

JUN CHEN, PH.D.

CONTACT	(515) 708-6401 jchenisu2015@gmail.com Website	U.S. Permanent Resident
EXPERTISE	Systems and Control: Supervisory control, failure diagnosis & prognosis, security, stochastic hybrid systems Power and Energy: Hybrid energy systems, renewables, co-simulation, optimization, electrical power market Modeling and Simulation: Acausal modeling, co-simulation, time series, reduced-order modeling Optimization: Convex optimization, stochastic optimization, implicit constraints Formal Methods: Model-based verification and design, statistical verification, linear-time temporal logic Data Mining: Reduced order modeling, time series analysis, statistical verification, risk analysis	
PROGRAMMING	Matlab (8 years experiences), C, Python, Modelica, HTML, XML, \LaTeX Simulink, Git, Dymola, FMI Toolbox, CVX, NuSMV, Spin, PSCAD, Visual Studio	
EXPERIENCE	R&D Scientist in <i>Power and Energy Systems</i> , Idaho National Laboratory, ID, USA 08/2016–present - Leading proposal development and technically supporting projects on power and energy systems. Postdoctoral Researcher in <i>Energy Integration</i> , Idaho National Laboratory, ID, USA 11/2014–08/2016 - Leading proposal development and technically supporting projects on hybrid renewable energy systems; - Apply expertise in control, optimization, statistics, time series, data mining, and economics. Summer Intern in <i>Software V&V</i> , General Motors R&D, MI, USA 04/2014–07/2014 - Model-based and data-based (statistical model checking) validation of diagnostic software requirement. Research Assistant in <i>Stochastic Hybrid Systems</i> , Iowa State University, IA, USA 01/2011–10/2014 - Model-based diagnosis, prognosis, and resiliency analysis in stochastic discrete-event and hybrid systems; - Property verification and parameter synthesis to meet desired error bounds; - Hybrid state estimation based on Bayesian filter for LTL requirement violation monitoring. Research Assistant in <i>System Identification</i> , University of Central Florida, FL, USA 08/2009–12/2010 - System identification in stochastic neuronal model for posture control application; - Weighted least-squares, maximum likelihood, and simulated annealing for parameter estimation. Undergraduate Research Assistant in <i>Embedded Control</i> , Zhejiang University, China 07/2008–06/2009 - Embedded controller development on Freescale microprocessor for intelligent autonomous vehicle.	
HONORS AND RECOGNITIONS	Best Paper Award , IEEE Transactions on Automation Science and Engineering 2016 Associate Editor , Energy Systems 2016–present INL Peer Recognition Award for Publication Achievement , Idaho National Laboratory 2016 INL Exceptional Contributions Program Award , Idaho National Laboratory 2015, 2016 Research Excellence Award , Iowa State University 2014 Student Travel Award, American Control Conference 2014 Associate Editor, Chinese Control & Decision Conference 2013–present Provost's Graduate Fellowship , University of Central Florida 2009 Outstanding Student , Zhejiang University 2008	
EDUCATION	Ph.D. in Electrical Engineering (minor in CS), Iowa State University, Ames IA, 4.0/4.0 01/2011–12/2014 Graduate Student in EE, University of Central Florida, Orlando FL, 4.0/4.0 09/2009–12/2010 B. S. in Automation , Zhejiang University, Hangzhou China, 3.72/4.0 09/2005–06/2009	
SELECTED PUBLICATIONS	- J. Chen and H. E. Garcia, “Economic Optimization of Operations for Hybrid Energy Systems under Variable Markets,” <i>Applied Energy</i> , vol. 177, pp. 11-24, September 2016. - J. Chen and R. Kumar, “Fault Detection of Discrete-Time Stochastic Systems Subject to Temporal Logic Correctness Requirements,” <i>IEEE Trans. Auto. Sci. Eng.</i> , vol. 12, no. 4, pp. 1369-1379, October 2015. - J. Chen and R. Kumar, “Stochastic Failure Prognosability of Discrete Event Systems,” <i>IEEE Trans. Automatic Control</i> , vol. 60, no. 6, pp. 1570-1581, June 2015. - J. Chen and R. Kumar, “Failure Detection Framework for Stochastic Discrete Event Systems with Guaranteed Error Bounds,” <i>IEEE Trans. Automatic Control</i> , vol. 60, no. 6, pp. 1542-1553, June 2015.	
Full list		