

FARZAN BEROZ

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Education

- **Ph.D.** in Physics (September 1, 2012 - May 18, 2018), Princeton University, Princeton NJ. Advisor: Prof. N. S. Wingreen.
- **B.S.** in Physics and **B.A.** in Russian Language and Culture, *magna cum laude* (2008 - 2012), Duke University, Durham NC. Advisor: Prof. K. Scholberg.

Experience

- **Research internship** with Prof. C. P. Broedersz, Ludwig-Maximilians-Universität München, Germany (February - April 2016). Theoretical biophysics. *Studied local mechanosensing in disordered fibre networks.*
- **Experimental project** with Prof. S. T. Staggs, Princeton University, Princeton NJ (June - August 2013). Early universe cosmology. *Contributed to Atacama B-mode Search experiment.*
- **Research internship** with Prof. D. Spergel, Princeton University, Princeton NJ (February - May 2013). Early universe cosmology. *Studied how PLANCK data constrains primordial non-Gaussianity.*
- **Research internship** with Prof. C. Galbiati, Laboratori Nazionali del Gran Sasso, Italy (July - August 2012). Particle astrophysics. *Contributed to DarkSide dark matter detection experiment.*
- **Research internship** with Prof. K. Scholberg, Duke University, Durham NC (May 2010 - May 2012). Particle astrophysics. *Contributed to water Cherenkov detectors for neutrino physics.*
- **Research Experiences for Undergraduates** with Prof. P. J. Erickson, MIT Haystack Observatory, Westford MA (July - August 2009). Atmospheric physics. *Studied Pedersen conductivity in sub-auroral polarization streams.*
- **Research assistantship** with Prof. E. M. Brannon, Duke University, Durham NC (September 2008 - May 2009). Primate cognition. *Studied risk-taking propensity of rhesus macaques.*

Teaching and Mentoring

- **Rotation student project** with Prof. N. S. Wingreen, Princeton University, Princeton NJ (2016). *Mentored graduate student studying bacterial biofilms.*
- **Assistantship in Instruction** with Prof. J. W. Shaevitz and Prof. T. Gregor, Princeton University, Princeton NJ (2015). *Integrated Science Curriculum, an introductory course covering all core scientific disciplines.*
- **Assistantship in Instruction** with Dr. K. Visnjic, Princeton University, Princeton NJ (2013-2014). *Implemented new ISLE-based pedagogical methods in calculus-based introductory physics course.*

Honors and Awards

- Princeton Physics Departmental Teaching Award (2014)
- Goldwater Scholarship Honorable Mention (2011)
- Duke University Dean's Lists with Distinction (2008-2010)
- National AP Scholar (2008)
- Science Olympiad Silver Medal in "Fermi Questions" State Tournament (2007)

Publications

1. **Beroz F**, Yan J, Meir Y, Sabass B, Stone HA, Bassler BL & Wingreen NS (2018) Verticalization of bacterial biofilms. *Nat. Phys.*
2. **Beroz F**, Jawerth LM, Münster S, Weitz DA, Broedersz CP & Wingreen NS (2017) Physical limits to biomechanical sensing in disordered fibre networks. *Nat. Commun.* <https://doi.org/10.1038/ncomms16096>
3. Erickson PJ, **Beroz F** & Miskin MZ (2011) Statistical characterization of the American sector subauroral polarization stream using incoherent scatter radar. *J. Geophys. Res.*

In preparation

1. **Beroz F** (2018) Mechanical focusing in disordered fibre networks. *Manuscript in preparation.*

Talks

1. Contributed talk: *Physical limits to biomechanical sensing in disordered fiber networks*, American Physical Society March Meeting 2017 (New Orleans, LA 2017)
2. Contributed talk: *Physical limits to biomechanical sensing*, International Physics of Living Systems, Harvard (Boston, MA 2016)
3. **Invited talk**: *Physical limits to biomechanical sensing*, PoLS Seminar, Georgia Tech (Atlanta, GA 2015)
4. Contributed talk: *Physical limits to biomechanical sensing*, International Physics of Living Systems, Ludwig-Maximilians-Universität (München, Germany 2014)
5. **Invited talk**: *Stormtime Ion Redistribution at Mid-Latitudes: A Coupled Geospace Phenomenon*, Coupling, Energetics and Dynamics of Atmospheric Regions workshop (Boulder, CO 2010)

Schools and Workshops

- Boulder School for Condensed Matter and Materials: *Frustrated and Disordered Systems*. University of Boulder, Boulder CO (2017).
- Beg Rohu Summer School: *Statistical Physics, Biology, Inference and Networks*. French National Sailing School, Saint Pierre Quiberon France (2015).
- Gordon Research Conference: *Signal Transduction by Engineered Extracellular Matrix*. Bentley University, Waltham MA (2014).