Tamás A. Prileszky

Colloids and soft matter

Contact

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Profile

Chemical engineering Ph.D. student at the University of Delaware studying emulsions and colloid science. Experienced coach and exceptional student.

Education

University of Delaware
Ph.D., Chemical Engineering
August 2013–Present
GPA: 4.0/4.0

Colorado School of Mines
B.S., Chemical Engineering
August 2010–May 2013
GPA: 3.954/4.0
summa cum laude

Skills

Laboratory skills
Microfluidics, optical microscopy, confocal microscopy, rheometry, differential scanning calorimetry, photolithography, light scattering, particle processing, gas chromatography

Computer skills
Programming: *C++, Visual Basic, Java, MATLAB* Graphics: *Igor Pro, Origin, Illustrator, Photoshop*
Office: *Microsoft Office, LaTeX*
CAD: *AutoCAD, Certified Solidworks Associate*
Modeling: *COMSOL, Aspen*

Other skills
Four years German language

Research experience

University of Delaware
Newark, DE **Nov 2013–Present**
Studying the formation of non-spherical structured emulsions in microfluidic devices, focusing on the assembly of hierarchical superstructures from individual anisotropic droplet building blocks and modifying emulsion droplets with surface-adsorbed and bulk particles. Research focuses strongly on the behavior of colloidal materials and the behavior of liquid interfaces. Mentored undergraduate students working on this and other projects.

University of New South Wales
Sydney, AU **Feb 2017–May 2017**
Designed and tested new equipment to create non-spherical aerosol droplets in an international collaboration between University of Delaware and University of New South Wales. Fabricated complete setup including heat transfer units and aerosolization device. Mentored an undergraduate student studying the adsorption characteristics of non-spherical emulsions.

Teaching experience

Teaching assistant, University of New South Wales
Sydney, AU **Apr 2017–May 2017**
Developed assignments, exam materials, and tutorial content for "Process Modelling and Analysis" and "Complex Fluid Microstructure and Rheology" courses. Taught tutorial lectures involving demonstrations and review materials.

Teaching assistant, University of Delaware
Newark, DE **Aug 2014–Dec 2014**
Teaching assistant for 92 students in Process Control and Dynamics course. Planned and led weekly lectures in computer lab sections. Graded homework and lab assignments from lecture and computer lab. Held independent office hours.

Gymnastics coach
Gymnastika, Arvada, CO **Nov 2010–Jun 2013**
The Sundance Studio, Monument, CO **Sep 2006–May 2010**
Coached level 4, 5, and 6 team boys—intermediate, competitive levels—and recreational students in gymnastics and developed team skills and leadership abilities. Trained students of varying mental and physical ability, including handicapped children.

2009—level 4 boys won 1st in USA Gymnastics (USAG)—governing body for gymnastics in the United States—state competition, level 5 boys placed 3rd.
2009—level 4 boys won 3rd in USAG state competition.

Honors and affiliations

International Summit of the MRS University Chapters on Sustainability and Nanotechnology poster session poster award	**Nov 2017**
Langmuir student poster award, 91st ACS CSSS	**Jul 2017**
Langmuir student poster award, 90th ACS CSSS	**Jun 2016**
87th Society of Rheology annual meeting poster competition, 3rd	**Oct 2015**
Robert L. Pigford Teaching Assistant Award	**May 2015**
American Chemical Society, Colloids Division member	**Jan 2015–Present**
Society of Rheology member	**Oct 2014–Present**
Outstanding Graduating Senior, chemical engineering	**May 2013**
Tau Beta Pi engineering honor society member	**Oct 2011–Present**
Anton Pegis and President's scholarships	**Aug 2010–May 2013**

Publications

- **T. A. Prileszky** and E. M. Furst. "Fluid networks assembled from endoskeletal droplets," *Chem. Mater.*, *28* (11), 3734–3740 (2016). DOI: 10.1021/acs.chemmater.6b00497
- **T. A. Prileszky** and E. M. Furst. "Crystallization kinetics of partially crystalline emulsion droplets in a microfluidic device," *Langmuir*, *32* (20), 5141–5146 (2016). DOI: 10.1021/acs.langmuir.6b00420
- **T. A. Prileszky**, B. A. Ogunnaike, and E. M. Furst. "Statistics of droplet sizes generated by a microfluidic device," *AIChEJ.*, *62* (8), 2923–2928 (2016). DOI: 10.1002/aic.15246

Presentations

- **T. A. Prileszky** and E. M. Furst, "Designing functional emulsions with internal structure," *91st ACS CSSS*, Jul 11, 2017, New York, NY.
- **T. A. Prileszky** and E. M. Furst, "Endoskeletal droplets as anisotropic interfaces," *University of Delaware Chemical Engineering Winter Research Review*, Jan 25, 2017, Newark, DE.
- **T. A. Prileszky** and E. M. Furst, "Hierarchical emulsion networks from endoskeletal droplets," *90th ACS CSSS*, Jun 18, 2016, Cambridge, MA.
- **T. A. Prileszky** and E. M. Furst, "Assembling anisotropic interfacial structures from endoskeletal droplets," *Gordon Research Seminar: Colloidal, Macromolecular, and Polyelectrolyte Solutions*, Feb 6, 2016, Ventura, CA.
- **T. A. Prileszky** and E. M. Furst, "Microfluidic fabrication of endoskeletal droplets," *89th ACS CSSS*, Jun 15, 2015, Pittsburgh, PA.

Posters

- **T. A. Prileszky** and E. M. Furst, "Modifying shaped emulsions with magnetic nanoparticles," *2017 MRS Fall meeting*, Nov 26–Dec 1, 2017, Boston, MA.*
- **T. A. Prileszky**, D. Traini, P. Young, P. T. Spicer, and E. M. Furst, "Non-spherical aerosol droplets with internal structure," *91st ACS CSSS*, Jul 9–12, 2017, New York, NY.*
- **T. A. Prileszky** and E. M. Furst, "Magnetically functionalized endoskeletal droplets," *90th ACS CSSS*, Jun 5–8, 2016, Cambridge, MA.*
- **T. A. Prileszky** and E. M. Furst, "Assembling anisotropic interfacial structures from endoskeletal droplets," *Gordon Research Conference: Colloidal, Macromolecular, and Polyelectrolyte Solutions*, Feb 7–12, 2016, Ventura, CA.
- **T. A. Prileszky** and E. M. Furst, "Assembling anisotropic interfacial structures from endoskeletal droplets," *University of Delaware Chemical Engineering Winter Research Review*, Jan 27, 2016.
- **T. A. Prileszky** and E. M. Furst, "Endoskeletal droplets: controlling assembly, rheology, and response," *87th Society of Rheology Annual Meeting*, Oct 11–15, 2015, Baltimore, MD.*
- **T. A. Prileszky** and E. M. Furst, "Endoskeletal droplets: controlling assembly, rheology, and response," *Chemical Heritage Foundation Innovation Day*, Oct 5–6, 2015, Philadelphia, PA.
- **T. A. Prileszky** and E. M. Furst, "Endoskeletal droplet generation in microfluidic devices," *Start Talking Science*, Sep 29, 2015, Philadelphia, PA.
- **T. A. Prileszky** and E. M. Furst, "Endoskeletal droplet generation in microfluidic devices," *Tiger-Hen-Hawk Rheology Symposium*, May 9, 2015, Bethlehem, PA.

Poster award received

Activities

- Collaborated with students, researchers, and faculty at University of New South Wales.
- Participated in educational outreach events while at University of Delaware including science demonstrations at museums and engineering summer camps.
- Three-year elected Colburn Club representative and vice president, planned and conducted department-wide events including graduate recruiting, happy hours, and picnics.
- Performed service for Tau Beta Pi while attending Colorado School of Mines including judging LEGO FIRST competitions, organization recruiting, and campus event planning.
- Performed cheerleading at Colorado School of Mines from 2010–2011 and participated in fundraising and community outreach.

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