

Justin Grana

CONTACT	Santa Fe Institute 1399 Hyde Park Road Santa Fe, New Mexico 87501	<i>Phone:</i> 716.807.8807 <i>E-mail:</i> justin.grana@santafe.edu <i>WWW:</i> http://www.jtgrana.com
EDUCATION	American University <i>Ph.D., Economics</i> <i>Dissertation:</i> Behavior Based Cyber Security: Employing Tools from Traditional and Behavioral Game Theory to Improve Attack Detection <i>Advisors:</i> Professors Alan Isaac (chair), David Wolpert (Santa Fe Institute), and Nathan Larson Xavier University <i>B.S.B.A., Economics</i> <i>B.A. Spanish</i>	Washington, DC 2016 Cincinnati, OH 2010
PROFESSIONAL EXPERIENCE	Santa Fe Institute <i>Postdoctoral Researcher</i> Research Areas: Dynamic Games, Multiagent Systems, Stochastic Processes, Network Security Institute of Spatial Economic Analysis (ISEA) <i>Economic Consultant</i> Research Areas: Spatio-temporal forecasting with machine learning and neural networks. Google Summer of Code <i>Student Awardee</i> Project : Empirical likelihood in Python.	Santa Fe, NM 2015 - Present Redlands, CA 2014 - Present Washington, DC 2011
TEACHING EXPERIENCE	Adjunct Professor <i>Introductory Macroeconomics</i> Teaching Assistant <i>12+ Undergraduate, Masters and Ph.D. Economics Courses</i> Freelance Tutor <i>Economics, Math, Statistics and Business Courses at the Undergraduate, Masters and Ph.D. Level</i>	American University 2013 American University 2010-2014 Washington, DC 2011-2014
JOURNAL PUBLICATIONS	Grana, Justin , Wolpert, D., Neil, J., Xie, D., Bhattacharya, T. & Bent, R. A likelihood ratio anomaly detector for identifying within-perimeter computer network attacks. <i>Journal of Network and Computer Applications</i> 66 , 166–179 (2016)	
CONFERENCE PROCEEDINGS	Bono, J. W., Wolpert, D., Xie, D. & Grana, Justin . <i>Decision-theoretic prediction and policy design of gdp slot auctions in 14th AIAA Aviation Technology, Integration, and Operations Conference</i> (2014), 2163 Kim, Y., Kochenderfer, M. J., Grana, Justin , Bono, J. & Wolpert, D. <i>Optimal lost-link policies for unmanned aircraft in Digital Avionics Systems Conference (DASC), 2015 IEEE/AIAA 34th</i> (2015), 5C1–1	
WORKING PAPERS	Grana, Justin , Bono, J. & Wolpert, D. Reasoning About When Instead of What in Repeated Oligopoly: Collusive Equilibria with Stochastic Event Times (2016) Available from: http://jtgrana.com/wp-content/uploads/2017/01/edcollusion.dhw_2.pdf (<i>Submitted</i>)	
WORK IN PREPARATION	Attack and Detection in a Noisy Environment — A New Approach How much would you be willing to pay to change a game before playing it? Forecasting U.S. Zip Code Level Employment using a Neural Network and Semi-Supervised Learning	

GRANTS,
AWARDS
& SUPPORT **Army Research Office**, Grant ARO BAA W911NF-12-R-0012-02. *Event-Driven Game Theory for Predicting Dynamical Systems* (2015)
 NASA, Grant NNH13ZEA001N-SSAT: B.2-AFCS-1.6 *Event-Driven Game Theory for Air Traffic Control and Unmanned Aircraft* (2014)
 Info-metrics, Graduate Summer Fellowship (2014)
 American University, College of Arts and Science Fellowship (2010-2014)
 Xavier University, Department of Economics Advisory Board Research Scholarship, (2009)

INVITED TALKS Santa Fe Institute, Biological Circuit Evolution, (December, 2016)
 Santa Fe Institute, Circumventing Achilles Heel, (October, 2016)
 University of Redlands, School of Business, (August, 2016)
 Los Alamos National Lab, Center for Nonlinear Studies (August, 2014)

SOFTWARE
PROFICIENCIES Python (expert), Julia, R, SAS, STATA, MATLAB, Unix, ArcGIS, SQL, Bash, Go, Mathematica, AWS, Github, Tensor-Flow, Theano