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EDUCATION	Ph.D. in Electrical Engineering (minor in CS), Iowa State University, Ames IA, 4.0/4.0 B. S. in Automation , Zhejiang University, Hangzhou China	12/2014 06/2009
RESEARCH INTERESTS	Systems and Control: Model predictive control, optimal control, stochastic processes, event-triggered control Artificial Intelligence: Reinforcement learning, deep learning, time series, generative adversary network Automotive Systems: Autonomous vehicle, electric vehicle, battery control, vehicle dynamics, co-simulation Energy Systems: Hybrid energy systems, renewable energy, power electronic, battery, economic analysis	
EMPLOYMENT	Assistant Professor , ECE Department, Oakland University, Rochester MI, USA Senior Control Systems Engineer , General Motors, Milford MI, USA R&D Scientist in <i>Power and Energy Systems</i> , Idaho National Laboratory, ID, USA Summer Intern in <i>Software V&V</i> , General Motors R&D, MI, USA Research Assistant in <i>Stochastic Hybrid Systems</i> , Iowa State University, IA, USA Teaching Assistant in <i>Electrical Engineering</i> , Iowa State University, IA, USA	08/2020–present 01/2017–08/2020 11/2014–12/2016 04/2014–07/2014 01/2011–10/2014 01/2011–12/2013
HONORS AND RECOGNITIONS	Associate Editor , IFAC International Symposium on Advances in Automotive Control IEEE Senior Member Associate Editor , IEEE International Conference on Robotics and Automation IEEE Best Paper Award , IEEE Transactions on Automation Science and Engineering Associate Editor , Energy Systems INL Publication Achievement Award , Idaho National Laboratory INL Exceptional Contributions Program Award, Idaho National Laboratory Research Excellence Award , Iowa State University Student Travel Award, American Control Conference Professional Development Grants (PAG), Iowa State University Third Class Scholarship for Undergraduate Student, Zhejiang University Outstanding Student , Zhejiang University	2022 2020 2020 2016 2016–present 2016 2015 & 2016 2014 2014 2014 2008 2008
PUBLICATIONS	(Students under my close supervision are marked in <u>underline</u> ; corresponding author is marked by *) Patent [4] Min Sun, Yiran Hu, David Edwards, Jun Chen , Insu Chang and Steven Moorman, “Active Thermal Management System and Method for Flow Control,” USPTO Application No. 16/551064; filed by GM Global Technology Operations LLC on August 26, 2019, US Patent Pending . [3] Jun Chen , Ruixing Long and Yiran Hu, “Method for Increasing Control Performance of Model Predictive Control Cost Functions,” USPTO Application No. 16/418658; filed by GM Global Technology Operations LLC on May 21, 2019, U.S. Patent No. US11192561 B2, December 7, 2021 . [2] Yiran Hu, David Edwards, Michael Paratore Jr, Min Sun, Jun Chen , Eugene Gonze and Sergio Quelhas, “Method and Apparatus for Control of Propulsion System Warmup Based on Engine Wall Temperature,” USPTO Application No. 16/589579; filed by GM Global Technology Operations LLC on October 1, 2019, U.S. Patent No. 11078825 B2, August 3, 2021 . [1] Jun Chen , David Edwards, Yiran Hu, Min Sun, Adam J. Heinzen and Michael A. Smith, “Method and System for Determining Thermal State,” USPTO Application No. 16/431199, filed by GM Global Technology Operations LLC on June 4, 2019, U.S. Patent No. 10995688 B2, May 4, 2021 .	

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- [20] Xuan Xie, Guojiang Xiong, **Jun Chen** and Jing Zhang, “Universal Transparent Artificial Neural Network-Based Fault Section Diagnosis Models for Power Systems,” *Advanced Theory and Simulations* (Accepted for publication).
- [19] **Jun Chen*** and Junhui Zhao, “Generating Synthetic Wind Speed Scenarios using Artificial Neural Networks for Probabilistic Analysis of Hybrid Energy Systems,” *International Journal of Modelling, Identification and Control*, (Accepted for publication)
- [18] Guojiang Xiong, Xufeng Yuan, Ali Wagdy Mohamed, **Jun Chen** and Jing Zhang, “Improved Binary Gaining-sharing Knowledge based Algorithm with Mutation for Fault Section Location in Distribution Networks,” *Journal of Computational Design and Engineering*, volume 9, number 2, pages 393–405, April 2022.
- [17] **Jun Chen*** and Ramesh S, “Model-based Validation of Diagnostic Software with Application in Automotive Systems,” *IET Cyber-Systems and Robotics*, volume 3, number 2, pages 140–149, June 2021.
- [16] **Jun Chen**, “Extended Kalman Filter Steady Gain Scheduling using k -means Clustering,” *International Journal of Modeling, Identification and Control*, volume 34, number 2, pages 158–162, 2020.
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- [14] **Jun Chen**, Qin Wang, Jianming Lian and Wanning Li, “Guest Editorial: Advances in Control and Decision for Power and Energy Systems,” *Journal of Control and Decision*, volume 5, number 2, pages 115–116, February 2018.
- [13] **Jun Chen**, Christoforos Keroglou, Christoforos N. Hadjicostis and Ratnesh Kumar, “Revised Test for Stochastic Diagnosability of Discrete-Event Systems,” *IEEE Transactions on Automation Science and Engineering*, volume 15, number 1, pages 404–408, January 2018.
- [12] **Jun Chen**, Peter Molnar and Aman Behal, “Identification of a Stochastic Resonate-and-Fire Neuronal Model via Nonlinear Least Squares and Maximum Likelihood Estimation,” *International Journal of Modeling, Identification and Control*, volume 28, number 3, pages 221–231, October 2017.
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- [5] **Jun Chen** and Ratnesh Kumar, “Fault Detection of Discrete-Time Stochastic Systems Subject to Temporal Logic Correctness Requirements,” *IEEE Transactions on Automation Science and Engineering*, volume 12, number 4, pages 1369–1379, October 2015. (**IEEE Best Paper Award**)
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- [1] Lingfei Zhi, **Jun Chen**, Peter Molnar and Aman Behal, “Weighted Least-Squares Approach for Identification of a Reduced-Order Adaptive Neuronal Model,” *IEEE Transactions on Neural Networks and Learning Systems*, volume 23, number 5, pages 834–840, May 2012.

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- [20] Shan Huang and **Jun Chen***, “Event-triggered Model Predictive Control for Autonomous Vehicle with Rear Steering,” *2022 SAE World Congress*, Detroit, MI, April 5–7, 2022.
- [19] **Jun Chen***, Aman Behal and Chong Li, “Active Cell Balancing by Model Predictive Control for Real Time Range Extension,” *2021 IEEE Conference on Decision and Control*, Austin, TX, December 13–15, 2021.
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- [17] **Jun Chen*** and Junhui Zhao, “Synthetic Wind Speed Scenarios Generation using Artificial Neural Networks for Probabilistic Analysis of Hybrid Energy Systems,” *2021 IEEE International Symposium on Industrial Electronics*, Kyoto, Japan, June 20–23, 2021.
- [16] **Jun Chen***, Man Liang and Xu Ma, “Probabilistic Analysis of Electric Vehicle Energy Consumption Using MPC Speed Control and Nonlinear Battery Model,” *2021 IEEE Green Technologies Conference*, Denver, CO, April 7–9, 2021.
- [15] **Jun Chen***, Zhaojian Li and Xiang Yin, “Optimization of Energy Storage Size and Operation for Renewable-EV Hybrid Energy Systems,” *2021 IEEE Green Technologies Conference*, Denver, CO, April 7–9, 2021.
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- [3] **Jun Chen** and Ratnesh Kumar, “Decentralized Failure Diagnosis of Stochastic Discrete Event Systems,” *2013 IEEE Conference on Automation Science and Engineering*, Madison, WI, August 17–21, 2013. (Invited Paper)
- [2] **Jun Chen** and Ratnesh Kumar, “Polynomial Test for Stochastic Diagnosability of Discrete Event Systems,” *2012 IEEE Conference on Automation Science and Engineering*, Seoul, Korea, August 20–24, 2012.
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Book Chapter

- [1] Mariam Ibrahim, **Jun Chen** and Ratnesh Kumar, “Quantification of Centralized/Distributed Secrecy in Stochastic Discrete Event Systems,” in *Recent Advances in Systems Safety and Security*, Editors: Emil Pricop and Grigore Stamatescu, Springer, May 2016, ISBN: 978-3-319-32523-1.

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- [2] **Jun Chen**, “Failure Diagnosis and Prognosis in Stochastic Discrete-Event and Cyber-Physical Systems,” Ph.D. Dissertation, Department of Electrical and Computer Engineering, Iowa State University, Ames, IA, USA, August 2014.
- [1] **Jun Chen**, “On the Reliability of MVB Communication Network,” Bachelor’s Thesis, College of Electrical Engineering, Zhejiang University, China, June 2009.