

# LENA A. BARRETT

Ph.D. Candidate  
Department of Chemical and Biological Engineering  
Princeton University

## EDUCATION

- Expected 2022     *Princeton University*  
Ph.D., Chemical and Biological Engineering
- 2018                *Princeton University*  
M.A., Chemical and Biological Engineering
- 2016                *Lehigh University, Highest Honors, 3.84*  
B.S. in Chemical Engineering  
B.S. in Integrated Business and Engineering: Business Information Systems

## RESEARCH EXPERIENCE

- 2016 - present     *Ph.D. Student, Princeton University Dept. of Chemical and Biological Engineering*
- Research Advisor: Celeste M. Nelson, Ph.D.
  - Mechanical signaling and the airway microenvironment in asthma pathogenesis
- 2015                *MPC-CMSE REU Summer Scholar, Massachusetts Institute of Technology Dept. of Chemical Engineering*
- Research Advisor: Yuriy Román, Ph.D.
  - A novel catalytic process for the one-pot production of neopentyl glycol from isobutyraldehyde and formalin
- 2014                *BDSI Summer Scholar, Lehigh University Dept. of Biological Sciences*
- Research Co-Advisors: Julie Miwa, Ph.D. & Amber Rice, Ph.D.
  - An integrative assessment of a gene family controlling learning potential

- 2013 *Analytical Lab Associate, W. L. Gore & Associates*
- Research Supervisor: Tracey Powell, B.S.
  - Mapping the path water takes through porous ePTFE membranes under pressure

## HONORS AND AWARDS

- 2016 President's Fellowship, \$8,000, Princeton University
- 2016 William H. Chandler Prize in Chemical Engineering, \$540, Lehigh Univ.
- 2014 Rings of Excellence Scholarship, \$500, Alpha Omega Epsilon Natl. Fdn.
- 2014 Tau Beta Pi Engineering Honor Society
- 2012 Delaware State Testing Program Grant, \$3,000, State of Delaware
- 2012 Accenture Scholarship, \$20,000, Lehigh University
- 2012 Dean's Scholar Award, \$40,000, Lehigh University
- 2012 Semifinalist, Presidential Scholars Program

## INVITED PRESENTATIONS

3. *INFRAfect*. Merck Innovation Cup 2018, Merck KGaA, Darmstadt, Germany, July 24, 2018.
2. *Stiff Airways May Exacerbate Asthma*. Dean of the Graduate School's Leadership Council Meeting, Princeton University, Princeton, NJ, May 18, 2018.
1. *Stiff Airways May Exacerbate Asthma*. Featured Speaker, Princeton Research Day, Princeton University, Princeton, NJ, May 10, 2018.

## ADMINISTRATIVE EXPERIENCE

- 2017 AY Member, Planning Committee for the 50<sup>th</sup> Anniversary of Undergraduate Women at Princeton
- 2017 AY Member, Council of the Princeton University Community (CPUC) Governance Committee
- 2016 AY Member, Association of Princeton Graduate Alumni (APGA) Reunion 2017 Food and Beverage Committee

## TEACHING EXPERIENCE

- 2019 Spring Physical Basis of Human Disease (CBE 440/540) TA, Princeton University
- 2018 Spring Mathematics in Engineering (MAE 305) TA, Princeton University
- 2015 Spring Chemical Engineering Thermodynamics (ChE 210) TA, Lehigh University

## LEADERSHIP AND EXTRACURRICULAR ACTIVITIES

2017 - 2018	Sexual Harassment/Assault Advising & Resources Graduate Peer
2017 - present	Bartender and Doorperson, DBar (Princeton Graduate Student Bar)
2015 - 2016	Senior Representative Executive Position, Lehigh Marching 97 Band
2012 - 2016	Clarinet, Lehigh University Marching 97 Band
2014 - 2015	Risk Management Chair, Alpha Omega Epsilon
2014	Volunteer, Sacred Heart Hospital in Bethlehem, PA
2013 - 2014	Professional Chair, Alpha Omega Epsilon

## MENTORING EXPERIENCE

Kofi Ries (Summer 2018)	Near-Peer Mentee, Princeton University Molecular Biophysics Research Experience for Undergraduates
Sriveena Chittamuri (Summer 2017)	Near-Peer Mentee, Princeton University Molecular Biophysics Research Experience for Undergraduates