

José Ignacio Rojas Echenique

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Education

2011—present: [Harvard University](#)

Department of Organismic and Evolutionary Biology

2006—2010: [University of Chicago](#)

Concentration in Biology with a specialization in Ecology and Evolution

Research

2011—present: [Marx Lab](#), Harvard University

I'm interested in the possible forms that organisms in a population can take on as the population evolves. Conceptually we organize these forms (or phenotypes) according to their fitness and mutational distance from one another on a fitness landscape. I'm working towards an understanding of the physiological traits and interactions that make up a model fitness landscape: the central carbon metabolism of *Methylobacterium extorquens*.

2009—2010: [Allesina Lab](#), University of Chicago
Dynamics of intransitive competitive relationships.

Summer courses

2011: [Hopkins Microbiology Course](#), Stanford University
2009: [Eco-Informatics Summer Institute](#), Oregon State University
Moth ecology in the Sub-Alpine Meadows of the H.J. Andrews
Experimental Forest
2007: [Summer Program for Undergraduate Research](#), University of
Oregon
Nematode Ecology: Developing methods for the identification
of gut contents

Publications

Clarity: An Open-Source Manager for Laboratory Automation
Nigel F. Delaney*, **José I. Rojas Echenique***, and Christopher J. Marx.
Journal of Laboratory Automation 2211068212460237. First pub-
lished on October 2, 2012
[\[doi:10.1177/2211068212460237\]](https://doi.org/10.1177/2211068212460237) [\[pdf\]](#)
Interaction rules affect species coexistence in intransitive networks.
José Rojas Echenique and Stefano Allesina.
Ecology 92:1174–1180. 2011.
[\[doi:10.1890/10-0953.1\]](https://doi.org/10.1890/10-0953.1) [\[pdf\]](#)

Conference talks and posters

Modeling methanol catabolism in *Methylobacterium extorquens*
José I. Rojas Echenique, Christopher Marx
[2014 Gordon Research Conference](#), and invited speaker at [2014 Gordon-
Kenan Research Seminar](#) on the Molecular Basis of Microbial One-
Carbon Metabolism
Epistasis in the context of redundant pathways for formaldehyde oxidation

José I. Rojas Echenique, Lon Chubiz, Christopher Marx
[2012 Gordon Research Conference](#), and [2012 Gordon-Kenan Research Seminar](#) on the Molecular Basis of Microbial One-Carbon Metabolism

Not Research

Python group

I organize a group of my fellow graduate students for an informal introduction to computer programming. I write some of my own material but also use material from [Software Carpentry](#).

Data and source code

I host the source code and data for all my research on an online git repository.

Outreach

[Society for Advancement of Chicanos and Native Americans in Science](#)

I have attended the SACNAS National Conference every year since 2012 representing my department, and encouraging minority students to apply.

Awards

- Smith Family Graduate Science and Engineering Fellowship
Full tuition, stipend, and an additional \$5,000 research award.
- ΦBK academic honor society
- University of Chicago scholar award
- University of Chicago Odyssey scholarship

Press

- [The EcoNetLab Science Weblog](#)