

ABHILASH SANKARAN

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Chicago, IL 60607

Research Experience

University of Illinois at Chicago

Chicago, IL

Research Assistant

Aug. 2015 – present

- Investigate intrinsic mechanism of charging of hydrocarbon liquids used for electrostatic atomization.
- Understanding the effect of different parameters in application of electrostatic atomization.
- Pool boiling enhancement with the help of nano-textured surfaces.
- Developing a detailed understanding of polymer deformation involving non-linear elasticity and time dependent characteristics: creep and viscoelasticity

Indian Institute of Science

Bangalore, India

Research Assistant

June. 2014 – July. 2015

- Micro-bubble drag reduction in turbulent boundary layer.
- Understanding the practical viability of microbubble drag reduction technique with experiments on a large flat plate.

Education

Ph.D., Mechanical Engineering | University of Illinois at Chicago

expected May. 2020

B.E., Mechanical Engineering | PES Institute of Technology, India

May 2014

Skills and Interests

Computer: Microsoft Office, Fortran, Solid Edge, Ansys, Matlab, Comsol.

Technical: DLS, SEM, XRD, Raman Spectroscopy, Optical profilometer, PIV.

Languages: English, Kannada, Hindi, Malayalam.

Publications

- **A. Sankaran**, C. Staszal, R. P. Sahu, A. L. Yarin, F. Mashayek (2017). "Evidence of faradaic reactions in electrostatic atomizers". *Langmuir*, 33(6), 1375-1384.
- **A. Sankaran**, C. Staszal, F. Mashayek, A. L. Yarin (2018) "Faradaic reactions' mechanisms and parameters in charging of oils". *Electrochimica Acta*, 268, 173-186.
- **A. Sankaran**, A. L. Yarin (2018). "Evaporation-driven thermocapillary Marangoni convection in liquid layers of different depths". *International Journal of Heat and Mass Transfer*, 122, 504-514.
- S. An, **A. Sankaran**, A. L. Yarin (2018). Natural Biopolymer-Based Triboelectric Nanogenerators via Fast, Facile, Scalable Solution Blowing. *ACS applied materials & interfaces*, 10(43), 37749-37759.
- **A. Sankaran**, S. I. Karakashev, S. Sett, N. Grozev, A. L. Yarin (2018). On the nature of the superspreaders. *Advances in colloid and interface science*, 263, 1-18.
- **A. Sankaran**, W. Zhang, A. L. Yarin (2018). Pool boiling in deep and shallow vessels and the effect of surface nano-texture and self-rewetting. *International journal of heat and mass transfer*, 127, 857-866.
- **A. Sankaran**, C. Staszal, D. Belknap, A. L. Yarin, F. Mashayek (2019). Effect of atmospheric humidity on electrical conductivity of oil and implications in electrostatic atomization. *Fuel*, 253, 283-292.
- G. Li, **A. Sankaran**, A. L. Yarin, B. Pourdeyhimi (2019). Hydroentangled polymer nonwovens: Prediction of jet streaks and surface roughness. *Polymer*, 180, 121731.

Conference Presentations, Trainings and Additional Experiences

- 3 conference presentations at American Physical Society (DFD).
- One ICLASS conference presentation, one ASGSR conference presentation and two presentations at Korea University and University of Illinois at Chicago International Workshop.
- Reviewed a scientific article for *International Journal of Heat and Mass Transfer*.
- Volunteered at ICLASS 2018.