

Nicholas Rossi

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EDUCATION

GRADUATE

BOSTON UNIVERSITY

Molecular Biology, Cell Biology
Biochemistry

2017 -

ECOLE NORMALE SUPERIEUR

Laboratoire de physique théorique
2016 - 2017

UNIVERSITY OF VERMONT

College of Engineering and
Mathematical Sciences
2013 - 2016

UNDERGRADUATE

BS IN MICROBIOLOGY

UNIVERSITY OF MINNESOTA

2008 | Minneapolis, MN
College of Biological Sciences

LINKS

Github:// [nicholasarossi](#)

Twitter:// [@divergentdata](#)

SKILLS

MOLECULAR BIOLOGY

Primer Design • Cloning • PCR
Flow Cytometry • Fluorescence
Microscopy • Optogenetics

MATHEMATICAL ANALYSIS

Nonlinear Dynamics • Statistical
Mechanics • Information Theory

PROGRAMMING

Over 5000 lines:

Python • Matlab

Over 1000 lines:

JavaScript • HTML • CSS

Familiar

Arduino • Bash

RESEARCH

THE DUNLOP LAB | GRADUATE STUDENT

September 2013 – Present | Burlington, VT / Boston, MA

Employed a combination of wet-bench molecular biology and engineering analysis to understand the propagation of signals in bacterial stress response networks.

ENS THEORETICAL PHYSICS | GRADUATE STUDENT

September 2016 – January 2017 | Paris, France

Developed theoretical framework to understand the emergence of stochastic antibiotic resistance in bacteria. Employed mathematical analysis and computer simulation to understand experimental time-series gene expression data.

TEACHING

TEACHING ASSISTANT | ELECTRICAL ENGINEERING

Expected January 2014 – May 2014 | Burlington, VT

- Taught the theory and practicum of programmable micro-controllers to undergraduate students

THE BLAKE SCHOOL | SUBSTITUTE COORDINATOR & MATH TEACHER

Sept 2012 – July 2013 | Minneapolis, MN

- Fulfilled administrative demands of hiring and coordinating substitute teachers in all disciplines
- Taught two sections of advanced placement calculus

PEACE CORPS | SCIENCE EDUCATOR & CURRICULUM DEVELOPER

Jul 2008 – July 2011 | Burkina Faso & Mali

- Taught Biology and Math to classes of 160 students, across 5 different grades
- Developed hands-on curriculum for teaching the scientific method to students
- Worked with community members to construct a library and plant over 500 trees

AWARDS

2016 Chateaubriand STEM Fellow

2014 First in Class: UVM Computer Science Fair

PAPERS AND PRESENTATIONS

2017 PLOS COMPUTATIONAL BIOLOGY

Customized Regulation of Diverse Stress Response Genes by the Multiple Antibiotic Resistance Activator MarA
Nicholas A. Rossi, Mary J. Dunlop

2016 Q-BIO Nashville, TN

Propagation of Signals from the Transcription factor MarA to downstream genes

2015 Q-BIO Blacksburg, VA

Signal Processing in Antibiotic Resistance

2014 SEED Los Angeles, CA

Genetic Reporter Systems for Understanding the MAR Operon in E. Coli