

Lacra Bintu (lbintu@stanford.edu) is **Assistant Professor of Bioengineering** at **Stanford University** and a member of the **Biophysics Program** and **Bio-X Institute** at Stanford.

Her interdisciplinary lab (<https://bintulab.com/>) works on:

1. Understanding the basic principles of chromatin and gene regulation dynamics using:
 - synthetic biology: engineering cell lines with fluorescent reporters
 - single-cell imaging: time-lapse fluorescence microscopy and multiplex DNA/RNA FISH
 - high-throughput perturbations and measurements based on next generation sequencing
 - mathematical models

Lacra is particularly interested in immune cells and the effect of viral proteins on gene regulation, chromatin structure, and epigenetic memory.

2. Developing new tools for mammalian synthetic biology with a focus on gene and chromatin control.

Lacra is part of the **4D Nucleome Consortium** through a collaborative grant on Real-Time Chromatin Dynamics and Function and serves as co-chair of the 4DN Imaging Working Group. Her lab is also supported by a Maximizing Investigators' Research Award (MIRA R35) from the National Institute of General Medical Sciences, and a collaborative Novel Genomic Technology Development R01 Grant from the National Human Genome Research Institute.

Lacra is involved in the organizing committees for the International Conference on Epigenetics and Bioengineering (**EpiBio**) and the International Mammalian Synthetic Biology Workshop (**mSBW**).

Lacra started working on the theory of gene regulation as an undergraduate with Jané Kondev from Brandeis University and Rob Phillips from California Institute of Technology. She graduated summa cum laude with majors in Physics, Mathematics, and Neuroscience from Brandeis University, where she was supported by the Wien International Scholarship.



As a Physics PhD student in the lab of Carlos Bustamante at University of California Berkeley, she used single-molecule methods (optical tweezers and atomic force microscopy) to tease apart the molecular mechanisms of transcription through nucleosomes. She won the Harold M. Weintraub Graduate Student Award for outstanding achievement during graduate studies.

Lacra transitioned to studying the dynamics of epigenetic regulation in live cells with time-lapse microscopy and flow cytometry during her postdoctoral fellowship with Michael Elowitz at California Institute of Technology. She was supported by a Jane Coffins Childs Postdoctoral Fellowship, and a Career Award at the Scientific Interface from the Burroughs Wellcome Fund.

Lacra lives in Menlo Park, California with her husband (and adventure partner of over 20 years), their son, and two cats. She bikes to work and enjoys cooking, hiking, reading, and story-telling.