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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
INTERESTS	Systems and Control, Artificial Intelligence, Intelligent Vehicles, Robotics, Battery Management Systems	
EMPLOYMENT	Oakland University , Rochester, MI, USA - Associate Professor , Department of Electrical and Computer Engineering - Assistant Professor, Department of Electrical and Computer Engineering General Motors , Michigan, USA - Senior Control Systems Engineer, Vehicle and Propulsion Control, Milford - Summer Intern, Software V&V, Warren (GM R&D) Idaho National Laboratory , Idaho Falls, ID, USA - R&D Scientist, Power and Energy Systems	08/2024–present 08/2020–08/2024 01/2017–08/2020 04/2014–07/2014 11/2014–12/2016
HONORS AND RECOGNITIONS	NSF CAREER Award , National Science Foundation Best Paper Award , IEEE Transactions on Automation Science and Engineering Best Paper Award , IEEE International Conference on Electro-Information Technology IEEE Senior Member Associate Editor , American Control Conference Associate Editor , Modeling, Estimation, and Control Conference Associate Editor , IEEE Conference on Control Technology and Applications Outstanding Graduate Mentor Award , Oakland University Editorial Contribution Award , Energy Systems (Springer Nature) Most Research Active Award , Oakland University New Investigator Research Excellence Award , Oakland University Most Active Grant Seeker Award , Oakland University Oakland County 40 Under 40 , Oakland County NSF CMMI Game Changer Academies (C-GCA) Panel Fellow , NSF Faculty Recognition Award for Research , Oakland University R&D 100 Award , R&D World Associate Editor , IEEE International Conference on Robotics and Automation 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 Third Class Scholarship for Undergraduate Student , Zhejiang University Outstanding Student , Zhejiang University	2022 2016 2023 2020 2024–present 2024–present 2023–present 2025 2025 2024 2024 2023 & 2024 2024 2024 2023 2023 2020 2016 2015 & 2016 2014 2014 2008 2008
HONORS BY MY ADVISEES	Student Grant (Wanqun Yang), Modeling, Estimation and Control Conference SECS Best Graduate Paper Award (Zhaodong Zhou), Oakland University Undergraduate Research Competition Winner (Steven DeCoste), ASME ICE Division	2025 2024 2022
SELECTED GRANTS	Total: ~\$5.7m; As lead/sole PI: ~\$2.2m; Personal share: ~\$2.4m [7] Jun Chen , “Collaborative Research: Scalable Privacy Verification and Quantification for Multi-Robot Systems,” 10/2025–09/2028, NSF-FRR. (Collaborative project with Dr. Feng Lin from Wayne State University; Lead institution – OU)	

- [6] **Jun Chen**, “Sensor-lean Estimation and Monitoring for Second Life EV Batteries,” 05/2025–04/2028, NSF-ECCS-EPCN.
- [5] **Jun Chen**, “CAREER: Reconfigurable and Predictive Control with Reinforcement Learning Supervisor for Active Battery Cell Balancing,” 01/2023–12/2027, NSF-ECCS-EPCN.
- [4] **Jun Chen**, “Sensor Reduction for Large Battery Packs,” 09/2024–08/2026, Michigan Translational Research and Commercialization (MTRAC) for Advanced Transportation Innovation Hub.
- [3] **Jun Chen**, “Affordable Autonomous Vehicle Platform for University Research and Education,” 09/2025–08/2026, MEDC ADVANCE Proof-of-Concept Fund.
- [2] **Jun Chen**, “Development of a Virtual Reality Environment for Autonomous Vehicle Personalization,” 05/2025–04/2026, University Research Committee, Oakland University.
- [1] Ankun Yang, **Jun Chen**, Xia Wang, Yongsoon Yoon, Dan DeVescovo, Daniel Aloï, Shadi Alawneh and Mohammad Sedigh Toulabi, “Next-Gen Electrification Testing and Standards Facility: from Materials to Vehicles,” 10/2024–09/2026, Congress Plus Up - NIST Construction of Research Facilities.

PUBLICATIONS

(h-index: 24; underline: students under my close supervision; *: corresponding author)

Patents

- [4] Min Sun, Yiran Hu, David Edwards, **Jun Chen**, Insu Chang and Steven Moorman, “[Active Thermal Management System and Method for Flow Control](#),” U.S. Patent No. US11312208 B2, April 26, 2022.
- [3] **Jun Chen**, Ruixing Long and Yiran Hu, “[Method for Increasing Control Performance of Model Predictive Control Cost Functions](#),” 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](#),” 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](#),” U.S. Patent No. 10995688 B2, May 4, 2021.

Book Chapters

- [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.

Journal Articles

- [47] Luke Nuculaj and **Jun Chen***, “[Simultaneous Cell State Estimation via Dense Adaptive Extended Kalman Filter](#),” *IEEE Transactions on Control Systems Technology*, (Accepted for Publication May 2025)
- [46] Owais Ogdeh, Luke Nuculaj, Ali Irshayyid, Zhaodong Zhou and **Jun Chen***, “[Cell State-of-Charge Estimation with Limited Voltage Sensor Measurements](#),” *Applied Sciences*, volume 25, number 18, pages 1–15, September 2025.
- [45] Wanqun Yang and **Jun Chen***, “[Comparison of Linear MPC and Explicit MPC for Battery Cell Balancing Control](#),” *Algorithms*, volume 18, number 9, pages 1–13, September 2025.
- [44] David Flessner and **Jun Chen***, “[Reinforcement Learning-Based Event-Triggered Model Predictive Control for Electric Vehicle Active Battery Cell Balancing](#),” *ASME Letters in Dynamic Systems and Control*, volume 5, number 2, pages 1–5, April 2025.
- [43] Zhaodong Zhou, Mingyuan Tao, Jiayi Qiu, Peng Zhang, Meng Xu and **Jun Chen***, “[Autonomous Vehicle Path Tracking Using Event-Triggered MPC with Switching Model: Methodology and Real-World Validation](#),” *IET Control Theory & Applications*, volume 19, number 1, pages 1–10, January 2025.
- [42] Ranya Badawi and **Jun Chen***, “[Event-Triggered Boost Converter Model Predictive Control with Kalman Filter](#),” *Systems Science & Control Engineering*, volume 12, number 1, pages 1–15, December 2024.
- [41] Guojiang Xiong*, Jing Zhang, Xiaofan Fu, **Jun Chen** and Ali Wagdy Mohamed, “[Seasonal Short-term Photovoltaic Power Prediction Based on GSK-BiGRU-XGboost Considering Correlation of Meteorological Factors](#),” *Journal of Big Data*, volume 11, number 164, pages 1–19, November 2024.

- [40] Mingqiang Wang, Lei Zhang*, **Jun Chen**, Zhiqiang Zhang, Zhenpo Wang and Dongpu Cao, “[A Hybrid Trajectory Prediction Framework for Automated Vehicles with Attention Mechanisms](#),” *IEEE Transactions on Transportation Electrification*, volume 10, number 3, pages 6178–6194, September 2024.
- [39] Ali Irshayyid, **Jun Chen*** and Guojiang Xiong, “[A Review on Reinforcement Learning-based Highway Autonomous Vehicle Control](#),” *Green Energy and Intelligent Transportation*, volume 3, number 4, pages 1–19, August 2024.
- [38] Cong Wang, Zhenpo Wang, Lei Zhang*, **Jun Chen** and Dongpu Cao, “[Post-Impact Stability Control for Road Vehicles: State-of-the-Art Methodologies and Perspectives](#),” *IEEE Transactions on Intelligent Transportation Systems*, volume 25, number 8, pages 8295–8312, August 2024.
- [37] **Jun Chen***, Aman Behal, Zhaojian Li and Chong Li, “[Active Battery Cell Balancing by Real Time Model Predictive Control for Extending Electric Vehicle Driving Range](#),” *IEEE Transactions on Automation Science and Engineering*, volume 21, number 3, pages 4003–4015, July 2024.
- [36] Zhaodong Zhou, Christopher Rother and **Jun Chen***, “[Comparison of Two-Wheel and Four-Wheel Steering using Event-Triggered Predictive Motion Control and Scale Vehicles](#),” *ASME Letters in Dynamic Systems and Control*, volume 4, number 3, pages 1–6, July 2024.
- [35] **Jun Chen***, Lei Zhang and Weinan Gao, “[Reconfigurable Model Predictive Control for Large Scale Distributed Systems](#),” *IEEE Systems Journal*, volume 18, number 2, pages 965–976, June 2024.
- [34] Kaixiang Zhang, Kaian Chen, Zhaojian Li*, **Jun Chen** and Yang Zheng, “[Privacy-Preserving Data-Enabled Predictive Leading Cruise Control in Mixed Traffic](#),” *IEEE Transactions on Intelligent Transportation Systems*, volume 25, number 5, pages 3467–3482, May 2024.
- [33] David Flessner, **Jun Chen*** and Guojiang Xiong, “[Reinforcement Learning-based Event-Triggered Active Battery Cell Balancing Control for Electric Vehicle Range Extension](#),” *Electronics*, volume 13, number 5, pages 1–22, March 2024.
- [32] Fengying Dang, Dong Chen, **Jun Chen*** and Zhaojian Li*, “[Event-Triggered Model Predictive Control with Deep Reinforcement Learning for Autonomous Driving](#),” *IEEE Transactions on Intelligent Vehicles*, volume 9, number 1, pages 459–468, January 2024.
- [31] Lei Zhang*, Qi Wang, **Jun Chen**, Zhenpo Wang and Shaohua Li, “[Brake-by-Wire System for Passenger Cars: A Review of Structure, Control, Key Technologies, and Application in X-by-Wire Chassis](#),” *eTransportation*, volume 18, number 1, pages 1–15, October 2023.
- [30] **Jun Chen***, Xiangyu Meng and Weinan Gao, “[Preface: Recent Advances on Learning-Based Control - Theory and Application](#),” *International Journal of Modelling, Identification and Control*, volume 43, number 3, pages 177–178, October 2023.
- [29] Mohammad R. Hajidavalloo, **Jun Chen***, Qiuha Hu, Ziyu Song, Xunyu Yin and Zhaojian Li, “[NMPC-based Integrated Thermal Management of Battery and Cabin for Electric Vehicles in Cold Weather Conditions](#),” *IEEE Transactions on Intelligent Vehicles*, volume 8, number 9, pages 4208–4222, September 2023.
- [28] Christopher Rother, Zhaodong Zhou and **Jun Chen***, “[Development of a Four-Wheel Steering Scale Vehicle for Research and Education on Autonomous Vehicle Motion Control](#),” *IEEE Robotics and Automation Letters*, volume 8, number 8, pages 5015–5022, August 2023.
- [27] Zhaodong Zhou, Christopher Rother and **Jun Chen***, “[Event-Triggered Model Predictive Control for Autonomous Vehicle Path Tracking: Validation using CARLA Simulator](#),” *IEEE Transactions on Intelligent Vehicles*, volume 8, number 6, pages 3547–3555, June 2023.
- [26] **Jun Chen***, “[A Probabilistic Test for A-Diagnosability of Stochastic Discrete-Event Systems with Guaranteed Error Bound](#),” *IEEE Control Systems Letters*, volume 7, number 1, pages 2833–2838, June 2023.
- [25] Zaiyu Gu, Guojiang Xiong*, Xiaofan Fu, Ali Wagdy Mohamed, Mohammed Azmi Al-Betar, Hao Chen and **Jun Chen**, “[Extracting Accurate Parameters of Photovoltaic Cell Models via Elite Learning Adaptive Differential Evolution](#),” *Energy Conversion and Management*, volume 285, pages 1–25, June 2023.
- [24] Qinghua Liu, Guojiang Xiong*, Xiaofan Fu, Ali Wagdy Mohamed, Jing Zhang, Mohammed Azmi Al-Betar, Hao Chen, **Jun Chen** and Sheng Xu, “[Hybridizing Gaining-Sharing Knowledge and Differential Evolution for Large-scale Power System Economic Dispatch Problems](#),” *Journal of Computational Design and Engineering*, volume 10, number 2, pages 615–631, April 2023.

- [23] Ali Irshayyid and **Jun Chen***, “[Comparative Study of Cooperative Platoon Merging Control Based on Reinforcement Learning](#),” *Sensors*, volume 23, number 2-990, pages 1–23, January 2023.
- [22] **Jun Chen***, Zhaodong Zhou, Ziwei Zhou, Xia Wang and Boryann Liaw, “[Impact of Battery Cell Imbalance on Electric Vehicle Range](#),” *Green Energy and Intelligent Transportation*, volume 1, number 3, pages 1–8, December 2022.
- [21] **Jun Chen*** and Ratnesh Kumar, “[Stochastic Failure Prognosis of Discrete Event Systems](#),” *IEEE Transactions on Automatic Control*, volume 67, number 10, pages 5487–5492, October 2022.
- [20] **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*, volume 41, number 3, pages 183–192, July 2022.
- [19] 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*, volume 5, number 4, pages 1–12, April 2022.
- [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 Modelling, Identification and Control*, volume 34, number 2, pages 158–162, February 2020.
- [15] Xiang Yin, **Jun Chen**, Zhaojian Li and Shaoyuan Li, “[Robust Fault Diagnosis of Stochastic Discrete Event Systems](#),” *IEEE Transactions on Automatic Control*, volume 64, number 10, pages 4237–4244, October 2019.
- [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 Modelling, Identification and Control*, volume 28, number 3, pages 221–231, October 2017.
- [11] **Jun Chen** and Cristian Rabiti, “[Synthetic Wind Speed Scenarios Generation for Probabilistic Analysis of Hybrid Energy Systems](#),” *Energy*, volume 120, pages 507–517, February 2017.
- [10] **Jun Chen**, Mariam Ibrahim and Ratnesh Kumar, “[Quantification of Secrecy in Partially Observed Stochastic Discrete Event Systems](#),” *IEEE Transactions on Automation Science and Engineering*, volume 14, number 1, pages 185–195, January 2017.
- [9] Jong S. Kim, **Jun Chen** and Humberto E. Garcia, “[Modeling, Control, and Dynamic Performance Analysis of a Reverse Osmosis Desalination Plant Integrated within Hybrid Energy Systems](#),” *Energy*, volume 112, pages 52–66, October 2016.
- [8] **Jun Chen** and Humberto E. Garcia, “[Economic Optimization of Operations for Hybrid Energy Systems under Variable Markets](#),” *Applied Energy*, volume 177, pages 11–24, September 2016.
- [7] **Jun Chen**, Humberto E. Garcia, Jong S. Kim and Shannon M. Bragg-Sitton, “[Operations Optimization of Nuclear Hybrid Energy Systems](#),” *Nuclear Technology*, volume 195, number 2, pages 143–156, August 2016.
- [6] Humberto E. Garcia, **Jun Chen**, Jong S. Kim, Richard B. Vilim, William R. Binder, Shannon M. Bragg-Sitton, Richard D. Boardman, Michael G. McKellar and Christiaan J. J. Paredis, “[Dynamic Performance Analysis of Two Regional Nuclear Hybrid Energy Systems](#),” *Energy*, volume 107, pages 234–258, July 2016.

- [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](#): [link](#))
- [4] **Jun Chen** and Ratnesh Kumar, “[Stochastic Failure Prognosability of Discrete Event Systems](#),” *IEEE Transactions on Automatic Control*, volume 60, number 6, pages 1570–1581, June 2015.
- [3] **Jun Chen** and Ratnesh Kumar, “[Failure Detection Framework for Stochastic Discrete Event Systems with Guaranteed Error Bounds](#),” *IEEE Transactions on Automatic Control*, volume 60, number 6, pages 1542–1553, June 2015.
- [2] **Jun Chen** and Ratnesh Kumar, “[Polynomial Test for Stochastic Diagnosability of Discrete Event Systems](#),” *IEEE Transactions on Automation Science and Engineering*, volume 10, number 4, pages 969–979, October 2013.
- [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.

Peer Reviewed Conference Articles

- [41] Artem Abzaliev, Rutchanon Hatasen, Hussein Kokash, Linda Zhu, **Jun Chen** and Mihai G. Burzo, “Machine Learning and Sensory Integration for Real-Time Road Surface Assessment,” *ASME International Mechanical Engineering Congress & Exposition*, Memphis, TN, USA, November 16–20, 2025.
- [40] Ashwin Devanga, Tingjun Lei*, Jueming Hu, **Jun Chen** and Chaomin Luo, “Trustworthy Cyber-Resilient Reinforcement Learning for Secure Navigation under Adversarial Attack,” *IEEE Cyber Awareness and Research Symposium*, Grand Forks, ND, October 27–30, 2025.
- [39] Wanqun Yang, Mohammad R. Hajidavalloo, Zhaojian Li and **Jun Chen***, “NMPC-based Cell-Level Thermal Management of EV Batteries in Low Temperature Environment,” *Modeling, Estimation and Control Conference*, Pittsburgh, PA, USA, October 5–8, 2025.
- [38] Hussein Alawsi, Zhaodong Zhou, Ali Irshayyid and **Jun Chen***, “RL-assisted Model Predictive Control for Automated Parking Systems,” *IEEE International Conference on Unmanned Systems*, Changzhou, China, September 18–19, 2025.
- [37] Ali Irshayyid and **Jun Chen***, “GNN-Based Surrogate Model for Reconfigurable Battery Packs,” *IEEE Conference on Control Technology and Applications*, San Diego, CA, August 25–27, 2025.
- [36] Lateefa Shibah Tusubira, Wen-Chiao Lin* and **Jun Chen**, “[Fault Mitigation for Autonomous Vehicles with Reduced Front Steering Capability](#),” *IEEE International Conference on Prognostics and Health Management*, Denver, CO, June 9–11, 2025, 2025.
- [35] Cory Ness and **Jun Chen***, “[Extended Kalman Filter for Flywheel Systems](#),” *IEEE International Conference on Electro Information Technology*, Valparaiso, IN, May 29–31, 2025.
- [34] Zhaodong Zhou, Yu Jiang and **Jun Chen***, “[Exploring Optimal Pumping Strategy in Active Suspension Systems for Speed Maximization during Downhill Motion](#),” *12th IFAC Symposium on Intelligent Autonomous Vehicles*, Phoenix, AZ, May 7–9, 2025.
- [33] Luke Nuculaj, Adam Kidwell, Connor Homayouni, Alex Fillmore, Darrin Hanna and **Jun Chen**, “[Optimal FPGA Implementation of Dense Extended Kalman Filter for Simultaneous Cell State Estimation](#),” *IEEE International Midwest Symposium on Circuits and Systems (MWSCAS)*, Springfield, MA, August 11–14, 2024.
- [32] Muye Jia, Mingyuan Tao, Meng Xu*, Peng Zhang, Jiayi Qiu, Gerald Bergsieker and **Jun Chen**, “[RL-MPC: Reinforcement Learning Aided Model Predictive Controller for Autonomous Vehicle Lateral Control](#),” *2024 SAE World Congress*, Detroit, MI, April 16–18, 2024.
- [31] Zhaodong Zhou and **Jun Chen***, “[Modeling Driver Lane Change Behavior Using Inverse Reinforcement Learning](#),” *IEEE International Conference on Computing and Machine Intelligence*, Mount Pleasant, MI, April 13–14, 2024.
- [30] Ali Irshayyid and **Jun Chen***, “[Highway Merging Control Using Multi-Agent Reinforcement Learning](#),” *IEEE International Conference on Computing and Machine Intelligence*, Mount Pleasant, MI, April 13–14, 2024.

- [29] Mohammad R. Hajidavalloo, **Jun Chen***, Qiuha Hu and Zhaojian Li, “[Study on the Benefits of Integrated Battery and Cabin Thermal Management in Cold Weather Conditions](#),” *2023 American Control Conference*, San Diego, CA, May 31–June 2, 2023.
- [28] [Zhaodong Zhou](#), **Jun Chen***, Mingyuan Tao, Peng Zhang and Meng Xu, “[Experimental Validation of Event-Triggered Model Predictive Control for Autonomous Vehicle Path Tracking](#),” *IEEE International Conference on Electro Information Technology*, Romeoville, IL, May 18–20, 2023. (**Best Paper Award**: [link](#))
- [27] Yang Chen, **Jun Chen***, Chenang Liu, Guodong Liu, Maximiliano Ferrari and Aditya Sundararajan, “[Integrated Modeling and Optimal Operation of Multi-Energy System for Coastal Community](#),” *IEEE International Conference on Electro Information Technology*, Romeoville, IL, May 18–20, 2023.
- [26] **Jun Chen*** and Zhaodong Zhou, “[Battery Cell Imbalance and Electric Vehicles Range: Correlation and NMPC-based Balancing Control](#),” *IEEE International Conference on Electro Information Technology*, Romeoville, IL, May 18–20, 2023.
- [25] [Steven DeCoste](#), [Antonio Scalzi](#), **Jun Chen*** and Dan DelVescovo*, “[Minimizing Steady-State Testing Time in an Engine Dynamometer Laboratory](#),” *2023 SAE World Congress*, Detroit, MI, April 18–20, 2023.
- [24] [Ranya Badawi](#) and **Jun Chen***, “[Performance Evaluation of Event-Triggered Model Predictive Control for Boost Converter](#),” *2022 IEEE Vehicle Power and Propulsion Conference*, Merced, CA, November 1–4, 2022.
- [23] Man Liang* and **Jun Chen**, “[A Conceptual Design of Barking Drones Fleet Management to Detect and Repulse Cattle](#),” *21st Asia Pacific Automotive Engineering Conference*, Melbourne, Australia, October 3–5, 2022.
- [22] [Ranya Badawi](#) and **Jun Chen***, “[Enhancing Enumeration-Based Model Predictive Control for DC-DC Boost Converter with Event-Triggered Control](#),” *European Control Conference*, London, UK, July 12–15, 2022.
- [21] **Jun Chen***, Xiangyu Meng and Zhaojian Li, “[Reinforcement Learning-based Event-Triggered Model Predictive Control for Autonomous Vehicle Path Following](#),” *2022 American Control Conference*, Atlanta, GA, June 8–10, 2022.
- [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](#),” *IEEE Conference on Decision and Control*, Austin, TX, USA, December 13–15, 2021.
- [18] **Jun Chen*** and Zonggen Yi, “[Comparison of Event-Triggered Model Predictive Control for Autonomous Vehicle Path Tracking](#),” *2021 IEEE Conference on Control Technology and Applications*, San Diego, CA, August 8–11, 2021. (Invited Paper)
- [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.
- [14] Aaron S. Epiney, Andrea Alfonsi, Cristian Rabiti and **Jun Chen**, “[Economic Assessment of Nuclear Hybrid Energy Systems: Optimization using RAVEN](#),” *2017 ANS Annual Meeting*, San Francisco, CA, June 11–15, 2017.
- [13] **Jun Chen**, Jong S. Kim and Cristian Rabiti, “[Probabilistic Analysis of Hybrid Energy Systems Using Synthetic Renewable and Load Data](#),” *2017 American Control Conference*, Seattle, WA, May 24–26, 2017.

- [12] **Jun Chen** and Humberto E. Garcia, “Operations Optimization of Hybrid Energy Systems under Variable Markets,” *2016 American Control Conference*, Boston, MA, July 6–8, 2016.
- [11] Mariam Ibrahim, **Jun Chen** and Ratnesh Kumar, “A Resiliency Measure for Electrical Power Systems,” *2016 IFAC/IEEE International Workshop on Discrete Event Systems*, Xi’an, China, May 30 – June 1, 2016.
- [10] Mariam Ibrahim, **Jun Chen** and Ratnesh Kumar, “Quantification of Distributed Secrecy Loss in Stochastic Discrete Event Systems under Bounded-Delay Communications,” *2016 IFAC/IEEE International Workshop on Discrete Event Systems*, Xi’an, China, May 30 – June 1, 2016.
- [9] Mariam Ibrahim, **Jun Chen** and Ratnesh Kumar, “An Information Theoretic Measure for Secrecy Loss in Stochastic Discrete Event Systems,” *2015 International Conference on Electronics, Computers and Artificial Intelligence – International Workshop on Systems, Safety and Security*, Bucharest, Romania, June 25–27, 2015.
- [8] **Jun Chen** and Ratnesh Kumar, “Failure Prognosability of Stochastic Discrete Event Systems,” *2014 American Control Conference*, Portland, OR, June 4–6, 2014.
- [7] **Jun Chen** and Ratnesh Kumar, “Pattern Mining for Predicting Critical Events from Sequential Event Data Log,” *2014 IFAC/IEEE International Workshop on Discrete Event Systems*, Paris-Cachan, France, May 14–16, 2014.
- [6] Mariam Ibrahim, **Jun Chen** and Ratnesh Kumar, “Secrecy in Stochastic Discrete Event Systems,” *2014 IEEE International Conference on Networking, Sensing and Control*, Miami, FL, April 7–9, 2014.
- [5] **Jun Chen** and Ratnesh Kumar, “Failure Diagnosis of Discrete-Time Stochastic Systems Subject to Temporal Logic Correctness Requirements,” *2014 IEEE International Conference on Networking, Sensing and Control*, Miami, FL, April 7–9, 2014.
- [4] **Jun Chen** and Ratnesh Kumar, “Online Failure Diagnosis of Stochastic Discrete Event Systems,” *2013 IEEE Multi-Conference on Systems and Control – IEEE Conference on Computer Aided Control System Design*, Hyderabad, India, August 28–30, 2013.
- [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.
- [1] **Jun Chen**, Jose Suarez, Peter Molnar and Aman Behal, “Maximum Likelihood Parameter Estimation in a Stochastic Resonate-and-Fire Neuronal Model,” *2011 IEEE International Conference on Computational Advances in Bio and medical Sciences (ICCABS)*, Orlando, FL, February 3–5, 2011.

Thesis and Dissertation

- [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.

Journal Editorial

- [1] **Associate Editor**, *ASME Journal of Dynamic Systems, Measurement, and Control*, 2025–present.
- [2] **Associate Editor**, *Systems Science & Control Engineering*, 2024–present.
- [3] **Associate Editor**, *International Journal of Modelling, Identification and Control*, 2023–present.
- [4] **Associate Editor**, *IET Cyber-Systems and Robotics*, 2022–present.
- [5] **Lead Guest Editor**, for Special Issue on “Intelligent Control Systems for Autonomous Vehicles,” *Sensors*, 2023–present.
- [6] **Guest Editor**, for Special Issue on “Modeling and Control of Discrete Event Systems,” *Applied Sciences*, 2025–present.

- [7] Associate Editor, *Energy Systems*, 2016–2024.
- [8] Lead Guest Editor, for Special Issue on “[Recent Advances on Learning-based Control: Theory and Application](#),” *International Journal of Modelling, Identification and Control* (volume 43, number 3, 2023), 2021–2023.
- [9] Guest Editor, for Special Issue on “[Artificial Intelligence Based Autonomous Vehicles](#),” *Sensors* (volume 21-23), 2021–2023.
- [10] Guest Editor, for Special Issue on “[Emerging Model-based and Data-Driven Techniques in Control, Communication and Learning](#),” *Electronics*, 2021–2022.
- [11] Guest Editor, for Special Issue on “Advanced Safety Design and Control for Electric Vehicles,” *International Journal of Vehicle Design*, 2021–2022.
- [12] Associate Editor, *Journal of Control and Decision*, 2016–2019.
- [13] Lead Guest Editor, for Special Issue on “[Advances in Control and Decision for Power and Energy Systems](#),” *Journal of Control and Decision* (volume 5, number 2, 2018), 2016–2018.

Conference Editorial and Chair

- [1] **Session Organizer and Chair**, *Modeling, Estimation, and Control Conference*, 2025–present.
- Invited session organizer and co-chair for MECC 2025 at Pittsburgh, PA, USA, for invited session “Integrating Machine Learning and Control Theory for Sustainable Transportation Solutions”.
- [2] **Associate Editor**, *IEEE International Midwest Symposium on Circuits and Systems*, 2025–present.
- [3] **Associate Editor**, *American Control Conference*, 2024–present.
- [4] **Associate Editor**, *Modeling, Estimation, and Control Conference*, 2024–present.
- [5] Technical Program Committee Member, *IEEE International Conference on Mobility: Operations, Services, and Technologies*, 2024–present.
- [6] **Associate Editor**, *IEEE Conference on Control Technology and Applications*, 2023–present.
- [7] Session Chair, *IEEE International Midwest Symposium on Circuits and Systems*, Lansing, MI, 2025, for Regular Session “AI Accelerators and Edge Computing”.
- [8] Technical Program Committee Member, *IEEE International Conference on Machine Learning and Applications*, 2021–2024.
- [9] Associate Editor, *IFAC International Symposium on Advances in Automotive Control*, 2022.
- [10] Associate Editor, *Chinese Control and Decision Conference*, 2013–2024.
- [11] Session Chair, *IEEE International Conference on Machine Learning and Applications*, Pasadena, CA, 2021, for Regular Session “Object Detection and Retrieval”.
- [12] Associate Editor, *IEEE International Conference on Robotics and Automation*, 2020.
- [13] Session Chair, *American Control Conference*, Portland, OR, 2014, for Regular Session “Discrete Event Systems”.
- [14] Invited Session Organizer and Co-Chair, *IEEE International Conference on Networking, Sensing and Control*, Miami, FL, 2014, for Invited Session “Model-Based Developments for Embedded and Cyber-physical System”.

Panel and Technical Committee

- [1] Panelist, *National Science Foundation*, 2022 (ECCS), 2024 (ECCS), 2025 (CMMI and ECCS).
- [2] Proposal Reviewer for Natural Sciences and Engineering Research Council of Canada (NSERC), 2024.
- [3] Proposal Reviewer for National Research and Development Agency (ANID) of the Ministry of Science, Technology, Knowledge and Innovation of Chile, 2023.
- [4] Technical Committee on Automotive Control, IEEE Control Systems Society, 2021–present.
- [5] Technical Committee Automotive and Transportation Systems, ASME Dynamic Systems and Control Division, 2020-present.
- [6] Technical Committee on Discrete-Event Systems, IEEE Control Systems Society, 2017–present.

Journal/Publisher/Conference Reviewer

- Reviewed for 90+ journals, publisher and conferences.