

Soft Matter REU Presentations:

In total, Cleveland State's Soft Matter REU has produced **78+** presentations; including **20 presentations at 10 different National Conferences** (4 additional presentations were prepared and accepted for the 2020 APS March Meeting, but the meeting was cancelled due to the COVID-19 pandemic), **38 presentations at 7 different Regional Conferences**, and **20 presentations at 9 different Local Events**. The titles and locations of these presentations are listed below and sorted by year.

2017 cohort

The 14th Annual Northeast Ohio Undergraduate Research Symposium, Case Western Reserve University, Cleveland OH, Aug 3, 2017

1. "Fluid Flow Modeling in Single Screw Extruder Systems" [Avi M. Desai \(Rutgers University\)](#), Petru S. Fodor, Miron Kaufman (**talk**)
2. "Optimizing the Direct Visualization of HPC Microgels via Scanning Electron Microscopy", [Tony D. Dobrila \(CSU\)](#), Petru S. Fodor, Kiril A. Streletzky (**talk**)
3. "Using a Staggered Herringbone Microfluidic Mixer to Synthesize Gold Nanoparticles", [Jacqueline Matz \(Duquesne University\)](#), Chandra Kothapalli, Brian Hama
4. "Length Distribution of DNA-Wrapped Boron Nitride Nanotubes", [Johnathan E. Weicherding \(University of Wisconsin - River Falls\)](#), Geyou Ao
5. "Design and Synthesis of Elastin-Like Polypeptide Diblock Copolymers for Biomedical Applications", [Biaggio Uricoli \(Rowan University\)](#), Nolan B. Holland, Richard Schmidt
6. "Preparing Low-Density Collagen Hydrogels Using Elastin-Like Polypeptide Cross-linkers", [Zack Hogan \(Rutgers University\)](#), Nolan B. Holland
7. "Mapping Evanescent Wave Scattering from Anisotropic Particles for Total Internal Reflection Microscopy", [Theodore Markiewicz \(Rowan University\)](#), Christopher Wirth, Aidin Rashidi
8. "Studying the Transition of Polymeric Microgels with Light Scattering", [Samantha Hudson \(Hiram College\)](#), Kiril A. Streletzky

CSU's Undergraduate Summer Research Award (USRA) Poster Session, Cleveland State University, Cleveland OH, Sep 7, 2017

9. "Synthesis Optimization and Characterization of Polymeric Microgels", [Samantha Tietjen, Samantha Hudson](#), Kiril A Streletzky

Hiram College Undergraduate Research Poster Session, Hiram College, Hiram OH, Sep 26, 2017

10. "Studying the Volume Phase Transition of Polymeric Microgels", [Samantha Hudson*](#), Samantha Tietjen, Kiril Streletzky

CSU's Society of Physics Students (SPS) Research and Outreach Poster Session, Cleveland State University, Cleveland OH, Oct 4, 2017

11. "Design and Synthesis of Elastin-Like Polypeptide Diblock Copolymers for Biomedical Applications", [Biaggio Uricoli \(Rowan University\)](#), Nolan B. Holland, Richard Schmidt
12. "Mapping Evanescent Wave Scattering from Anisotropic Particles for Total Internal Reflection Microscopy", [Theodore Markiewicz \(Rowan University\)](#), Christopher Wirth, Aidin Rashidi
13. "Studying the Volume Phase Transition of Polymeric Microgels", [Samantha Hudson*](#), Samantha Tietjen, Kiril Streletzky
14. "Synthesis Optimization and Characterization of Polymeric Microgels", [Samantha Tietjen](#), [Samantha Hudson](#), Kiril A Streletzky
15. "Optimizing the Direct Visualization of Microgels via Scanning Electron Microscopy", [Tony Dobrila*](#), Kiril Streletzky, Petru Fodor

The Council on Undergraduate Research (CUR) REU Symposium, Washington DC, Oct 22-23, 2017

16. "Optimizing the Direct Visualization of Microgels via Scanning Electron Microscopy", [Tony Dobrila*](#), Kiril Streletzky, Petru Fodor

2017 Washkewicz College of Engineering Research Day, Cleveland OH, Oct 27, 2017

17. "Total Internal Reflection Microscopy of Anisotropic Particles: Simulations and Evanescent Wave Mapping", [Aidin Rashidi](#), Payton Lewis, Theodore J. Markiewicz*, Christopher L. Wirth

2018 APS Conference for Undergraduate Women in Physics at University of Toledo, Toledo OH, Jan 12-14, 2018

18. "Using a Staggered Herringbone Microfluidic Mixer to Synthesize Gold Nanoparticles", [Jacqueline Matz \(Duquesne University\)](#), Chandra Kothapalli, Brian Hama
19. "Studying the Volume Phase Transition of Polymeric Microgels", [Samantha Hudson*](#), Samantha Tietjen, Kiril Streletzky
20. "Synthesis Optimization and Characterization of Polymeric Microgels", [Samantha Tietjen*](#), [Samantha Hudson](#), Kiril Streletzky

2018 APS March Meeting, Los Angeles CA, Mar 5-9, 2018

21. "Optimizing the Direct Visualization of Microgels via Scanning Electron Microscopy", [Tony Dobrila*](#), Kiril A. Streletzky, Petru Fodor

22. "Studying the Volume Phase Transition of Polymeric Microgels", [Samantha Hudson*](#), Samantha Tietjen, Kiril A. Strelitzky
23. "Synthesis Optimization and Characterization of Polymeric Microgels", Samantha Tietjen*, [Samantha Hudson](#), Kiril A. Strelitzky
24. "Light Scattering Study of the Size and Shape of Mixed Elastin-Like Polypeptide Micelles", Ilona Tsuper*, Daniel Terrano, Adam M. Maraschky, [Biaggio Uricoli](#), Nolan B. Holland, Kiril A. Strelitzky

2018 ANS Student Conference, Gainesville FL, Apr 4-7, 2018

25. "Length Distribution of DNA-Wrapped Boron Nitride Nanotubes", [Johnathan E. Weicherding](#), Geyou Ao

2018 College of Science and Health Professions Research Day, Cleveland State University, Cleveland OH, Apr 6, 2018

26. "Synthesis Optimization and Characterization of Polymeric Microgels", Samantha Tietjen*, Samantha Hudson, Kiril Strelitzky
27. "Optimizing the Direct Visualization of Microgels via Scanning Electron Microscopy", Tony Dobrila*, Kiril Strelitzky, Petru Fodor

2018 cohort

The 15th Annual Northeast Ohio Undergraduate Research Symposium Aug 2, 2018, Kent State University, Kent OH

28. "Towards Understanding Microgel Volume Phase Transitions", [Jacob Adamczyk](#), Kiril Strelitzky
29. "Optimization of Serpentine Micromixers with Non-Rectangular Cross-Sections" [Joshua Clark](#), Petru Fodor, Chandrasekhar Kothapalli
30. "Evanescence Wave Scattering Morphology from Polymer Ellipsoids" [Kenneth W. Gregg](#), Christopher Wirth, Aidin Rashidi
31. "Self-Assembly of Organic Molecules on Gold Surfaces", [Abigail Hickin](#), Jessica Bickel
32. "Protein-based Drug Delivery Nanoparticles", [Ty Naquin](#), Kiril Strelitzky, Nolan Holland
33. "Self-Assembly of Pentacene on Highly Ordered Pyrolytic Graphite", [Troy Nemeth](#), Jessica Bickel
34. "Rheological Characterization of Aqueous Dispersions of Boron Nitride Nanotubes Stabilized by DNA", [Sofia Panomitros](#), Geyou Ao, Venkateswara Kode
35. "Analysis of Pulsatile Flow through an Elastic Tube using Computational Methods", [Niksa Praljak](#), Andrew Resnick
36. "The Effects of Chemical Crosslinker on Polymeric Microgels", [Samantha Tietjen](#), [Jacob Adamczyk](#), Kiril Strelitzky
37. "Tracking the dispersion morphology of DNA-wrapped boron nitride nanotubes by microscopy", [Michael Thompson](#), Geyou Ao, Venkateswara Kode

CSU's Undergraduate Summer Research Award (USRA) Poster Session,

Cleveland State University, Cleveland OH, Sep 6, 2018

38. "Phase Transitions in Polymeric Gels Induced by Crosslinking Entropy", Jacob Adamczyk, Miron Kaufman, Kiril A. Streletzky
39. "The Effects of Chemical Crosslinker on Polymeric Microgels", Samantha Tietjen, Jacob Adamczyk, Kiril Streletzky

OSAPS Meeting, The University of Toledo, Toledo OH, Sep 28, 2018

40. "Flow Modeling in Long Surface Patterned Micromixers Using Division in Multiple Geometrical Subunits", Petru S. Fodor, Joshua Clark
41. "Self-Assembly of Organic Molecules on Gold Surfaces", Abigail Hickin, Jessica Bickel
42. "The Effects of Chemical Crosslinker on Polymeric Microgels", Samantha Tietjen, Jacob Adamczyk, Kiril Streletzky

Annual Meeting of the Ohio Physiological Society, Cincinnati OH, Sep 28, 2018

43. "Analysis of Pulsatile Flow through an Elastic Tube using Computational Methods", Niksa Praljak, Andrew Resnick

2018 COMSOL Conference, Boston MA, Oct 2, 2018

44. "Flow Modeling in Long Surface Patterned Micromixers Using Division in Multiple Geometrical Subunits", Petru S. Fodor, [Joshua Clark](#)

2018 Washkewicz College of Engineering Research Day, Cleveland OH, Oct 19, 2018

45. "Aqueous dispersion and self-assembly of DNA wrapped boron-nitride nanotubes", Venkateswara R. Kode, [Michael Thompson](#), [Sofia Panomitros](#), Geyou Ao

2018 AIChE Annual Meeting, Pittsburgh PA, Oct 28-Nov 2, 2018

46. "Characterization of the aqueous dispersion of boron nitride nanotubes stabilized by DNA", Venkateswara R. Kode, Camerin McDonald, [John Weicherding](#), [Tony Dobrila](#), Petru S. Fodor, Christopher L. Wirth, Geyou Ao
47. "Characterizing the aqueous dispersion of DNA-assisted boron nitride nanotubes", Venkateswara R. Kode, Camerin McDonald, [John Weicherding](#), [Tony Dobrila](#), Petru S. Fodor, Christopher L. Wirth, Geyou Ao

2019 APS March Meeting, Oct 2, 2018 Boston MA, Mar 4-8, 2019

48. "Towards Optimizing Synthesis Temperature for Microgels with Large Degree of Deswelling", Krista G. Freeman, [Jacob Adamczyk](#), Kiril A. Streletzky
49. "The dynamics of polymeric microgels with varying crosslinker concentration", [Samantha Tietjen](#), [Jacob Adamczyk](#), Dr. Kiril A Streletzky
50. "Phase Transitions in Polymeric Gels Induced by Crosslinking Entropy", [Jacob Adamczyk](#), Miron Kaufman, Kiril A. Streletzky
51. "Protein-Based Drug Delivery Nanoparticles", [Ty Naquin](#), Kiril A. Streletzky, Nolan B. Holland
52. "Optimization of Serpentine Micromixers with Non-Rectangular Cross-Sections", [Joshua Clark](#), Petru S. Fodor, Chandrasekhar Kothapalli

53. “Pulsatile Flow Through Multi-Coupled Idealized Renal Tubules: Fluid-Structure Interaction and Dynamics Pathologies”, [Niksa Praljak](#), Andrew Resnick

**2019 College of Science and Health Professions Research Day,
Cleveland State University, Cleveland OH, Apr 26, 2019**

54. “The dynamics of polymeric microgels with varying crosslinker concentration”, Samantha Tietjen, Jacob Adamczyk, Dr. Kiril A Streletzky
55. “Phase Transitions in Polymeric Gels Induced by Crosslinking Entropy”, Jacob Adamczyk, Miron Kaufman, Kiril A. Streletzky
56. “Optimization of Serpentine Micromixers with Non-Rectangular Cross-Sections”, Joshua Clark, Petru S. Fodor, Chandrasekhar Kothapalli
57. “Pulsatile Flow Through Multi-Coupled Idealized Renal Tubules: Fluid-Structure Interaction and Dynamics Pathologies”, [Niksa Praljak](#), Andrew Resnick
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2019 cohort

The 16th Annual Northeast Ohio Undergraduate Research Symposium, Cleveland State University, Cleveland OH, Aug 2, 2019

58. “Microfluidic Synthesis and Characterization of Lead Iodide Perovskite Nanoplatelets”, [Quinton Wright](#), Chandra Kothapalli, Geyou Ao, Petru S. Fodor (**talk and poster**)
59. “Optical Trapping to Investigate Cilia Mechanics”, [Jacob Duckworth](#), Andrew Resnick (**talk and poster**)
60. “Achieving Flat Gold Surfaces for the Organization of Organic Molecules” [Jacob Martin](#), Jessica E. Bickel
61. “Pentacene Thin Film Growth” [Bradley Lockhart](#), Jessica E. Bickel
62. “Synthesis of Gold Nanoparticles Using Microfluidic Mixers”, [Benjamin Bosela](#), Alexa Roberts, Chandra Kothapalli, Petru S. Fodor
63. “Evanescent Wave Scattering as A Versatile Technique for Characterizing Anisotropic Particle Dynamics Under Complex Fields”, [Peter Howard](#), Chris Wirth, Jiarui Yan
64. “Characterizing Gegenees, a Thermoreversible ELP-based Star Polymer” [Mario Alberto](#), Kiril A. Streletzky, Nolan B. Holland
65. “Direct measurement of deposition of synthetic and biological colloids”, [Tyler Leibengood](#), Christopher Wirth
66. “Optimization of Hydroxypropyl Cellulose (HPC) Microgel Imaging and Characterization Using Scanning Electron Microscopy (SEM)”, [Samantha Tietjen](#), Kiril A. Streletzky, Petru S. Fodor

OSAPS Meeting, Kettering University, Kettering MI, Sep 28, 2019

67. “Direct measurement of deposition of synthetic and biological colloids”, [Tyler Leibengood](#), Christopher Wirth
68. “Achieving Flat Gold Surfaces for the Organization of Organic Molecules” [Jacob Martin](#), Jessica E. Bickel
69. “Pentacene Thin Film Growth” [Bradley Lockhart](#), Jessica E. Bickel

70. "Synthesis of Gold Nanoparticles Using Microfluidic Mixers", [Benjamin Bosela](#), Alexa Roberts, Chandra Kothapalli, Petru S. Fodor

**Materials Science and Technology Technical Meeting and Exhibition,
Portland OR, Sep 29-Oct 3, 2019**

71. "Microfluidic Synthesis and Characterization of Lead Iodide Perovskite Nanoplatelets", [Quinton Wright](#), Chandra Kothapalli, Geyou Ao, Petru S. Fodor

**4th Bioengineering & Translational Medicine Conference, Duke University,
Durham NC, Oct 7-8, 2019**

72. "Thermally Induced Aggregation Behavior of a Six-Armed ELP Star Polymer", [Mario Alberto](#), Kiril A. Streletzky, Nolan Holland

**CSU's Joint Meeting of the Society of Physics Students (SPS) and Choose Ohio
First cohort, Cleveland State University, Cleveland OH, Nov 7, 2019**

73. "Thermally Induced Aggregation Behavior of a Six-Armed ELP Star Polymer", [Mario Alberto](#), Kiril A. Streletzky, Nolan Holland

74. "Optimization of Hydroxypropyl Cellulose (HPC) Microgel Imaging and Characterization Using Scanning Electron Microscopy (SEM)", [Samantha Tietjen](#), Kiril A. Streletzky, Petru S. Fodor

75. "Achieving Flat Gold Surfaces for the Organization of Organic Molecules", [Jacob Martin](#), Jessica E. Bickel

2019 AIChE Annual Meeting, Orlando FL, Nov 10-15, 2019

76. "Developing Evanescent Wave Scattering as a Tool for Tracking Janus Particle Dynamics in Response to Electric Fields", [Peter Howard](#), Christopher L. Wirth, Bhuvnesh Bharti, and JinGyun Lee

2019 Physics Congress, Providence RI, Nov 13-17, 2019

77. "Optimization of Hydroxypropyl Cellulose (HPC) Microgel Imaging and Characterization Using Scanning Electron Microscopy (SEM)", [Samantha Tietjen](#), Kiril A. Streletzky, Petru S. Fodor

78. "Thermally Induced Aggregation Behavior of a Six-Armed ELP Star Polymer", [Mario Alberto](#), Kiril A. Streletzky, Nolan Holland

2020 APS March Meeting, Denver CO, Mar 2-6, 2020

(Unfortunately, 2020 March Meeting was cancelled due to COVID-19)

79. "Apparent effect of crosslinker concentration on structure and dynamics of polymeric microgels", Kiril A. Streletzky*, [Samantha C. Tietjen](#), [Samantha R. Hudson](#)

80. "Optimization of Microgel Imaging Using SEM", [Samantha C. Tietjen*](#), Petru S. Fodor, Kiril A. Streletzky

81. "Achieving Flat Gold Surfaces for the Organization of Organic Molecules" [Jacob Martin](#), Jessica E. Bickel

"Pentacene Thin Film Growth" [Bradley Lockhart](#), Jessica E. Bickel