symposium
AICHE Undergraduate Poster Competition
AICHE ChemE Car Competition
Georgia Tech Presidents Undergraduate Research Awards Reviewer

Member of:

American Physical Society (APS) *2015 - present*
American Institute of Chemical Engineers (AICHE) *2008 - present*
SPIE *2011 - 2015*

Outreach:

Ruston Farmer's Market Science Booth, *Summer 2019*

Workshops Attended:

Writing/Designing Winning NSF Proposals, Tulane University, *August 2017*
Felder and Brent: Effective Teaching: A Workshop, Louisiana Tech University, *February 2018*

Service to Academic Program:

• Advised 14 students in my first two years for coursework, scheduling, professional development, and career opportunities.

Other Services to Academic Program:

- Developed new Polymer Science and Engineering Course (CMEN 435)
- Developed MATLAB interactive models to demonstrate various phenomena in Polymer Science and Separation Science.
- Helped lead annual ChemE Camp held for incomding sophomores. (2020)

Service to Profession:

- Chair at National AICHE Conference 2021 for Polymer Thermodynamics and Self-Assembly session.

Service to College:

- Voting Member of the Institute for Micromanufacturing Executive Committee (2019-current).
- Started the Louisiana Tech Materials Modeling Group (2018) which met monthly to discuss topics relevant to materials modeling and present research.

Service to University:

- Member of Faculty Senate (2019-2022)

Service to Community:

- Ran science booth at Ruston Farmer's Market and developed demonstrations for K-12 students. *Summer 2019*
- Science Tutor for Underprivileged Students *2015*