Carlos Xavier Hernández

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Experience

Graduate Fellow in the Biophysics Program with Vijay Pande @ Stanford University	2013 - Present
Undergraduate Researcher at the Center for Computational Biology and Bioinformatics with Raul Rabadan @ Columbia University Medical Center	2010 - 2013
Undergraduate Fellow at the Department of Chemistry and Biochemistry with James Andrew McCammon @ University of California, San Diego	2012
Undergraduate Fellow at the Department of Biochemistry and Molecular Biophysics with Stephen Goff @ Columbia University Medical Center	2011

Education

Stanford University Biophysics, PhD	Present
Columbia University in the City of New York Applied Mathematics, BSc	2013

Skills

- Python | Java
- MATLAB | R | UNIX
- Keras | PyTorch
- HTML | CSS | JavaScript | SQL

Awards

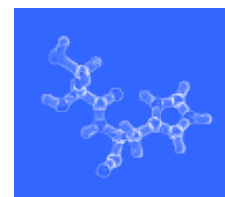|	
Graduate Research Fellowship National Science Foundation	2013
ADVANCE Summer Institute Fellowship Stanford University	2013
Exceptional Research Opportunities Program Fellowship Howard Hughes Medical Institute	2012
Summer Undergraduate Research Fellowship Genentech	2011

Publications	On Inferring Causality within Ergodic Systems **Hernández CX** and Pande VS *In prep.*	2017
	Using Deep Learning for Segmentation and Counting within Microscopy Data **Hernández CX**, Sultan MM, Ramsundar B, and Pande VS *In prep.*	2017
	Kinetic Machine Learning Unravels Ligand-Directed Conformational Change of μ Opioid Receptor Feinberg EN, Farimani AB, **Hernández CX**, and Pande VS *bioRxiv*. doi: 10.1101/170886	2017
	MSMExplorer: Data Visualizations for Biomolecular Dynamics **Hernández CX**, Harrigan MP, Sultan MM, and Pande VS *The Journal of Open Source Software*. doi: 10.21105/joss.00188	2017
	MSMBuilder: Statistical Models for Biomolecular Dynamics Harrigan MP, Sultan MM, **Hernández CX**, Husic BE, and Pande VS *Biophysical Journal*. doi: 10.1016/j.bpj.2016.10.042	2017
	Osprey: Hyperparameter Optimization for Machine Learning McGibbon RT, **Hernández CX**, Harrigan MP, Kearnes S, Sultan MM, Jastrzebski S, Husic BE, and Pande VS *The Journal of Open Source Software*. doi: 10.21105/joss.00034	2016
	MDTraj: a modern, open library for the analysis of molecular dynamics trajectories McGibbon RT, Beauchamp KA, Schwantes CR, Wang LP, **Hernández CX**, Harrigan MP, Lane TJ, Swails JM, and Pande VS *Biophysical Journal*. doi: 10.1016/j.bpj.2015.08.015	2015
	Markov State Models Provide Insights into Dynamic Modulation of Protein Function Shukla D, **Hernández CX**, Weber JK, and Pande VS *Accounts of Chemical Research*. doi: 10.1021/ar5002999	2015
	Structure-based Network Analysis of an Evolved G-Protein Coupled Receptor Homodimer Interface Nichols SE*, **Hernández CX***, Wang Y, and McCammon JA *Protein Science*. doi: 10.1002/pro.2258	2013
	Understanding the Origins of a Pandemic Virus **Hernández CX**, Khiabanian H, Chan J, and Rabadan R *arXiv*. arXiv: 1104.4568v1 [q-bio.PE]	2011
Press	Pandemic Flu Risk Raised by Lax Hog-Farm Surveillance *Wired Science*	2012
	The Origin and Evolution of a Pandemic Virus *MAGNet Newsletter*, 4:15-18	2011