

# Justin A. Sirignano

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<b>EDUCATION</b>	<i>Stanford University</i> PhD candidate in Management Science and Engineering: Finance Group Dissertation Advisor: Professor Kay Giesecke Dissertation Title: Asymptotics for Large Stochastic Systems GPA: 4.0/4.0	2010-2015
	<i>Princeton University, B.S.E.</i> Major: Operations Research and Financial Engineering Certificate: Applied and Computational Mathematics GPA: 3.9/4.0 and graduated <i>summa cum laude</i> Elected to Phi Beta Kappa, Tau Beta Pi, and Sigma Xi	2006-2010
<b>PUBLICATIONS</b>		
	<ul style="list-style-type: none"><li>“Large Portfolio Asymptotics for Loss from Default” (with K. Giesecke, K. Spiliopoulos, and R.B. Sowers). <i>Mathematical Finance</i>, in press, 2013.</li><li>“Fluctuation Analysis for the Loss from Default” (with K. Giesecke and K. Spiliopoulos). <i>Stochastic Processes and their Applications</i>, (124): 2322-2362, 2014.</li><li>“A Forward-Backward Algorithm for Stochastic Control Problems” (with S. Ludwig, R. Huang, and G. Papanicolaou). <i>Proceedings of the First International Conference on Operations Research and Enterprise Systems</i>. Vilamoura, Algarve, Portugal. 4 – 6 February, 2012.</li><li>“Optimization of Secondary-Air Addition in a Continuous One-Dimensional Spray Combustor” (with L. Rodriguez, A. Sideris, and W. Sirignano). <i>Journal of Propulsion and Power</i>, 26.2: 288-294, 2010.</li></ul>	
<b>WORKING PAPERS</b>	<ul style="list-style-type: none"><li>“Likelihood Estimation for Large Financial Systems” (with K. Giesecke and G. Schwenkler). To be submitted soon to <i>Annals of Statistics</i>.</li><li>“Efficient Risk Analysis for Mortgage Pools” (with K. Giesecke). To be submitted soon to <i>Operations Research</i>.</li><li>“Geographic Risk for Mortgage-backed Securities” (with K. Giesecke). Work in progress.</li><li>“Risk Premia for Mortgage-backed Securities” (with K. Giesecke). Work in progress.</li></ul>	
<b>HONORS</b>	<ul style="list-style-type: none"><li>NSF Grant (\$220,000), Division of Social and Economic Sciences: Methodology, Measurement, and Statistics Program.</li><li>Lore von Jaskowsky Memorial Prize, School of Engineering and Applied Sciences at Princeton University, for senior thesis research.</li><li>Rose Hills Foundation Engineering Fellowship, Stanford University.</li><li>Travel Award for INFORMS Conference (2013), Stanford University.</li><li>Travel Award for SIAM Financial Math Conference (2012, 2014), SIAM.</li></ul>	

<b>PRESENTATIONS</b>	<ul style="list-style-type: none"> <li>• SIAM Financial Mathematics and Engineering Meeting, Chicago, 2014. Invited Speaker.</li> <li>• INFORMS Annual Meeting, San Francisco, 2014. Invited Speaker.</li> <li>• Joint Mathematics Meeting, Baltimore, 2014. Invited Speaker.</li> <li>• INFORMS Annual Meeting, Minneapolis, 2013.</li> <li>• Fifth Western Conference on Mathematical Finance, Stanford University, 2013. Invited Speaker.</li> <li>• INFORMS Annual Meeting, Phoenix, October, 2012. Invited Speaker.</li> <li>• Financial Mathematics Seminar, Stanford University, 2012. Invited Speaker.</li> <li>• Systemic Risk Seminar, Department of Mathematics, Stanford University, 2012.</li> <li>• SIAM Financial Mathematics and Engineering Meeting, Minneapolis, 2012.</li> <li>• Annual Meeting of the Canadian Applied and Industrial Mathematics Society, Toronto, 2012. Invited Speaker.</li> <li>• 5th Financial Risks International Forum, Paris, France, 2012.</li> <li>• Financial Engineering Seminar, Stanford University, 2011.</li> </ul>
<b>PROFESSIONAL ACTIVITIES</b>	<ul style="list-style-type: none"> <li>• Chair of the Credit Risk Session for SIAM Annual Meeting, Minnesota, 2012.</li> <li>• Session Organizer for INFORMS Annual Meeting, 2014.</li> <li>• Referee for <i>Journal of Banking and Finance</i></li> </ul>
<b>TEACHING EXPERIENCE</b>	<ul style="list-style-type: none"> <li>• Undergraduate courses: <ul style="list-style-type: none"> <li>– Introduction to Financial Analysis (MS&amp;E 142)</li> <li>– Introduction to Optimization (MS&amp;E 111)</li> </ul> </li> <li>• Graduate courses: <ul style="list-style-type: none"> <li>– Teaching assistant: Honors Investment Science (MS&amp;E 242H), 2013</li> <li>– Teaching assistant: Investment Science (MS&amp;E 245), 2014</li> <li>– Teaching assistant: Mathematical Finance (MATH 238)</li> <li>– Teaching assistant: Credit Risk (MS&amp;E 347), 2012, 2013, and 2014</li> </ul> </li> </ul>
<b>WORK EXPERIENCE</b>	<ul style="list-style-type: none"> <li>• British Petroleum, Natural Gas and Power (NAGP) Trading, Summer 2013. Proposed, developed, and successfully backtested a trading algorithm for power market using machine learning.</li> </ul>
<b>SKILLS</b>	Matlab, Python, LaTeX, Excel, Hadoop (familiar), C++ (familiar), Java (familiar), R (familiar)
<b>CITIZENSHIP</b>	United States of America