

NATALIE N. BEAMS

beams2@illinois.edu

Education

University of Illinois at Urbana-Champaign

Ph.D. in Theoretical & Applied Mechanics (expected 2017)

M.S. in Theoretical & Applied Mechanics (2014)

University of Oklahoma

B.S. in Mechanical Engineering (2010)

Summa cum Laude

Experience

University of Illinois at Urbana-Champaign

Teaching Assistant/Research Assistant (2013-present)

Computational Science & Engineering Fellow (2011- 2013)

Carver Fellow (2010-2011)

University of Oklahoma School of Aerospace and Mechanical Engineering

Undergraduate Academic Assistant (2009-2010)

Presentations & Papers

“A Scalable Fast Method for N-body Problems Based on Exact Finite Element Basis Screen Functions,” with L. N. Olson and J. B. Freund. *SIAM J. Sci. Comput.*, 38(3) (2016)

“A Scalable Method for Cellular Blood Flow and Other N-body Systems,” with L. N. Olson and J. B. Freund, University of Illinois at Urbana-Champaign Computational Science & Engineering Annual Meeting (2013)

“Ordered and chaotic flow of red blood cells flowing in a narrow tube,” with J. B. Freund 66th Annual Meeting of the American Physical Society Division of Fluid Dynamics (2013)

“Stability of red cells flowing in narrow tubes,” with J. B. Freund 64th Annual Meeting of the American Physical Society Division of Fluid Dynamics (2011)

“Program Visualization Tool for Educational Code Analysis” 2010 Global Conference on Educational Robotics (2010)

Awards & Honors

- Named to "List of Teachers Ranked as Excellent by Their Students," Fall 2014 (as TA for TAM 335, Introductory Fluid Mechanics)
- Member of Tau Beta Pi (Engineering Honor Society)
- Member of Pi Tau Sigma (Mechanical Engineering Honor Society)