Stanford

Lacramioara Bintu

Assistant Professor of Bioengineering

Bio

BIO

Lacra Bintu is an Assistant Professor in the Bioengineering Department at Stanford. Her lab performs single-cell measurements of chromatin and gene regulation dynamics, and uses these data to develop predictive models of basic biological processes and improve mammalian cell engineering.

Lacra started working on the theory of gene regulation as an undergraduate with Jané Kondev from Brandeis University and Rob Phillips from Caltech. As a Physics PhD student in the lab of Carlos Bustamante at U.C. Berkeley, she used single-molecule methods to tease apart the molecular mechanisms of transcription through nucleosomes. She transitioned to studying the dynamics of epigenetic regulation in live cells during her postdoctoral fellowship with Michael Elowitz at Caltech. She started her own interdisciplinary lab at Stanford in January 2017.

ACADEMIC APPOINTMENTS

- Assistant Professor, Bioengineering
- Member, Bio-X

HONORS AND AWARDS

- Career Award at the Scientific Interface, Burroughs Wellcome Fund (2015-2020)
- Postdoctoral Fellowship, Jane Coffin Childs Memorial Fund for Medical Research (2011-2014)
- Beckman Fellowship, California Institute of Technology (2011-2014)
- Harold M. Weintraub Graduate Student Award, Fred Hutchinson Center (2011)
- Outstanding Graduate Student Instructor Award, University of California, Berkeley (2006)
- Doris Brewer Cohen Endowment Award for best senior thesis, Brandeis University (2005)
- Wien International Scholarship, Brandeis University (2001-2005)

PROFESSIONAL EDUCATION

- Postdoctoral Fellow, California Institute of Technology , Biology and Biological Engineering (2016)
- Ph.D., University of California, Berkeley , Physics (2010)
- B.S., Brandeis University , Physics, Mathematics, Neuroscience (2005)

LINKS

- Bintu Lab Site: https://bintulab.com/

Teaching

COURSES

2019-20

- Molecular and Cellular Bioengineering: BIOE 300A (Win)

2018-19

- Molecular and Cellular Bioengineering: BIOE 300A (Win)
- Molecular and Cellular Engineering Lab: BIOE 301A (Aut)

2017-18

- Molecular and Cellular Bioengineering: BIOE 300A (Win)
- Molecular and Cellular Engineering Lab: BIOE 301A (Spr)

STANFORD ADVISEES

Arjun Aditham

Doctoral Dissertation Reader (AC)

Travis Horst, Stevan Jeknic, Margarita Khariton, Thomas Lozanoski, Sedona Murphy

Postdoctoral Faculty Sponsor

Taihei Fujimori, Jun Wan

Doctoral Dissertation Advisor (AC)

Michaela Hinks, Sarah Lensch, Connor Ludwig, Aditya Mukund, Joydeb Sinha, Mike Van

Doctoral Dissertation Co-Advisor (AC)

Nicole DelRosso, Josh Tycko

Master's Program Advisor

Janelle Kaneda, Ziv Lautman

Doctoral (Program)

Beatriz Atsavapranee, Aris Kare, Yuxi Ke, Connor Ludwig, Kasra Naftchi-Ardebili, Taylor Nguyen, Marija Pavlovic, Mike Van

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Bioengineering (Phd Program)
- Biophysics (Phd Program)

Publications

PUBLICATIONS

- **Mapping chromatin modifications at the single cell level.** *Development (Cambridge, England)*
  Ludwig, C. H., Bintu, L.
  2019; 146 (12)

- **Mitigation of off-target toxicity in CRISPR-Cas9 screens for essential non-coding elements.** *Nature communications*
  Tycko, J., Wainberg, M., Marinov, G. K., Ursu, O., Hess, G. T., Ego, B. K., Li, A., Truong, A., Trevino, A. E., Spees, K., Yao, D., Kaplow, I. M., Greenside, et al
  2019; 10 (1): 4063