

# SIYUAN GAO

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<b>RESEARCH INTERESTS</b>	Computational Neuroscience, Network Analysis, Graph Theory, Time Series Analysis, Machine Learning
<b>EDUCATION</b>	<b>Ph.D. in Engineering</b> <span style="float: right;"><b>2016 – present</b></span> Yale University <i>Advisor: Todd Constable</i>
	<b>Bachelor in Mathematics and Applied Mathematics</b> <span style="float: right;"><b>2012 - 2016</b></span> Zhejiang University <i>Advisor: Wei Chen</i> <i>Third year rank: 1/78</i>
<b>PUBLICATION</b>	<b>Task-induced brain state manipulation improves prediction of individual traits</b> Abigail Greene, <b>Siyuan Gao</b> , R. Todd Constable, Dustin Scheinost <i>Nature Neuroscience, 2017. (submitted)</i>
	<b>Brain state perturbation improves connectome-based predictions of related behaviors</b> Abigail Greene, <b>Siyuan Gao</b> , R. Todd Constable, Dustin Scheinost <i>Society for Neuroscience(SfN), 2017.</i>
	<b>Connectome-based predictive modeling: the impact of brain state and sex in a developmental cohort</b> Abigail Greene, <b>Siyuan Gao</b> , R. Todd Constable, Dustin Scheinost <i>Flux Congress, 2017.</i>
	<b>RCLens: Interactive Rare Category Exploration and Identification</b> Hanfei Lin, <b>Siyuan Gao</b> , David Gotz, Fan Du, Jingrui He, Nan Cao <i>IEEE Transactions on Visualization and Computer Graphics(TVCG), 2017.</i>
	<b>Adaptively Exploring Population Mobility Patterns in Flow Visualization</b> Fei Wang, Wei Chen, Ye Zhao, Tianyu Gu, <b>Siyuan Gao</b> , Hujun Bao <i>IEEE Transactions on Intelligent Transportation Systems, 2017.</i>

<b>RESEARCH EXPERIENCE</b>	<p><b>Graduate Research Assistant</b> <span style="float: right;"><b>2016 - present</b></span>  Magnetic Resonance Research Center, Yale University  Mentor: Todd Constable  <i>Focus on brain connectivity analysis. Build computational model to predict fluid intelligence from fmri data.</i></p> <p><b>Research Intern</b> <span style="float: right;"><b>Spring 2016</b></span>  Department of Computer Science, New York University, Shanghai  Mentor: Nan Cao  <i>Developed a rare category detection algorithm for a data visualization system. Paper submitted to IEEE Transactions on Visualization and Computer Graphics.</i></p> <p><b>Research Assistant</b> <span style="float: right;"><b>Summer 2015</b></span>  Department of Biomedical Engineering, University of California, Davis  Mentor: Jinyi Qi  <i>Developed JMLAA algorithm, which improved performance of the state-of-art MLAA algorithm for PET image reconstruction. It combined two likelihood functions for different information and using optimization algorithm to get the more accurate reconstructed PET image.</i></p>
<b>EXCHANGE EXPERIENCE</b>	<p><b>University of California, Berkeley</b> <span style="float: right;"><b>Summer 2014</b></span>  Courses:  <i>Introduction to High-Level Programming, Computational Analytics,</i>  Project:  <i>Implemented a web scraper for fundraising website Indiegogo and performed statistical data analysis for most efficient media presentation method for fundraising</i></p>
<b>SELECTED HONORS AND AWARDS</b>	<p>Yale University graduate fellowship <span style="float: right;">2016 - 2021</span></p> <p>Outstanding graduate of Zhejiang Province <span style="float: right;">2016</span></p> <p>National Scholarship (Top 1.5%) <span style="float: right;">2014 – 2015</span></p> <p>First-Class Scholarship for Outstanding Students <span style="float: right;">2014 - 2015</span></p> <p>Outstanding Student Leader Awards <span style="float: right;">2012 - 2013</span></p>
<b>TECHNICAL SKILLS</b>	<p>Theory: Applied math and statistics  Programming Language: Matlab, Python, R, C++</p>