Anna G. Stefanopoulou
William Clay Professor of Technology
Professor of Mechanical Engineering Department and
Electrical Engineering and Computer Science Department (courtesy)
TEL: +1 (734) 615-8461, annastef@umich.edu

Education:

Ph.D.	Electrical Engineering and Computer Science, University of Michigan, 1996
M.S.	Electrical Engineering and Computer Science, University of Michigan, 1994
M.S.	Naval Architecture and Marine Engineering, University of Michigan, 1992
Diploma	Naval Architecture and Marine Engineering, National Technical University of Athens, NTUA, 1991

Employment:

2006-present	Professor of Mechanical Engineering Department, University of Michigan, Ann Arbor
2018-20	Director of the University of Michigan Energy Institute, Ann Arbor
2009-18	Director of the Automotive Research Center, A Multi-University U.S. Army Center of Excellence in Modeling and Simulation of Ground Vehicles led by the University of Michigan.
2000-06	Associate Professor of Mechanical Engineering Department, University of Michigan, Ann Arbor
1998-00	Assistant Professor of Mechanical and Environmental Eng, University of California, Santa Barbara
1995-97	Technical Specialist, Ford Research Laboratory, Ford Motor Company, Dearborn.

Honors and awards (external)

2019 AACC Control Engineering Practice Award
2018 ASME Charles Stark Draper Innovative Practice Award
2018 SAE Fellow
2016 Control System Technology Award, IEEE Control System Society
2009 ASME 2009 Gustus L. Larson Memorial Award
2009 IEEE Fellow
2007 ASME Fellow
2005 Outstanding Young Investigator by the ASME Dynamic Systems & Control Division (DSCD)
2002 MIT's Technology Review Young Innovator (one of the world's 100 top young innovators)
2002 SAE Teetor Educational Award
2001 Invitee of the Alexander von Humboldt Foundation (AvH) 4th German-American
1999 Invitee of the National Academy of Engineering Symposium on Frontiers of Engineering
1998, 1999, 2000, 2001 Ford Innovation Award Awards (based on patents issued each year)
1997 NSF Faculty Early Career Development Award

Honors and awards (internal)

2018 Rackham Distinguished Graduate Mentor Award, University of Michigan
2018 Vulcans Educational Excellence Award, College of Engineering, University of Michigan
2017 William Clay Ford Professor of Manufacturing, Endowed Professorship, University of Michigan
2012 College of Engineering Research Award
2008 University of Michigan Faculty Recognition Award
2005 Henry Russel Award, The University of Michigan
2005 Outstanding Faculty Achievement Award in Mechanical Engineering Department, University of Michigan

Best paper Awards:

2018 ASME Dynamic Systems and Control Division, Energy Systems Technical Committee best paper award titled "Modeling Li-ion Battery Thermal Runaway Using a Three Section Thermal Model", co-authored with PhD advisee T. Cai and Dr. J. Siegel DSCC2018, V002T28A003.
2018 IEEE Vehicle Power and Propulsion Conference best paper award titled "Optimal Energy Management for a Hybrid Electric Vehicle With a Power Split Supercharger" co-authored with PhD advisee Shima Nazari and Dr. Jason Siegel VPPC18, 1-6.
2016 ASME Dynamic Systems and Control Division Automotive and Transportation Systems Technical Committee (ATS-TC) best paper award for the "Methodology to Evaluate the Fuel Economy of a Multimode

Combustion Engine with Three-Way Catalytic Converter," co-authored with PhD advisee S. Nuesch, Dr. L. Jiang (Bosch), and Mr. J. Sterniak (Bosch), ASME 2014 DSCC2014-6146, V002T34A003, Oct 2014.

2013 ASME Automotive and Transportation Systems Technical Committee (ATS-TC) best paper awards for the "Experiments and Analysis of High Cyclic Variability at the Operating Limits of Spark-Assisted HCCI Combustion," co-authored with PhD advisee J. Larimore, Dr. E. Hellstrom (UM), and Dr. L. Jiang (Bosch), ACC 2012

2006 Best Paper in Advanced Vehicle Propulsion in the 8th International Symposium on Advanced Vehicle Control (AVEC06), titled "Nonlinear Control of Transitions between Thermal Equilibria in Homogeneous Charge Compression Ignition (HCCI) Engines" co-authored by Ph.D. advisee Chia Jui Chiang and Dr. M. Jankovic (Ford), August 20-24, 2006, Taipei, Taiwan.

2004 Best Paper Award co-authored by Ph.D. advisee Katherine Peterson, International Federation of Automatic Control, Symposium on Mechatronic Systems, Sydney, AU

2003 Best Paper Award IEEE Transaction Control System Technology for years 2001-2002 titled "Effects of Control Structure on Performance for an Automotive Powertrain with a Continuously Variable Transmission" (vol. 10, no. 5, Sept. 2002). on co-authored with Sharon Liu.

Keynote or Plenary Talks

2021 Keynote Lecture, 29th Mediterranean Conf on Control and Automation (MED), Bari, Italy
2020 Plenary 20th International Conference on Control, Automation and Systems (ICCAS), Busan, Korea
2020 Plenary ASME Dynamic Systems Control Conference (DSCC 2020), virtual.
2020 Plenary IEEE Energy Conversion Congress and Exposition 2020 (ECCE2020), Detroit, MI, USA
2019 Plenary, Energy Track, "Battery State Estimation: A critical technology where data and models merge principles from mechanics, thermal, electrical, and chemical engineering disciplines," International Mechanical Engineering Congress and Exposition, Salt Lake City, Utah
2019 Keynote, "Decoding battery swelling for higher confidence levels in aging diagnostics, protection against lithium plating, and detection of thermal runaway," 3rd International Battery Safety Workshop, IBSW, Beijing, China.
2019 Featured Presentation, " Modeling, Validation, and Detection of Thermal Runaway from Cell Swelling and Gas Evolution," 10th Annual Battery Safety Summit, Alexandria, VA
2019 Keynote, "Using Information to Stretch Vehicle Efficiency," joint 8th IFAC Symposium on Mechatronic Systems (MECHATRONICS 2019) and the 11th IFAC Symposium on Nonlinear Control Systems (NOLCOS 2019), Vienna, Austria
2017 Plenary, "Battery Control Engineering," 56th IEEE Conference on Control and Decision, CDC17, Melbourne, Australia
2016 Plenary, 2nd Symposium on Combustion Control, June 2016, Aahen, Germany
2016 Keynote 8th IFAC International symposium on Advances in Automotive Control, IFAC-AAC, Sweden
2016 Plenary 3rd Biannual International Conf. in Powertrain Modeling and Control, England
2014 Semi-Plenary, American Control Conference, ACC2014, Portland, USA
2011 Keynote, The Advanced Engine Control Symposium, AECS2011, China
2011 First and Luminaries: Battery Management: Prognostics and Health Monitoring Symposium, PHM 2011
2010 Keynote Lecture, Modeling and Simulation Symposium, GVSET, August 2010, USA
2007 Opening Lecture in European Union review: Fuel Cell Technologies for Marine Applications, Greece
2007 Keynote Lecture, CSChE2007 57th Canadian Chemical Engineering Conference, Oct 2007, Canada
2006 Plenary Talk, the IEEE Vehicle Power and Propulsion Conference Sept 2006, Windsor, UK, England.
2006 Keynote Lecture, Les Rencontres Scientifiques de l'IFP, France
2005 Keynote Lecture, the ASME 3rd International Conf on Fuel Cell Science, Eng and Tech, USA
2004 Plenary Talk, International Federation of Automatic Control, Symposium on Mechatronic Systems, Newcastle, Australia

Special Appointments:

- Elected Member
    - Executive Committee of the ASME Dynamic Systems Control Division, 2015-2019
    - Board of Governors for the IEEE Control Sys Society (CSS) 2006-2009, 2017-2020
- Chair
    - Dynamic Systems and Control Division (DSCD) of the ASME, 2018-2019
    - Energy Systems Committee, ASME DSCD 2010-2014 (Founding Chair)

  - Transportation Panel, ASME Dynamic Sys and Control Div, 1997-2002
- Member
  - National Research Council (NRC) committee for reviewing the USA National Corporate Fuel Economy Standards in Light Duty Vehicles Beyond-2025
  - National Research Council (NRC) committee for reviewing Army Research Laboratories, ARL 2018
  - National Research Council (NRC) committee for reviewing the USA Corporate Fuel Economy (CAFE 2012) Standards in Light Duty Vehicles 2012-2015
  - Lund University, Internal Combustion Engine Technologies Senior Lecturer (External Reviewer)
  - Board of Electors to the Hopkinson and ICI Professorship of Applied Thermodynamics, University of Cambridge, UK, 2015
  - Election Committee to the Assistant Professor in the area "Operation and Automatic Control of Ship Propulsion Systems" 2014-2015
- Chair of the External Review Board for The Department of Vehicle Engineering, Alexander Technical Institute of Thessaloniki, Greece, 2014
- Vice-Chair: Industry & Applications, 2008 American Control Conference Org. Committee.
- Associate Editor
  - Joule, Advisory Board
  - ASME J. of Dynamic Systems Control and Measurements, 2009-2010
  - eTransportation Elsevier, September 01, 2020 - August 31, 2023
  - IEEE Trans in Control Systems Technology, 2002-2007 and 2015- present
  - International Journal of Vehicle Autonomous Systems, 2003-2007
- Member
  - ORNL Advisory Scientific Com of Transformation Energy Science and Technology (TEST) Initiative (2021-)
  - IEEE Fellow: Evaluation Committee for IEEE Control System Society (2016-2019)
  - ASME Phi Tau Sigma Awards (Gold, Larsen, Richards) 2016-2017
  - ASME Dyn Systems Control division Honors and Awards committee, 2007-2010
  - American Automatic Control Council (AACC) Ragazzini Educ Award com 2007
  - IEEE Control Sys Society Technology Award selection committee, 2005-2013
  - American Control Conf. selection committee for best student paper award, 2004
  - American Automatic Control Council (AACC) D. P. Eckman Award Committee 2015

Articles:

2021

154. T. Cai, P. Valecha, V. Tran, B. Engle, A. Stefanopoulou, J. Siegel, "Detection of Li-ion battery failure and venting with Carbon Dioxide sensors," (2021) *eTransportation,* 7, art. no. 100100.
153. V. Sulzer, P. Mohtat, A. Aitio, S. Lee, Y.T. Yeh, F. Steinbacher, M.U. Khan, J.W. Lee, J.B. Siegel, A.G. Stefanopoulou, D.A. Howey, "The challenge and opportunity of battery lifetime prediction from field data" (2021) *Joule,* 5 (8), pp. 1934-1955.
152. S. Lee, Y. Kim, J.B. Siegel, A.G. Stefanopoulou, "Optimal control for fast acquisition of equilibrium voltage for Li-ion batteries, (2021) *Journal of Energy Storage,* 40, art. no. 102814.
151. D. Chen, M. Huang, A. G. Stefanopoulou, and Y. Kim, "A receding horizon framework for co-optimizing the velocity and power-split of automated plug-in hybrid electric vehicles," ASME Letters in Dynamic Systems and Control, pp. 1–7, 2021.
150. S. Nazari, F. Borrelli, A. Stefanopoulou, "Electric Vehicles for Smart Buildings: A Survey on Applications, Energy Management Methods, and Battery Degradation," (2021) *Proceedings of the IEEE,* 109 (6), art. no. 9288750, pp. 1128-1144.

2020

150. Lin, X., Perez, H.E., Siegel, J.B., Stefanopoulou, A.G. "Robust estimation of battery system temperature distribution under sparse sensing and uncertainty," (2020) *IEEE Transactions on Control Systems Technology,* 28 (3), art. no. 8626763, pp. 753-765.
149. P. Mohtat, S. Lee, V. Sulzer, J. Siegel, A. Stefanopoulou, "Differential Expansion and Voltage Model for Li-ion Batteries at Practical Charging Rates," *Journal of the Electrochemical Society* 167, 110561
148. M. Woody, M. Arbabzadeh, G. M. Lewis, G.A. Keoleian, A.G. Stefanopoulou, (2020). "Strategies to limit degradation and maximize Li-ion battery service lifetime - Critical review and guidance for stakeholders", *Science Direct,* 28:101231. doi:10.1016/j.est.2020.101231.

147. H. Movahedi, M.A. Figueroa-Santos, J.B. Siegel, A.G. Stefanopoulou, R. Rajamani, (2020). “Hybrid nonlinear observer for battery state‑of‑charge estimation using nonmonotonic force measurements", *Advanced Control for Applications: Engineering and Industrial Systems,* doi:10.1002/adc2.38.
146. M.A. Figueroa-Santos, J.B. Siegel, A.G. Stefanopoulou, (2020). “Leveraging Cell Expansion Sensing in State of Charge Estimation: Practical Considerations”, *Energy Storage Systems for Electric Vehicles,* 13(10), 2653, doi:10.3390/en13102653.
145. S. Lee, J.B. Siegel, A.G. Stefanopoulou, J-W. Lee, T-K. Lee, (2020). “Electrode State of Health Estimation for Lithium Ion Batteries Considering Half-cell Potential Change Due to Aging”, *Journal of the Electrochemical Society,* 167(9), doi:10.1149/1945-7111/ab8c83.
144. S. Nazari, J. Siegel, R. Middleton, A. Stefanopoulou, “Power Split Supercharging: A Mild Hybrid Approach to Boost Fuel Economy.” *Energies*. 2020; 13(24):6580. https://doi.org/10.3390/en13246580.
143. C. Huang, R. Salehi, T. Ersal, G.A. Stefanopoulou, (2020). “An energy and emission conscious adaptive cruise controller for a connected automated diesel truck”, *Vehicle System Dynamics (International Journal of Vehicle Mechanics and Mobility)*, 58(5) 805-825. doi:10.1080/00423114.2020.1740283.
142. D. Chen, Y. Kim, A.G. Stefanopoulou, “Predictive Equivalent Consumption Minimization Strategy with Segmented Traffic Information” (2020) *IEEE Transactions on Vehicular Technology,* 69 (12), art. no. 9242266, pp. 14377-14390.
141. S. Nazari, J. Siegel, A.G. Stefanopoulou, (2020). “Control of hybrid boosting in highly diluted internal combustion engines”, *International Journal of Engine Research,* doi:10.1177/1468087420929769.
140. B.P. Maldonado, M. Bieniek, J. Hoard, A. Stefanopoulou, B. Fulton, M. Van Nieuwstadt, “Modeling and estimation of combustion variability for fast light-off of diesel aftertreatment,” *Int J Powertrains* 2019.
139. S. Duraiarasan, R. Salehi, A. Stefanopoulou, S. Mahesh, M. Allain, “Control-Oriented Physics-Based NO_x Emission Model for a Diesel Engine with Exhaust Gas Recirculation”, ASME Letters in Dynamic Systems and Control. In: Dynamic systems and control conference, vol. 59155, Park City, Utah, 8–11 October 2019. V002T12A006. American Society of Mechanical Engineers.
138. B.P. Maldonado, N. Li, I. Komanovsky, A.G. Stefanopoulou, (2020). “Learning reference governor for cycle-to-cycle combustion control with misfire avoidance in spark-ignition engines at high eI, exhaust gas recirculation–diluted conditions”, *International Journal of Engine Research,* doi:10.1177/1468087420929109.
137. Y. Luo, B. Maldonado, S. Liu, D. Adair, A. Stefanopoulou, (2020). “Accelerometer-Based Estimation of Combustion Features for Engine Feedback Control of Compression-Ignition Direct-Injection Engines”, *SAE Technical Papers* April. doi:10.4271/2020-01-1147.
136. Y. Luo, B. Maldonado, S. Liu, C. Solbrig, D. Adair, A.G. Stefanopoulou, (2020). "Portable In-Cylinder Pressure Measurement and Signal Processing System for Real-Time Combustion Analysis and Engine Control," *SAE International*, doi:10.4271/2020-01-1144.
135. R. Salehi, A.G. Stefanopoulou, (2020). “Parameter Set Reduction and Ensemble Kalman Filtering for Engine Model Calibration”, *J.Dyn.Sys. Meas., Contro*l, 142(1):011007, doi:10.1115/1.4045090.

2019

134. S. Lee, P. Mohtat, J. B. Siegel, A.G. Stefanopoulou, (2019). “Estimation Error Bound of Battery Electrode Parameters With Limited Data Window”, *IEEE Transactions on Industrial Informatics,* 16(5): 3376-3386. doi: 10.1109/TII.2019.2952066.
133. X. Zhang, C. Huang, M. Liu, A.G. Stefanopoulou, (2019). “Predictive Cruise Control with Private Vehicle-to-Vehicle Communication for Improving Fuel Consumption and Emissions”, *IEEE Communications Magazine*, 57(10):91-97. doi: 10.1109/MCOM.001.1900146.
132. X.Lin, Y. Kim, S. Mohan, J.B. Siegel, A.G. Stefanopoulou, “Modeling and Estimation for Advanced Battery Management”, *Annual Review Control*, (2019). 2:1–33. doi:10.1146/annurev-control-053018-023643.
131. C. Guardiola, B. Pla, P. Bares, A.G. Stefanopoulou, (2019). “Cylinder charge composition observation based on in-cylinder pressure measurement,” (2019), *Measurement* 131:559—568. doi:10.1016/j.measurement.2018.08.024.
130. S. Xu, K.H. Chen, N.P. Dasgupta, A.G. Stefanopoulou, “Evolution of Dead Lithium Growth in Lithium Metal Batteries: Experimentally Validated Model of the Apparent Capacity Loss,” *Journal of The Electrochemical Society,* 166 (14) A3456-A3463 (2019).
129. T. Cai, A.G. Stefanopoulou, J.B. Siegel, “Modeling Li-Ion Battery Temperature and Expansion Force during the Early Stages of Thermal Runaway Triggered by Internal Shorts, “ *Journal of The Electrochemical Society* 166 (12), A2431

128. T. Cai, A.G. Stefanopoulou, J.B. Siegel, "Early Detection for Li-Ion Batteries Thermal Runaway Based on Gas Sensing," *ECS Transactions* 89 (1), 85
127. P. Mohtat, S. Lee, A. Stefanopoulou, J. Siegel, "Towards better estimability of electrode-specific state of health: Decoding the cell expansion," *Journal of Power Sources* 427, 101-11.

2018

126. B.P. Maldonado, A.G. Stefanopoulou, (2018). "Cycle-to-cycle feedback for combustion control of spark advance at the misfire limit," *ASME Journal of Engineering for Gas Turbines and Power*, 140(10): 102812.
125. R. Salehi, et al, (2018). "Decentralized feedback control of pumping losses and NOx emissions in diesel engines", *ASME Journal of Engineering for Gas Turbines and Power,* (2018) 140(10):102810.
124. R. Salehi, A.G. Stefanopoulou, B. Vernham, (2018). "Diesel air path control using pressure difference: Pumping loss and aging considerations," *Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering,* doi:10.1177/0954407018784696.
123. P Fernández-Yáñez, O. Armas, R. Kiwan, A.G. Stefanopoulou, A.L. Boehman, (2018). "A thermoelectric generator in exhaust systems of spark-ignition and compression-ignition engines. A comparison with an electric turbo-generator," *Applied Energy*, 2018, 229, p 80--87.
122. A. Knobloch, C. Kapusta, J. Karp, Y. Plotnikov, J.B. Siegel, A.G. Stefanopoulou, (2018). "Fabrication of Multimeasurand Sensor for Monitoring of a Li-Ion Battery;" (2018) *Journal of Electronic Packaging, Transactions of the ASME*, 140 (3), art. no. 031002.
121. S. Mohan, J.B. Siegel, A.G. Stefanopoulou, Vasudevan, R., (2018). "An Energy-Optimal Warm-Up Strategy for Li-Ion Batteries and Its Approximations," (2018) *IEEE Transactions on Control Systems Technology,* doi: 10.1109/TCST.2017.2785833

2017

120. M. Zhang, J. Du, L. Liu, A. Stefanopoulou, J. Siegel, L. Lu, X. He, X. Xie, M. Ouyang, "Internal Short Circuit Trigger Method for Lithium-Ion Battery Based on Shape Memory Alloy," Journal of the Electrochemical Society, no 13, vol 164, pp A3038-44, 2017
119. M. Zhang, L. Liu, A. Stefanopoulou, J. Siegel, L. Lu, X. He, M. Ouyang, "Fusing Phenomenon of Lithium-Ion Battery Internal Short Circuit," Journal of the Electrochemical Society, no 12, vol 164, pp A2738-45, 2017
118. Nassim A Samad, Boyun Wang, Jason B. Siegel, Anna G. Stefanopoulou "Parameterization of Battery Electrothermal Models Coupled With Finite Element Flow Models for Cooling," ASME Journal Dynamic Systems Control and Measurements, no 7, vol 139, 2017.
117. S. Nuesch, A.G. Stefanopoulou Multimode combustion in a mild hybrid electric vehicle. Part 2: Three-way catalyst considerations, Control Engineering Practice, vol 58, pp 107-117, 2017, Pergamon
116. Patrick Gorzelic, Anna Stefanopoulou, and Jeff Sterniak, "SI-HCCI Mode Transitions Without Open-Loop Sequence Scheduling: Control Architecture and Experimental Validation," ASME Journal Dynamic Systems Control and Measurements, no 8, vol 139, 2017.
115. Patrick Gorzelic, Anna Stefanopoulou, and Jeff Sterniak, "SI-HCCI Mode Transitions Without Open-Loop Sequence Scheduling: Online Parameter Adaptation," ASME Journal Dynamic Systems Control and Measurements, no 8, vol 139, 2017.
114. H. Lian, J. B. Martz, B. P. Maldonado, A. G. Stefanopoulou, K. Zaseck, J. Wilkie, O. Nitulescu and M. Ehara, J. 114. "Prediction of Flame Burning Velocity at Early Flame Development Time With High Exhaust Gas Recirculation and Spark Advance," Eng. Gas Turbines Power 139(8), Paper No: GTP-16-1530; doi: 10.1115/1.4035849

2016

113. S. Nuesch, P. Gorzelic, L. Jiang, J. Sterniak, A.G. Stefanopoulou, "Accounting for combustion mode switch dynamics and fuel penalties in drive cycle fuel economy," International Journal of Engine Research, 17, 4, pp436-450, 2016, SAGE Publications.
112. P. Gorzelic, P. Shingne, J. Martz, A.G. Stefanopoulou, J. Sterniak, L. Jiang, "A low-order adaptive engine model for SI-HCCI mode transition control applications with cam switching strategies," International Journal of Engine Research, 17, 4, pp 451-468, 2016, SAGE Publications.
111. S. Nuesch, A.G. Stefanopoulou, "Multimode combustion in a mild hybrid electric vehicle. Part 1: Supervisory control", Control Engineering Practice, 57, 99-110, 2016, Pergamon
110. K.-Y. Oh, N. Samad, Y. Kim, J. Siegel, A. Stefanopoulou, Bogdan I. Epureanu, "A Novel Phenomenological Multi-Physics Model of Li-Ion Battery Cells," Journal of Power Sources Vol. 326, pp 447-458, Sept 2016
109. S. Mohan, Y. Kim, A. Stefanopoulou, "Energy-Conscious Warm-Up of Li-ion Cells From Sub-Zero Temperatures," IEEE Transactions on Industrial Electronics, May 2016 DOI: 10.1109/TIE.2016.2523440

108. H. Lian, J. Martz, N. Prakash, A. Stefanopoulou, “Fast Computation of Combustion Phasing and Its Influence on Classifying Random or Deterministic Patterns,” Journal of Engineering for Gas Turbines and Power, Apr 2016
107. Y. Wang, J. Siegel, A. Stefanopoulou, “Control Strategies for Power Quantized Solid Oxide Fuel Cell Hybrid Powertrains: In Mobile Robot Applications,” SAE International Journal of Alternative Powertrains, Vol. 5, Issue 1, Apr 2016
106. K. Oh, B. I. Epureanu, J. B. Sigel, A. G. Stefanopoulou, “Phenomenological Force and Swelling Models for Rechargeable Lithium-Ion Battery Cells,” Journal of Power Sources, Apr 2016.
105. N. Samad, Y. Kim, J. B. Siegel, A. Stefanopoulou, “Battery Capacity Fading Estimation Using a Force-Based Incremental Capacity Analysis,” Journal of The Electrochemical Society Vol. 163 Issue 8, pp. A1584-A1594, Jan 2016

2015

104. Y. Parvini, J. B. Siegel, A. Vahidi, A. Stefanopoulou, “Supercapactior Electrical and Thermal Modeling, Identification, and Validation for a Wide Range of Temperature and Power Applications,” IEEE Transactions on Industrial Electronics, volume 63, issue 3, October 2015. DOI: 10.1109/TIE.2015.2494868
103. P. Gorzelic, P. Shingne, J. Martz, A. Stefanopoulou, J. Sterniak, L. Jiang, “A low-order adaptive engine model for SI-HCCI mode transition control applications with cam switching strategies,” International Journal of Engine Research, June 2015. DOI: 10.1177/1468087415585016
102. X. Lin, A. Stefanopoulou, “Analytic Bound on Accuracy of Battery State and Parameter Estimation,” Journal of The Electrochemical Society, volume 162, issue 9, July 2015. doi: 10.1149/2.0791509jes
101. S. Nüesch, P. Gorzelic, L. Jiang, J. Sterniak, A. Stefanopoulou, “Accounting for Combustion Mode Switch Dynamics and Fuel Penalties in Drive Cycle Fuel Economy,” International Journal of Engine Research, May 2015. doi: 10.1177/1468087415584713
100. S. Jade, J. Larimore, E. Hellström, L. Jiang, A. Stefanopoulou, Controlled load and speed transitions in a multi-cylinder recompression HCCI engine. IEEE Transactions on Control Systems Technology,” Vol.23 No.3, May 2015. doi:10.1109/TCST.2014.2346992
99. X. Lin, A. Stefanopoulou, Y. Li, R. D. Anderson, "State of Charge Imbalance Estimation for Battery Strings under Reduced Voltage Sensing," IEEE Transactions on Control Systems Technology, Vol 23, No 3, May 2015. doi:10.1109/TCST.2014.2360919
98. J. Larimore, S. Jade, E. Hellström, L. Jiang, A. Stefanopoulou, “Adaptive Control of a Recompression Four-Cylinder Engine,” IEEE Trans on Control Systems Technology, Mar 2015, DOI**:** 10.1109/ TCST.2015.2402235
97. Y. Kim, A. Salvi, A. Stefanopoulou, T. Ersal, "Reducing Soot Emissions in a Diesel Series Hybrid Electric Vehicle using a Power Rate Constraint Map," IEEE Transactions on Vehicular Technology, Vol 64, Issue 1, Jan 2015. doi: 10.1109/TVT.2014.2321346
96. S. Mohan, Y. Kim, A. Stefanopoulou, “Estimating the Power Capability of Li-ion Batteries Using Informationally Partitioned Estimators,” IEEE Transactions on Control Systems Technology, December 2015. DOI: 10.1109/TCST.2015.2504847
95. K. Broderick, T. Guo, A. Stefanopoulou, J. B. Siegel, D. Tilbury, E. Atkins, H. Peng, J. Jin, A. Ulsoy, “Keeping Ground Robots on the Move Through Battery and Mission Management”, Mechanical Engineering, Vol 136, Issue 6, New York, NY, February 2015.

2014

94. S. Nüesch, L. Jiang, J. Sterniak, A. Stefanopoulou, "Fuel Economy of a Multimode Combustion Engine with Three-Way Catalytic Converter," ASME Journal of Dynamic Systems, Measurement, and Control, v 137, i 5, p 051007, Dec 2014 doi: 10.1115/1.4028885
93. K-Y. Oh, J. B. Siegel, L. Secundo, S. Kim, N. Samad, J. Qin, D. Anderson, K. Garikipati, A. Knobloch, B. Epureanu, C. Monroe, A. Stefanpoulou, "Rate dependence of swelling in lithium-ion cells," Journal of Power Sources, Volume 267, Pages 197-202, December 2014. doi:10.1016/j.jpowsour.2014.05.039
92. S. Mohan, Y. Kim, J. B. Siegel, N. Samad, A. Stefanopoulou, "A Phenomenological Model of Bulk Force in a Li-ion battery pack and its Application to State of Charge Estimation," Journal of Electrochemical Society, 2014 volume 161, issue 14, A2222-A2231, October 2014. doi:10.1109/TCST.2013.2271355
91. J. Larimore, E. Hellström, S. Jade, A. Stefanopoulou, Li Jiang, “Real-time internal residual mass estimation for combustion with high cyclic variability,” International Journal of Engine Research, Cyclic Dispersion Special Issue, 1–11, October 2014. doi: 10.1177/1468087414552616

90. Y. Kim, A. Salvi, J.B. Siegel, Z. Filipi, A. Stefanopoulou, T. Ersal, "Hardware-in-the-Loop Validation of a Power Management Strategy for Hybrid Powertrains", Control Engineering Practice, Pages 277–286, Volume 29, Aug 2014. doi: 10.1016/j.conengprac.2014.04.008
89. S. Jade, J. Larimore, E. Hellström, L. Jiang, A. Stefanopoulou, "Reference governor for load control in a multi-cylinder recompression HCCI engine," IEEE Transactions on Control Systems Technology, v 22, n 4, p 1408-1421, July 2014. doi:10.1109/TCST.2013.2283275
88. E. Hellström, A. Stefanopoulou, L. Jiang, "A linear least-squares algorithm for double-Wiebe functions applied to spark-assisted compression ignition," Journal of Engineering for Gas Turbines and Power, v 136, n 9, May 2014. doi:10.1115/1.4027277
87. E. Hellström, J. Larimore, S. Jade, L. Jiang, A. Stefanopoulou, "Reducing cyclic variability while regulating combustion phasing in a four-cylinder HCCI engine," IEEE Transactions on Control Systems Technology, v 22, n 3, p 1190-7, May 2014. doi:10.1109/TCST.2013.2271355
86. Y. Kim, S. Mohan, J.B. Siegel, A. Stefanopoulou, Y. Ding, "The Estimation of Temperature Distribution in Cylindrical Battery Cells under Unknown Cooling Conditions," IEEE Transactions on Control Systems Technology, Pages 2277-2286, Volume 22, March 2014. doi: 10.1109/TCST.2014.2309492
85. X. Lin, H. Perez, S. Mohan, J. B. Siegel, A. Stefanopoulou, Y. Ding, M. Castanier, "A Lumped-Parameter Electro-thermal Model for Cylindrical Batteries," Journal of Power Sources, Vol. 257, p 1-11, January 2014. doi:10.1016/j.jpowsour.2014.01.097

2013

84. E. Hellström, D. Lee, L. Jiang, A. Stefanopoulou, H. Yilmaz, "On-board Calibration of Spark Timing by Extremum Seeking for Flex-Fuel Engines," IEEE Transactions on Control Systems Technology, vol. 21 issue 6, pages: 2273 – 2279, November 2013. doi: 10.1109/TCST.2012.2236093
83. X. Lin, H. Perez, J. B. Siegel, A. Stefanopoulou, Y. Li, R. Anderson, Y. Ding, M. Castanier, "Online Parameterization of Lumped Thermal Dynamics in Cylindrical Ion Batteries for Core Temperature Estimation and Health Monitoring," IEEE Trans on Control Systems Technology, Volume 21, Issue 5, Pages 1745-1755, September 2013. doi: 10.1109/TCST.2012.2217143
82. E. Hellström, A. Stefanopoulou, L. Jiang, "Cyclic Variability and Dynamical Instabilities in Autoignition Engines With High Residuals," IEEE Transactions on Control Systems Technology, vol 21no. 5, Sept 2013. DOI: 10.1109/TCST.2012.2221715
81. T. Ersal, C. Ahn, D. L. Peters, J. Whitefoot, A. Mechtenberg, I. Hiskens, H. Peng, A. Stefanopoulou, P. Papalambros, J. Stein, "Coupling between Component Sizing and Regulation Capability in Microgrids," IEEE Transactions on Smart Grid, vol. 4, no. 3, pp. 1576-1585, July 2013. doi: 10.1109/TSG.2013.2260363.
80. T. Matsuura, J. Chen, J. Siegel, A. Stefanopoulou, "Degradation Phenomena in PEM Fuel Cell with Dead-Ended Anode," International Journal of Hydrogen Energy, vol. 38, pp. 11346-11356, July 2013. doi:10.1016/j.ijhydene.2013.06.096
79. K.-h. Ahn, A. Stefanopoulou, M. Jankovic, "AFR-Based Fuel Ethanol Content Estimation in Flex-Fuel Engines Tolerant to MAF Sensor Drifts," IEEE Transactions on Control Systems Technology, vol 21 Issue 3 .PP 590-603, May 2013. DOI: 10.1109/TCST.2012.2187786
78. J. Siegel, A. Stefanopoulou, P. Hagans, Y. Ding, D. Gorsich, "Expansion of lithium ion pouch cell batteries: Observations from neutron imaging," Journal of the Electrochemical Society, vol. 160, pp. A1031-A1038, April 2013. doi: 10.1149/2.011308jes
77. J. B. Siegel, A. G. Stefanopoulou, P. Hagans, Y. Ding, D. Gorsich, "Expansion of Lithium Ion Pouch Cell Batteries: Observations from Neutron Imaging," Journal of the Electrochemical Society, volume 160, issue 8, A1031-A1038, April 2013. doi 10.1149/2.011308jes
76. X. Lin, H. Fu, H. Perez, J. B. Siegel, A. Stefanopoulou, Y. Ding, M. Castanier, "Parameterization and Observability Analysis of Scalable Battery Clusters for Onboard Thermal Management," Oil & Gas Science and Technology - Revue d'IFP Energies Nouvelles, Vol. 68, No. 1, pp. 165-178, Mar 2013. doi: http://dx.doi.org/10.2516/ogst/2012075
75. J. Chen, J. Siegel, A. Stefanopoulou, J. Waldecker, "Optimization of purge cycle for dead-ended anode fuel cell operation," International Journal of Hydrogen Energy, vol. 38, pp. 5092-5105, March 2013. doi:10.1016/j.ijhydene.2013.02.022

2012

74. E. Hellström, J. Larimore, A. Stefanopoulou, J. Sterniak, L. Jiang, "Quantifying Cyclic Variability in a Multi-Cylinder HCCI Engine with High Residuals," Journal of Engineering for Gas Turbines and Power, Vol 134 Issue 11, Sep 2012. doi:10.1115/1.4007164

73. E. Hellström, A. Stefanopoulou, J. Vávra, A. Babajimopoulos, D. Assanis, L. Jiang, H. Yilmaz, "Understanding the Dynamic Evolution of Cyclic Variability at the Operating Limits of HCCI Engines with Negative Valve Overlap," SAE International Journal of Engines, 5(3), April 2012. DOI:10.4271/2012-01-1106, Also in SAE World Congress number 2012-01-1106 in SAE Technical Paper Series.
72. S. Yesilyurt, J. B. Siegel, A. Stefanopoulou, "Modeling and Experiments of Voltage Transients of Polymer Electrolyte Membrane Fuel Cells With the Dead-Ended Anode," Journal of Fuel Cell Science and Technology. 9, 021012 , April 2012.

2011

71. J. Chen, J. B. Siegel, T. Matsuura, A. Stefanopoulou, "Carbon Corrosion in PEM Fuel Cell Dead-Ended Anode Operations," Journal of Electrochemical Society, volume 158, issue 9, B1164-B1174, July 2011. (doi: 10.1149/1.3609770)
70. J. B. Siegel, X. Lin, A. Stefanopoulou, D. Hussey, D. Jacobson, D. Gorsich, "Neutron Imaging of Lithium Concentration in LFP Pouch Cell Battery," Journal of The Electrochemical Society, 158(5):A523-A529, March 2011. doi: 10.1149/1.3566341

2010

69. D. McKay, A. Stefanopoulou, J. Cook, "A Controllable Membrane-Type Humidifier for Fuel Cell Applications - Part II: Controller Design, Analysis and Implementation," Journal of Fuel Cell Science and Technology, 8(1):011004, Nov 2010. doi:10.1115/1.4001020
68. K. Ahn, A. Stefanopoulou, M. Jankovic, "Puddle Dynamics and Air-To-Fuel Ratio Compensation for Gasoline-Ethanol Blends in Flex-Fuel Engines," IEEE Transactions on Control Systems Technololgy, 18(6):1241-1253, Nov 2010. (doi: 10.1109/TCST.2009.2035441)
67. J. B. Siegel, S. Yesilyurt, A. Stefanopoulou, "Reduced Complexity Models for Water Management and Anode Purge Scheduling in DEA Operation of PEMFCs," ECS Trans. 33, 1583, October 2010.
66. D. Di Domenico, A. Stefanopoulou, G. Fiengo, "Lithium-Ion Battery State of Charge and Critical Surface Charge Estimation Using an electrochemical model-based extended Kalman filter," Journal of Dynamic Systems, Measurement, and Control, 132(6):061302, Oct 2010. doi:10.1115/1.4002475
65. D. McKay, A. Stefanopoulou, J. Cook, "A Controllable Membrane-Type Humidifier for Fuel Cell Applications, Part A: Operation, Modeling and Experimental Validation," ASME Journal of Fuel Cell Science and Technology, v 7, n 5, p 051006 (12 pp.), Oct. 2010. doi:10.1115/1.4000997
64. B. McCain, A. Stefanopoulou, J. B. Siegel, "Controllability and Observability Analysis of the Liquid Water Distribution Inside the Gas Diffusion Layer of a Unit Fuel Cell Model," Journal of Dynamic Systems, Measurement, and Control, 132(6):061303, Oct 2010. doi:10.1115/1.4002477
63. J. B. Siegel, S. Bohac, A. Stefanopoulou, S. Yesilyurt, "Nitrogen front evolution in purged polymer electrolyte membrane fuel cell with dead-ended anode," Journal of the Electrochemical Society, (157)7, pp. B1081-B1093, May 2010. doi: 10.1149/1.3425743
62. D. Di Domenico, G. Fiengo, A. Stefanopoulou, "A Decoupled Controller for Fuel Cell Hybrid Electric Power Split," International Journal of Systems Science, v 41, n 4, p 447-456, April 2010. DOI: 10.1080/00207720903072274
61. E. Muller, F. Kolb, L. Guzzella, A. Stefanopoulou, D. McKay, "Correlating Nitrogen Accumulation with Temporal Fuel Cell Performance," Journal of Fuel Cell Science and Technology, 7(2):021013, Jan 2010. doi:10.1115/1.3177447

2009

60. V. Tsourapas, J. Sun, A. Stefanopoulou, "Incremental Step Reference Governor for Load Conditioning of Hybrid Fuel Cell and Gas Turbine Power Plants," IEEE Transactions on Control Systems Technology, 17(4):756-767, Aug 2009. DOI: 10.1109/TCST.2008.2010554
59. V. Tsourapas, J. Sun, A. G. Stefanopoulou, "Control Oriented Analysis of a Hybrid Solid Oxide Fuel Cell and Gas Turbine (SOFC/GT) System," ASME Journal on Fuel Cell Science and Technology. 6(4), 041008, Aug 2009, doi:10.1115/1.3081467
58. N. Oliverio, A. Stefanopoulou, L. Jiang, , H. Yilmaz, "Ethanol Detection in Flex-Fuel Direct Injection Engines Using In-Cylinder Pressure Measurements," SAE International Journal of Fuels and Lubricants, 2(1):229-241, April 2009.

57. A. Stefanopoulou, I. Kolmanovsky, B. McCain, "A Dynamic Semi-Analytic Channel-to-Channel Model of Two-Phase Water Distribution for a Unit Fuel Cell," IEEE Transactions on Control Systems Technology, 17(5):1055 -1068, April. 2009.
56. A. Karnik, J. Sun, A. Stefanopoulou, J. Buckland, "Humidity and Pressure Regulation in a PEM Fuel Cell Using a Gain-Scheduled Static Feedback Controller," IEEE Transactions on Control Systems Technology, 17(2):283-297, March 2009. (10.1109/TCST.2008.924562)

2008.

55. C. Chiang, A. Stefanopoulou, "Sensitivity Analysis of Combustion Timing of Homogeneous Charge Compression Ignition Gasoline Engines," Journal of Dynamic Systems, Measurement and Control, 131(1):014506-014510, Dec 2008. doi:10.1115/1.2936877
54. J. B. Siegel, D. McKay, A. Stefanopoulou, D. Hussey, D. Jacobson, "Measurement of Liquid Water Accumulation in a PEMFC with Dead-Ended Anode," Journal of The Electrochemical Society, 155(11):B1168-B1178, Sept 2008. (DOI: 10.1149/1.2976356)
53. A. Ingimundarson, A. Stefanopoulou, D. McKay, "Model-Based Detection of Hydrogen Leaks in a Fuel Cell Stack," IEEE Transactions on Control Systems Technology, 16(5):1004-1012, Sept. 2008.
52. B. McCain, A. Stefanopoulou, I. Kolmanovsky, "On the Dynamics and Control of Through-Plane Water Distributions in PEM Fuel Cells," Chemical Engineering Science, Vol. 63, Issue 17, pp 4418 - 4432, Sept 2008.
51. D. McKay, J. B. Siegel, W. Ott, A. Stefanopoulou, "Parameterization and Prediction of Temporal Fuel Cell Voltage Behavior During Flooding and Drying Conditions," Journal of Power Sources, Vol. 178, Issue 1, pp207 - 222, March 2008.

2007

50. C. Chiang, A. Stefanopoulou, M. Jankovic, "Nonlinear Observer-Based Control of Load Transitions in Homogeneous Charge Compression Ignition Engines," IEEE Transactions on Control Systems Technology, 15(3):438-448, May 2007. DOI: 10.1109/TCST.2007.894637
49. K. Suh, A. Stefanopoulou, "Performance Limitations of Air Flow Control in Power-Autonomous Fuel Cell Systems," IEEE Transactions on Control Systems Technology, 15(3):465-473, May 2007.
48. O. Sundstroem, A. Stefanopoulou, "Optimum Battery Size for Fuel Cell Hybrid Electric Vehicle, Part I," ASME Journal of Fuel Cell Science and Technology, vol 4, pp 167-175, May 2007.
47. O. Sundstroem, A. Stefanopoulou, "Optimum Battery Size for Fuel Cell Hybrid Electric Vehicle with Transient Loading Consideration, Part II," ASME Journal of Fuel Cell Science and Technology, vol 4, pp 176-184, May 2007.
46. C. Chiang, A. Stefanopoulou, "Stability Analysis in Homogeneous Charge Compression Ignition (HCCI) Engines with High Dilution," IEEE Transactions on Control Systems Technology, 15(2):209-219, Mar 2007.
45. E. Muller, A. Stefanopoulou, L. Guzzella, "Optimal Power Control of Hybrid Fuel Cell Systems for an Accelerated System Warm-Up," IEEE Transactions on Control Systems Technology, 15(2):290-305, March 2007. (DOI: 10.1109/TCST.2006.886435)
44. V. Tsourapas, A. Stefanopoulou, J. Sun, "Model Based Control of an Integrated Fuel Cell and Fuel Processor with Exhaust Heat Recirculation," IEEE Transactions on Control Systems Technology, 15(2):233-245, March 2007.
43. A. Stefanopoulou, K.-W. Suh, "Mechatronics in Fuel Cell Systems," IFAC Control Engineering Practice, Volume 15, Issue 3, Pages 277-289, March 2007.
42. A. Karnik, A. Stefanopoulou, J. Sun, "Water Equilibria and Management Using a Two-Volume Model of a Polymer Electrolyte Fuel Cell," Journal of Power Sources, 164(2):590 - 605, Feb 2007. doi: 10.1016/j.jpowsour.2006.10.053
41. A. Vahidi, I. Kolmanovsky, A. Stefanopoulou, "Constraint Handling in a Fuel Cell System: A Fast Reference Governor Approach," IEEE Transactions on Control Systems Technology, 15(1): 86-98, Jan. 2007.

2006

40. A. Vahidi, A. Stefanopoulou, H. Peng, "Adaptive Model Predictive Control for Coordination of Compression and Friction Brakes in Heavy Duty Vehicles," International Journal of Adaptive Control and Signal Processing, Volume 20, Issue 10, Pages: 581-598, Dec. 2006
39. A. Vahidi, A. Stefanopoulou, H. Peng, "Current Management in a Hybrid Fuel Cell Power System: A Model Predictive Control Approach," IEEE Transactions on Control Systems Technology, 14(6):1047-1057, Nov. 2006.

38. K.-W. Suh, A. Stefanopoulou, "Control and Coordination of Air Compressor and Voltage Converter in Load-Following Fuel Cells," International Journal of Energy Research, vol 29, issue 29, pp 1167-1189, Sept 2006.
37. J. Pukrushpan, A. Stefanopoulou, S. Varigonda, J. Eborn, C. Haugstetter, "Control-Oriented Model of Fuel Processor for Hydrogen Generation in Fuel Cell," Control Engineering Practice, 14(3):277 - 293, Mar 2006. DOI: 10.1016/j.conengprac.2005.04.014
36. K. Peterson, J. Grizzle, A. Stefanopoulou, "Nonlinear Control for Magnetic Levitation of Automotive Engine Valves," IEEE Transactions on Control Systems Technology, Vol.14, Issue 2, p:346 – 354, Mar 2006.

2005

35. K.-W. Suh, A. Stefanopoulou, "Control and Coordination of Air Compressor and Voltage Converter in Load-Following Fuel Cells," International Journal of Energy Research, Volume 29, Issue 12, pages 1167–1189, 10 October 2005. DOI: 10.1002/er.1146
34. E. Muller, A. Stefanopoulou, "Analysis, Modeling, and Validation for the Thermal Dynamics of a Polymer Electrolyte Membrane Fuel Cell System," Journal of Fuel Cell Science and Technology, 3(2):99-110, Sep 2005.
33. D. Rausen, A. Stefanopoulou, J. Kang, J.-M. Eng, T.-W Kuo, "A Mean-Value Model for Control of Homogeneous Charge Compression Ignition (HCCI) Engines," Transactions of the ASME. Journal of Dynamic Systems, Measurement and Control, 3(3):355-362, Sep 2005
32. H. Yilmaz, A. Stefanopoulou, "Control of Charge Dilution in Turbocharged Diesel Engines via Exhaust Valve Timing," Journal of Dynamic Systems, Measurement, and Control, 127(3):363-373, Aug 2005. doi:10.1115/1.1985440
31. M. Kokkolaras, Z. Mourelatos, L. Louca, Z Filipi, G. Delagrammatikas, A. Stefanopoulou, P. Papalambros, D. Assanis, "Design Under Uncertainty and Assessment of Performance Reliability of a Dual-Use Medium Truck with Hydraulic-Hybrid Powertrain and Fuel Cell Auxiliary Power Unit," SAE 2005 Transactions—Journal in Engines, SAE 2005-01-1396, April 2005. DOI: 10.4271/2005-01-1396
30. J. Pukrushpan, H. Peng, A. Stefanopoulou, "Modeling and Analysis of Fuel Cell Reactant Flow for Automotive Applications," Journal of Dynamic Systems, Measurement and Control, 126(1):14-25, Mar 2004.
29. J. Pukrushpan, A. Stefanopoulou, S. Varigonda, L. Pedersen, S. Ghosh, H. Peng, "Control of Natural Gas Catalytic Partial Oxidation for Hydrogen Generation in Fuel Cell Applications," IEEE Transactions on Control Systems Technology, 13(1):3-14, Jan. 2005.
28. A. Vahidi, A. Stefanopoulou, H. Peng, "Recursive Least Squares with Forgetting for Online Estimation of Vehicle Mass and Road Grade: Theory and Experiments," Vehicle System Dynamics, Vol. 43, No. 1, pp. 31-55, Jan 2005. DOI: 10.1080/00423110412331290446

2004

27. O. Storset, A. Stefanopoulou, R. Smith, "Adaptive Air Charge Estimation for Turbocharged Diesel Engines without Exhaust Gas Recirculation," Journal of Dynamic Systems, Measurement, and Control, 126(3):633-643, Dec 2004. Doi:10.1115/1.1771691
26. K. Peterson, A. Stefanopoulou, "Extremum Seeking Control for Soft Landing of an Electromechanical Valve Actuator," Automatica, 40(6):1063 - 1069, June 2004. DOI: 10.1016/j.automatica.2004.01.027
25. J. Pukrushpan, H. Peng, A. Stefanopoulou, "Control-Oriented Modeling and Analysis for Automotive Fuel Cell Systems," Journal of Dynamic Systems, Measurement, and Control, 126(1):14-25, April 2004. doi:10.1115/1.1648308
24. J. Pukrushpan, A. Stefanopoulou, H. Peng, "Control of Fuel Cell Breathing," IEEE Control Systems Magazine, 24(2):30-46, Apr 2004.
23. A. Stefanopoulou, O. Storset, R. Smith, "Pressure and Temperature Based Adaptive Observer of Air Charge for Turbocharged Diesel Engines," International Journal of Robust and Nonlinear Control, 14(6):543-560, April 2004. DOI: 10.1002/rnc.902
22. V. Tsourapas, A. Stefanopoulou, J. Sun, "Modeling and Dynamics of a Fuel Cell Combined Heat Power System for Marine Applications," IASME Transactions, 2(1):288-293, April 2004.
21. Z. Filipi, L. Louca, A. Stefanopoulou, J. Pukrushpan, B. Kittirungsi, H. Peng, "Fuel Cell APU for Silent Watch and Mild Electrification of a Medium Tactical Truck," SAE 2004 Transactions - Journal of Engines, SAE 2004-01-1477 Mar 2004. doi:10.4271/2004-01-1477
20. M. Druzhinina , A. Stefanopoulou, "Speed Control Experiments for Heavy Duty Vehicles with Coordinated Friction and Engine Compression Brakes," International Journal of Heavy Vehicle Systems, 11(3-4):237-256, Jan 2004. DOI: 10.1504/IJHVS.2004.005450

2003

19. W. Hoffmann, K. Peterson, A. Stefanopoulou, "Iterative Learning Control for Soft Landing of Electromechanical Valve Actuator in Camless Engines," IEEE Transactions on Control System Technology Vol 11, no.2, p. 174-184, March 2003. DOI: 10.1109/TCST.2003.809242

2002

18. S. Liu, A. Stefanopoulou, "Effects of Control Structure on Performance for an Automotive Powertrain with Continuously Variable Transmission," IEEE Transactions on Control Systems Technology, 10(5):701-708, Sep 2002.
17. M. Druzhinina, A. Stefanopoulou, L. Moklegaard, "Adaptive Continuously Variable Compression Braking Control for Heavy-Duty Vehicles," Journal of Dynamic Systems, Measurement, and Control, 124(3):406-414, Jul 2002. doi: 10.1115/1.1486010
16. M. Druzhinina, L. Moklegaard, A. Stefanopoulou, "Speed Gradient Approach to Longitudinal Control of Heavy-Duty Vehicles Equipped with Variable Compression Brake," IEEE Transactions on Control System Technology, 10(2):209-221, Mar 2002.
15. Y. Wang, A. Stefanopoulou, K. Peterson, T. Megli, M. Haghgooie, "Modeling and Control of Electromechanical Valve Actuator," SAE 2002 Transactions - Journal of Engines, SAE 2002-01-1106, Mar 2002. doi:10.4271/2002-01-1106

2001

14. I. Kolmanovsky, A. Stefanopoulou, "Optimal Control Techniques for Assessing Feasibility and Defining Subsystem Level Requirements: an Automotive Case Study," Control Systems Technology, IEEE Transactions on, 9(3):524-534, May 2001.
13. Y. Wang, A. Stefanopoulou, R. Smith, "Inherent Limitations and Control Design for Camless Engine Idle Speed Dynamics," International Journal of Robust and Nonlinear Control, 11(11):1023-1042, Sep 2001.
12. L. Moklegaard, M. Druzhinina, A. Stefanopoulou, "Brake Valve Timing and Fuel Injection: a Unified Engine Torque Actuator for Heavy-Duty Vehicles," Journal of Vehicle System Dynamics, 36(2-3):179-201(23), Aug 2001. DOI: 10.1076/vesd.36.2.179.3552

2000

11. A. Stefanopoulou, R. Smith, "Maneuverability and Smoke Constraints in Marine Diesel Propulsion." IFAC Journal of Control Engineering Practice, vol.8, no.9, p.1023-31, Sept. 2000.
10. A. Stefanopoulou, I. Kolmanovsky, J. Freudenberg, "Control of Variable Geometry Turbocharged Diesel Engines for Reduced Emissions," IEEE Transactions on Control Systems Technology, 8(4):733-745, Jul 2000.
9. M. van Nieuwstadt, I. Kolmanovsky, P. Moraal, A. Stefanopoulou, M. Jankovic, "EGR-VGT Control Schemes: Experimental Comparison for a High-Speed Diesel Engine," IEEE Control Systems Magazine, 20(3):63-79, June 2000.
8. A. Stefanopoulou, J. Freudenberg, J. Grizzle, "Variable Camshaft Timing Engine Control," IEEE Transactions on Control Systems Technology, 8(1):23-34, Jan 2000.

1999

7. A. Stefanopoulou, I. Kolmanovsky, "Analysis and Control of Transient Torque Response in Engines with Internal Exhaust Gas Recirculation," Control Systems Technology, IEEE Transactions on, 7(5):555-566, Sep 1999.
6. A. Stefanopoulou, J. Cook, J. Grizzle, J. Freudenberg, "Joint Air-Fuel Ratio and Torque Regulation using Secondary Cylinder Air Flow Actuators," Journal of Dynamic Systems, Measurement, and Control, 121(4):638-647, Dec 1999.

1998

5. M. Jankovic, F. Frischmuth, A. Stefanopoulou, J. Cook, "Torque Management of Engines with Variable Cam Timing," Control Systems Magazine, IEEE, 18(5):34-42, Oct 1998.
4. M.-S. Ashhab, A. Stefanopoulou, J. Cook, M.. Levin, "Control of Camless Intake Process (Part II)," Journal of Dynamic Systems, Measurement, and Control, 122(1): 131-139, Jul 1998.
3. M.-S. Ashhab, A. Stefanopoulou, J. Cook, M. Levin, "Control-Oriented Model for Camless Intake Process (Part I)," Journal of Dynamic Systems, Measurement, and Control, 122(1):122-130, Jul 1998.
2. A. Stefanopoulou, J. Cook, J. Grizzle, J. Freudenberg, "Control-Oriented Model of a Dual Equal Variable Cam Timing Spark Ignition Engine," Journal of Dynamic Systems, Measurement, and Control, 120(2): 257-266, June 1998. doi:10.1115/1.2802417
1. M. Ashhab, A. Stefanopoulou, J. Cook, M. Levin, "Camless Engine Control for Robust Unthrottled Operation," SAE 1998 Transactions, Journal of Engines, Vol. 107, Feb 1998. doi: 10.4271/981031

Books:

1. "Control of Fuel Cell Power Systems: Principles, Modeling, Analysis, and Feedback Design," by Jay T. Pukrushpan, Anna G. Stefanopoulou, and Huei Peng, Springer Verlag, London, UK, ISBN 1-85233-816-4, Sept 2004
2. "Cost, Effectiveness, and Deployment of Fuel Economy Technologies for Light-Duty Vehicles," National Research Council. 2015, Washington, DC, The National Academies Press. https://doi.org/10.17226/21744.
3. "Assessment of Technologies for Improving Light-Duty Vehicle Fuel Economy 2025-2035," National Academies of Sciences, Engineering, and Medicine 2021, Washington, DC, The National Academies Press. https://doi.org/10.17226/26092.

Chapters in books:

1. M.A. Figueroa-Santos, A.G. Stefanopoulou (2021) Fuel Cell Vehicle Optimization and Control. In: Baillieul J., Samad T. (eds) Encyclopedia of Systems and Control. Springer, London. https://doi.org/10.1007/978-1-4471-5102-9_100145-1
2. Y. Kim, A. Stefanopoulou, "System-level management of rechargeable lithium-ion batteries" Recharagable Lithium Batteries: From Fundamentals to Applications, (Woodhead Publishing Series in Energy), pp. 281-302, April 2015 doi: 10.1016/B978-1-78242-090-3.00010-9
3. J. B. Siegel, A. G. Stefanopoulou, G. Ripaccioli, and S. Di Cairano, "Purge Scheduling for Dead-Ended Anode Operation of PEM Fuel Cells," The Control Handbook, Second Edition: Control System Applications, Second Edition . CRC Press, 2010.
4. "Control of Electromechanical Actuators: Valves Tapping in Rhythm", Kathy Peterson, Yan Wang, Anna Stefanopoulou, in Multidisciplinary Research in Control: The Mohammed Dahleh Symposium 2002. Eds. L. Giarre' and B. Bamieh, Lecture Notes in Control and Information Sciences N. 289, Springer-Verlag, Berlin, 2003, ISBN 3-540-00917-5
5. "Issues in Modelling and Control of Intake Flow in Variable Geometry Turbocharged Engines", I. V. Kolmanovsky, P.E. Moraal, and M. van Nieustandt, and A. G. Stefanopoulou, Systems Modeling and Optimization, pp. 436-445, Ed. M. Polis, Chapman Hall/CRC Research Notes in Mathematics, 1999.

US and International Patents Granted:

23. US 10,422,293, "Predictive modeling and mitigation of misfires in spark ignition engines," Stefanopoulou; Anna G., Lian; Huan, Martz; Jason Brian
22. US 10,230,137 "Estimating Core Temperatures of Battery Cells in a Battery Pack", X. Lin, Y. Ding, M. Castanier, A. Stefanopoulou, Filed: May 2013
21. US 10,074,996 "Bulk force in a battery pack and its application to state of charge estimation" Anna Stefanopoulou, Shankar Mohan, YoungKi Kim, Jason Siegel, Assignee: The Regents of the University of Michigan, issued Sep 2018
20. US 9708991 "Real-Time Residual Mass Estimation with Adaptive Scaling," J. Larimore, L. Jiang, E. Hellstrom, S. Jade, A. Stefanopoulou, J. Vanier, Assignee Bosch, filled 2014, issued 2017
19. US 977099 "Detection of Imbalance Across Multiple Battery Cells Measured by the Same Voltage Sensor" X. Lin, A. Stefanopoulou, R.D. Anderson, Y. Li, Assignee Ford, issued 2017
18. US 9429096 "Predictive Modeling and Reducing Cyclic Variability in Autoignition Engines," E. Hellstrom, A. Stefanopoulou, L. Jiang, J. Larimore, filled 2014, issued 2016.
17. US 9334818 "Mixed-Mode Combustion Control", E. Hellstrom, A. Stefanopoulou, L. Jiang, J.S. Sterniak, N. Ravi, J. Oudart, J. Schwanke, Assignee Bosch.
16. US 9376979B2 "Fuel Governor for Controlled Autoignition Engines," S. Jade, E. Hellstrom, A. G. Stefanopoulou, L. Jiang, Assignee Bosch, June 2016
15. US 9228527 "Dynamic Estimator for Determining Operating Conditions in an Internal Combustion Engine," E. Hellstrom, A. Stefanopoulou, L. Jiang, J. Larimore, Assignee Bosch, Jan 2016.
14. US 9,200,583, Concurrently adjusting interrelated control parameters to achieve optimal engine performance. Li Jiang, Donghoon Lee, Hakan Yilmaz, Anna Stefanopoulou, Assignee Bosch, Issued Dec 2015.
13. US 9,097,197 "Defining a region of optimization based on engine usage data" L. Jiang, D. Lee, H. Yilmaz, A. Stefanopoulou, I Assignee Bosch, Aug 2015
12. US 9,097,197 "Defining a region of optimization based on engine usage data", L. Jiang, D. Lee, H. Yilmaz, A. Stefanopoulou, Issued Aug. 2015, Assignee Bosch.

11. US 8,924,125 “Perturbing engine performance measurements to determine optimal engine control settings” L. Jiang, D. Lee, H. Yilmaz, A. Stefanopoulou, Assignee Bosch, Dec 2014.
10. US 8,874,351 “Adjusting the specificity of an engine map based on the sensitivity of an engine control parameter relative to a performance variable” L. Jiang, D. Lee, H. Yilmaz, A. Stefanopoulou, Assignee Bosch, Oct 2014.
9. US 8,185,293 “Fuel Composition Recognition and Adaptation System,” L. Jiang, N. Oliverio, A.G. Stefanopoulou, H. Yilmaz, Assignee Bosch, May 2012.
8. US 6,681,728 “Method for controlling an electromechanical actuator for Fuel Air Charge Valve,” M. Haghgooie, A.G. Stefanopoulou, K.S. Peterson, T. Megli, Y Wang, Assignee Ford, Jan 2004.
7. US 6,579,206 “Coordinated control for a powertrain with a continuously variable transmission,” S. Liu, A. Stefanopoulou, Assignee GM, June 2003.
6. US 6,568,173 B1 “Control method for turbocharged diesel engine aftertreatment system”, I. Kolmanovsky, A. Stefanopoulou, Assignee Ford, June 2003.
5. U.S. 6,186,124 “System and Method For Controlling Camshaft Timing, Air/Fuel Ratio, and Throttle Position in an Automotive Internal Combustion Engine”, A.G. Stefanopoulou and M. Jankovic, Feb 2001. (This application is a divisional of Ser. No. 09/005,571, now U.S. Pat. No. 6,006,725)
4. U.S. 6,076,353 “Coordinated control method for turbocharged diesel engines having exhaust gas recirculation”, J. S. Freudenberg, A. G. Stefanopoulou, I. V. Kolmanovsky, Jun 2000.
3. U.S. 6,006,725 “System and Method For Controlling Camshaft Timing, Air/Fuel Ratio, and Throttle Position in an Automotive Internal Combustion Engine”, A.G. Stefanopoulou, M. Jankovic, Dec 1999.
2. U.S. 5,787,848 “A Method of System for Operating An Internal Combustion Engine Having Variable Valve Timing”, A. G. Stefanopoulou, I. V. Kolmanovsky, Aug 1998.
1. U.S. 5,755,202 “Method of reducing feed gas emissions in an internal combustion engine”, A. G. Stefanopoulou, K.R. Butts, May 1998.

US and International Patent and Provisional Patent Applications:

5. U.S. Provisional Patent App 62/715,014, Electrode Diagnostics, for Lithium Ion Battery, S. Lee, JW Lee, TK Lee, J. Siegel, A. Stefanopoulou, Aug 2018
4. U.S. Provisional Patent App. 62/670,313, “High Confidence Detection of Internal Short Circuit in Lithium Ion Batteries,” Sravan Pannala, Jason Siegel, Anna Stefanopoulou, May 2018
3. US Patent App. 15/573,388 “Predictive modeling and mitigation of misfires in spark ignition engines, AG Stefanopoulou, L Huan, JB Martz, April 2016
2. US Patent App 2016090267 “Energy Conscious Warm-Up of Lithium-Ion Cells from Sub-Zero Temperatures,” Shankar Mohan, Youngki Kim, Anna Stefanopoulou, Jason Siegel, Yi Ding, Sonya Zanardelli, Wes Zanardelli, PCT/US15/64032, Filed Dec 2015
1. U.S. Patent App. 62/257,654 “Battery State of Health Estimation Using Force in Incremental Capacity Analysis,” Nassim Samad, YoungKi Kim, Jason Siegel, Anna Stefanopoulou, November 2015, UM 6840

Conference papers (peer-reviewed 6 pages or more)

2021

238. D. Chen, Y. Kim and E. Hyeon, "Receding-Horizon Safe Co-Optimization of the Velocity and Power-split of Plug-in Hybrid Electric Vehicles with Imperfect Prediction," 2021 American Control Conference (ACC), 2021, pp. 1848-1854, doi: 10.23919/ACC50511.2021.9482642.
237. P. Mohtat, S. Pannala, V. Sulzer, J.B. Siegel, A.G. Stefanopoulou, “An Algorithmic Safety VEST For Li-ion Batteries During Fast Charging”, to appear in IFAC-online Modeling, Estimation and Control Conference 2021, arXiv preprint arXiv:2108.07833, 2021.
236. V. Sulzer, P. Mohtat, S. Lee, J.B. Siegel, A.G. Stefanopoulou, “Promise and Challenges of a Data-Driven Approach for Battery Lifetime Prognostics”, Proceedings of the American Control Conference 2021-May,9483312, pp. 4427-4433
235. S. Pannala, P. Valecha, P. Mohtat, J.B. Siegel, A.G. Stefanopoulou, “Electrochemical Battery State Estimation Under Parameter Uncertainty Caused by Aging Using Expansion Measurements”, 2021 American Control Conference (ACC), 2021, pp. 3088-3093, doi: 10.23919/ACC50511.2021.9482886.
234. J.A. Drallmeier, H. Hofmann, R. Middleton, J. Siegel, A. Stefanopoulou, A. Salvi, “Work Extraction Efficiency in a Series Hybrid Opposed Piston Engine”, 2021, SAE Technical Paper 2021-01-1242.

233. X. Cui, A. Ramyar, P. Mohtat, V. Contreras, J. Siegel, A. Stefanopoulou, A.T. Avestruz, “Optimizing Partial Power Processing for Second-Use Battery Energy Storage Systems”, arXiv preprint arXiv:2106.11749, 2021.
232. X. Cui, A. Ramyar, P. Mohtat, V. Contreras, J. Siegel, A. Stefanopoulou, A.T. Avestruz, “Grid Interfaces to Electric Vehicle Charges Using Statistically-Structured Power Conversion for Second-Use Batteries as Energy Buffering”, arXiv preprint arXiv:2104.14976, 2021.

2020

231. E. Hyeon, Y. Kim, A.G. Stefanopoulou, “Fast Risk-Sensitive Model Predictive Control for Systems with Time-Series Forecasting Uncertainties”, Proceedings of the IEEE Conference on Decision and Control, 2020-December, pp. 2515-2520.
230. T. Cai, S. Pannala, A.G. Stefanopoulou, J.B. Siegel, “Battery Internal Short Detection Methodology Using Cell Swelling Measurements”, Proceedings of the American Control Conference, 2020-July,9147956, pp. 1143-1148, doi:10.23919/ACC45564.2020.9147956.
229. T. Cai, P. Mohtat, A.G. Stefanopoulou, J.B. Siegel, “Li-ion battery fault detection in large packs using force and gas sensors”, 2020, IFAC-PapersOnLine, 53, pp. 12491-12496.
228. M. Bieniek, B. Maldonado, A.G. Stefanopoulou, J. Hoard. “Online Control of Process Variance Using Feedback”, Proceedings of the American Control Conference, 2020-July, 9147900, pp. 3589-3594, doi:10.23919/ACC45564.2020.9147900.
227. E. Amezcua, B. Maldonado, D. Rothamer, K. Kim, “Accelerometer-based estimation of combustion features for engine feedback control of compression-ignition direct-injection engines”, 2020, SAE Technical Paper 2020-01-1147.
226. D. Chen, Y. Kim, M. Huang, A.G. Stefanopoulou, “An Iterative and Hierarchical Approach to Co-optimizing the Velocity Profile and Power-split of Plug-in Hybrid Electric Vehicles”, 2020-July, 9147804, pp. 3059-3064, doi:10.23919/ACC45564.2020.9147804.
225. C. Huang, X. Zhang, R. Salehi, T. Ersal,, G.A. Stefanopoulou, “A Robust Energy and Emissions Conscious Cruise Controller for Connected Vehicles with Privacy Considerations”, American Control Conference, 2020, DOI: 10.1080/00423114.2020.1740283.
224. S. Duraiarasan, R. Salehi, F. Wang, A.G. Stefanopoulou, M. Allain, S. Mahesh, “Real-Time Embedded Models for Simulation and Control of Clean and Fuel-Efficient Heavy-Duty Diesel Engines”, 2020, SAE International World Conference Experience, DOI: 10.4271/2020-01-0257.

2019

223. B. Maldonado, A.G. Stefanopoulou, R. Scarcelli, S. Som, “Characteristics of Cycle-to-Cycle Combustion Variability at Partial-Burn Limited and Misfire Limited Spark Timing Under Highly Diluted Conditions “, 2019, ASME Internal Combustion Engine Fall Technical Conference, DOI: 10.1115/ICEF2019-7256.
222. B.P. Maldonado, C.E. Solbrig, A.G. Stefanopoulou, “Feasibility and Calibration Considerations for Selection of Combustion Control Features”, 2019, IEEE Conference on Control Technology and Applications (CCTA), DOI: 10.1109/CCTA.2019.8920631.
221. S. Duraiarasan, R. Salehi, A.G. Stefanopoulou, S. Mahesh, M.Allain, “Control-Oriented Physics-Based NOx Emission Model for a Diesel Engine With Exhaust Gas Recirculation”, 2019, ASME Dynamic Systems and Control Conference, DOI: 10.1115/DSCC2019-9247.
220. J.A. Drallmeier, J.B. Siegel, A.G. Stefanopoulou, “Comparison of Estimation Techniques for the Crankshaft Dynamics of an Opposed Piston Engine”, 2019, ASME Dynamic Systems and Control Conference, DOI: 10.1115/DSCC2019-9206.
219. E. Hyeon, Y. Kim, N. Prakash, A.G. Stefanopoulou, “Influence of Speed Forecasting on the Performance of Ecological Adaptive Cruise Control”, 2019, ASME Dynamic Systems and Control Conference, DOI: 10.1115/DSCC2019-9046.
218. S. Lee, P. Mohtat, J. Siegel, A.G. Stefanopoulou, “Electrode-Specific State of Health Diagnostics for Lithium Ion Batteries Using Cell Voltage and Expansion,” 2019, The Electro Chemical Society, DOI: 10.1149/MA2019-02/5/265.
217. S. Nazari, N. Prakash, J. Siegel, A.G. Stefanopoulou, “On the Effectiveness of Hybridization Paired with Eco-Driving,” 2019, IEEE American Control Conference, DOI: 10.23919/ACC.2019.8814975.
216. S. Lee, Y. Kim, J.B. Siegel, A.G. Stefanopoulou, “Minimum-Time Measurement of Open Circuit Voltage of Battery Systems,” 2019, IEEE American Control Conference, DOI: 10.23919/ACC.2019.8814911.
215. E. Hyeon, Y. Kim, N. Prakash, A.G. Stefanopoulou, “Short-term Speed Forecasting Using Vehicle Wireless Communications,” 2019, IEEE American Control Conference, DOI: 10.23919/ACC.2019.8814400.

214. R. Salehi, A.G. Stefanopoulou, S. Mahesh, M. Allain, "Reduced-Order Long-Horizon Predictive Thermal Management for Diesel Engine Aftertreatment Systems," 2019 IEEE American Control Conference, DOI: 10.23919/ACC.2019.8814313

2018

213. Siegel, Jason B and Stefanopoulou, Anna G and Rizzo, Denise and Prakash, Niket,"Cooling Parasitic Considerations for Optimal Sizing and Power Split Strategy for Military Robot Powered by Hydrogen Fuel Cells," 2018 SAE Technical Paper
212. Polóni, T., Figueroa-Santos, M.A., Siegel, J.B., Stefanopoulou, A.G. Integration of Non-monotonic Cell Swelling Characteristic for State-of-Charge Estimation (2018) Proceedings of the American Control Conference, 2018-June, art. no. 8431237, pp. 2306-2311. DOI: 10.23919/ACC.2018.8431237
211. Lee, S., Mohtat, P., Siegel, J.B., Stefanopoulou, A.G. Beyond Estimating Battery State of Health: Identifiability of Individual Electrode Capacity and Utilization (2018) Proceedings of the American Control Conference, pp. 2288-2293, DOI: 10.23919/ACC.2018.8430743
210. Cai, T., Stefanopoulou, A.G., Siegel, J.B. Modeling Li-ion battery thermal runaway using a three section thermal model (2018) ASME 2018 Dynamic Systems and Control Conference, DSCC 2018, 2. DOI: 10.1115/DSCC2018-9086
209. Lee, S., Siegel, J.B., Stefanopoulou, A.G., Lee, J.-W., Lee, T.-K. Comparison of individual-electrode state of health estimation methods for lithium ion battery (2018) ASME 2018 Dynamic Systems and Control Conference, DSCC 2018, 2, DOI: 10.1115/DSCC2018-9014
208. Chen, Di and Kim, Youngki and Stefanopoulou, Anna G., "State of Charge Node Planning with Segmented Traffic Information," 2018 IEEE Annual American Control Conference ACC, p 4969—4974.
207. Huang, Chunan and Salehi, Rasoul and Stefanopoulou, Anna G, "Intelligent Cruise Control of Diesel Powered Vehicles Addressing the Fuel Consumption Versus Emissions Trade-off," 2018 Annual American Control Conference (ACC)},p 840--845},
206. Huang, Chunan and Salehi, Rasoul and Ersal, Tulga and Stefanopoulou, Anna G, "Optimal Speed Planning using Limited Preview for Connected Vehicles with Diesel Engines," 14th International Symposium on Advanced Vehicle Control, 2018
205. Pannala, Sravan et al, "Mechanical Measurements for Early Detection of Thermal Runaway Induced By an Internal Short Circuit, The Electrochemical Society Meeting Abstracts, no 3, p 368—368, 2018},
204. Stefanopoulou, Anna G and Huan, Lian and Martz, Jason Brian, "Predictive modeling and mitigation of misfires in spark ignition engines," 2018, May 17, US Patent App. 15/573,388
203. Maldonado, Bryan P and Freudenberg, James S and Stefanopoulou, Anna G, "Stochastic Feedback Combustion Control at High Dilution Limit," 2018 Annual American Control Conference (ACC), 1598--1603, 2018, IEEE
202. Nazari, Shima and Kiwan, Rani and Siegel, Jason and Stefanopoulou, Anna,"Waste Energy Recovery Through Turbo Generation: "Unexpected Fuel Efficiency Sweet Spot for Transient Control." 2018 Annual American Control Conference (ACC), P 13--18
201. Kiwan, Rani and Middleton, Robert and Stefanopoulou, Anna, "Thermodynamic and Practical Benefits of Waste Energy Recovery Using an Electric Turbo-Generator Under Different Boosting Methods," 2018 SAE Technical Paper
200. Nazari, Shima and Middleton, Robert and Sugimori, Kanji and Siegel, Jason and Stefanopoulou, Anna "Assessing a Hybrid Supercharged Engine for Highly Diluted Combustion Using a Dynamic Drive Cycle Simulation," 2018 SAE Technical Paper
199. Salehi, Rasoul and Stefanopoulou, Anna G, "Optimal Exhaust Valve Opening Control for Fast Aftertreatment Warm Up in Diesel Engines," ASME 2018 Dynamic Systems and Control Conference, V002T26A003
198. Maldonado, Bryan P and Stefanopoulou, Anna G, "Linear Stochastic Modeling and Control of Diluted Combustion for SI Engines," IFAC-PapersOnLine, 5th IFAC Conference on Engine and Powertrain Control, Simulation and Modeling E-COSM 2018, Vol 51, no 31, p 99--104, Elsevier
197. Bieniek, Mitchell and Stefanopoulou, Anna and Hoard, John and Fulton, Brien and Van Nieuwstadt, Michiel, "Combustion Variability Model for Control of Injection Timing for Diesel Exhaust Heating," ASME 2018 Internal Combustion Engine Division Fall Technical Conference, V002T05A009
196. Maldonado, Bryan P and Stefanopoulou, Anna G , "Non-Equiprobable Statistical Analysis of Misfires and Partial Burns for Cycle-to-Cycle Control of Combustion Variability," ASME 2018 Internal Combustion Engine Division Fall Technical Conference}, V002T05A003

195. Nazari, Shima and Siegel, Jason and Stefanopoulou, Anna, "Optimal Energy Management for a Hybrid Electric Vehicle with a Power Split Supercharger," 2018 IEEE Vehicle Power and Propulsion Conference (VPPC)},
194. Nazari, Shima and Middleton, Robert and Siegel, Jason and Stefanopoulou, Anna, "Equivalent Consumption Minimization Strategy for a Power Split Supercharger," 2019 SAE Technical Paper

2017

193. Knobloch, A., Karp, J., Plotnikov, Y., Kapusta, C., Siegel, J., Samad, N., Stefanopoulou, A. Novel thin temperature and expansion sensors for li-ion battery monitoring (2017) Proceedings of IEEE Sensors, 2017-December, pp. 1-3.
195. Mohan, S., Stefanopoulou, A.G. Comparing optimal battery warm-up strategies based on self-heating (2018) 2017 IEEE 56th Annual Conference on Decision and Control, CDC 2017, 2018-January, pp. 3884-3889. DOI: 10.1109/CDC.2017.8264231
191. R. Salehi, J. Martz, A. Stefanopoulou, B. Vernham, L Uppalapati, B. P. Baliga, "Decentralized Feedback Control of Pumping Losses and NOx Emissions in Diesel Engines," ASME ICEF 2017
190. B. P. Maldonado, A. G. Stefanopoulou, "Cycle-to-Cycle Feedback for Combustion Control of Spark Advance at the Misfire Limit," ASME ICEF 2017
189. B. P. Maldonado, H. Lian, J. B. Martz, A. G. Stefanopoulou, K. Zaseck, E. Kitagawa, "Combustion shaping using multivariable feedback control American Control Conference (ACC), 2017, 4760-4765, 2017
188. P. Mohtat, F. Nez, S. Mohan, J. B. Siegel, A.G. Stefanopoulou, "On identifying the aging mechanisms in li-ion batteries using two points measurements," American Control Conf (ACC), 2017, 98-103.
187. A. P. Wiese, A. Stefanopoulou, A. Karnik, J. H. Buckland, "Model Predictive Control for Low Pressure Exhaust Gas Recirculation with scavenging," American Control Conference (ACC), 2017, pages 3638-3643.
186. S. Nazari, Shima; R. Middleton, J Martz, A. G. Stefanopoulou," The elusive consequences of slow engine response on drive cycle fuel efficiency," ACC 2017, 5379-5385,2017
185. R. Kiwan, A.G.S. Stefanopoulou, J. Martz, G. Surnilla, I. Ali, D. Styles, "Effects of Differential Pressure Sensor Gauge-Lines and Measurement Accuracy on Low Pressure EGR Estimation Error in SI Engines," SAE 2017-01-0531
184. A. Wiese, A.G. Stefanopoulou, J. Buckland, A. Y. Karnik, "Modelling and Control of Engine Torque for Short-Circuit Flow and EGR Evacuation," SAE 2017-01-0606

2016

183. Y. Kim, N. Samad, K.-Y. Oh, J. B. Siegel, B. Epureanu, A. Stefanopoulou, "Estimating State-of-Charge Imbalance of Batteries Using Force Measurements," American Control Conference (ACC), Jul 2016
182. S. Mohan, J. Siegel, Jason; A.G. Stefanopoulou, M. Castanier, Y. Ding, "Synthesis of an energy-optimal self-heating strategy for Li-ion batteries," Decision and Control (CDC) Conference Dec. 2016
181. N. Prakash, A. Stefanopoulou, A. Moskalik, M. Brusstar, "Use of the Hypothetical Lead (HL) Vehicle Trace: A New Method for Evaluating Fuel Consumption in Automated Driving," American Control Conference (ACC), Jul 2016. DOI: 10.1109/ACC.2016.7525453
180 N. Prakash, G. Cimini, A.G. Stefanopoulou, M. J. Brusstar, "Assessing Fuel Economy From Automated Driving: Influence of Preview and Velocity Constraints," ASME 2016 Dynamic Systems and Control Conference (DSCC) V002T19A001, 2016.
179. R. Kiwan, A. Stefanopoulou, J. Martz, G. Surnilla, I. Ali, D. Styles, "Effects of Differential Pressure Measurement Characteristics on Low Pressure-EGR Estimation Error in SI-Engines," 8th IFAC Symposium on Advances in Automotive Control, Jun 2016.
178. C. Guardiola, V. Triantopoulos, P. Bares, S. Bohac, A. Stefanopoulou, "Simultaneous Estimation of Intake and Residual Mass Using In-Cylinder Pressure in an Engine with Negative Valve Overlap," 8th IFAC Symposium on Advances in Automotive Control, Jun 2016.
177. S. Nüesch, A. Stefanopoulou, "Mild HEV with Multimode Combustion: Benefits of a Small Oxygen Storage," 8th IFAC Symposium on Advances in Automotive Control, Jan 2016
176. S. Nazari, A.G. Stefanopoulou, J. Martz, "Minimum backpressure wastegate control for a boosted gasoline engine with low pressure external EGR" ASME 2016 Dynamic Systems and Control Conference, V002T20A002- 2016
175. S. Nazari, Shima, A.G. Stefanopoulou, R. Kiwan, V. Tsourapas, "A Coordinated Boost Control in a Twincharged Spark Ignition Engine With High External Dilution," ASME 2016 Dynamic Systems and Control Conference, V002T20A003, ASME.

174. R. Salehi, J. Martz, A. Stefanopoulou, D. Rizzo, D. Mcgrew, T. Hansen, “Enabling Electrified Diesel Engine-Powered and Vehicle-Supported Microgrids,” NDIA Ground Vehicle Systems Engineering and Technology Symposium, Aug 2016
173. R. Salehi, A. Stefanopoulou, D. Kihas, M. Uchanski, “Selection and Tuning of a Reduced Parameter Set for a Turbocharged Diesel Engine Model,” American Control Conference (ACC), Jul 2016
172. R. Salehi, J. Martz, A. Stefanopoulou, T. Hansen, A, Haughton, “Comparison of High- and Low-Pressure Electric Supercharging of a HDD Engine: Steady State and Dynamic Air-Path Considerations,” SAE Conference Paper, Apr 2016. DOI: 10.4271/2016-01-1035

2015

171. Y. Kim, B. McCain, A. Stefanopoulou, “Trajectory Optimization for Electrified Trams without Catenary Cable,” 2015 IFAC Workshop on Engine and Powertrain Control Simulation and Modeling, Aug 2015.
170. N. Samad, Y. Kim, J. B. Siegel, A. Stefanopoulou, “Influence of Battery Downsizing and SOC Operating Window on Battery Pack Performance in a Hybrid electric Vehicle,” SS5-1, 2015 IEEE Vehicle Power and Propulsion Conference (VPPC), Oct 2015, DOI: 10.1109/VPPC.2015.7352966
169. J. B. Siegel, Y. Wang, A. Stefanopoulou, B. McCain, “Comparison of SOFC and PEM Fuel Cell Hybrid Power Management Strategies for Mobile Robots,” IEEE Vehicle Power and Propulsion Conference (VPPC), Oct 2015. DOI: 10.1109/VPPC.2015.7352914
168. R. Salehi, A. Stefanopoulou, "Effective Component Tuning in a Diesel Engine Model Using Sensitivity Analysis," ASME Dynamic Systems and Control Conference (DSCC), Oct 2015. DOI: 10.1115/DSCC2015-9729
167. Y. Parvini, J. B. Siegel, A. Stefanopoulou, A. Vahidi, "Preliminary Results on Identification of an Electro-Thermal Model for Low Temperature and High Power Operation of Cylindrical Double Layer Ultracapacitors," American Control Conference, Portland, OR, June 2014, DOI: 10.1109/ACC.2014.6859394
166. S. Mohan, Y. Kim, A. Stefanopoulou, "On improving battery state of charge estimation using bulk force measurements," ASME Dynamic Systems and Control Conference (DSCC), Oct 2015
165. S. Nüesch, A. Stefanopoulou, "Is it Economical to Ignore the Driver? A Case Study on Multimode Combustion," ASME Dynamic Systems and Control Conference (DSCC), DSCC2015-9875, Oct 2015
164. N. Prakash, J. Martz, A. Stefanopoulou, "A Phenomenological Model for Predicting the Combustion Phasing and Variability of Spark Assisted Compression Ignition (SACI) Engines,” ASME Dynamic Systems and Control Conference (DSCC), DSCC2015-9883, October 2015
163. S. Nüesch, J. Sterniak, L. Jiang, A. Stefanopoulou, "On Beneficial Mode Switch Decisions based on Short-term Engine Load Prediction," IFAC E-COSM, Aug 2015.
162. N. Samad, J. B. Siegel, A. Stefanopoulou, A. Knobloch, "Observability analysis for surface sensor location in encased battery cells,” IEEE American Control Conference (ACC), July 2015. doi: 10.1109/ACC.2015.7170752

2014

161. S. Nuesch, A. Stefanopoulou, L. Jiang, J. Sterniak, “Methodology to Evaluate the Fuel Economy of a Multimode Combustion Engine With Three-Way Catalytic Converter,” ASME 2014 Dynamic Systems and Control Conference (DSCC), DSCC2014-6146, pp. V002T34A003, Oct 2014. doi: 10.1115/DSCC2014-6146
160. N. Samad, J. Siegel, A. Stefanopoulou, “Parameterization and Validation of a Distributed Coupled Electro-Thermal Model for Prismatic Cells,” ASME Dynamic Systems and Control Conference (DSCC), San Antonio, DSCC2014-6321, Oct 2014. doi: 10.1115/DSCC2014-6321
159. X. Lin, S. Mohan, J. Siegel, A. Stefanopoulou, “Temperature Estimation in a Battery String under Frugal Sensor Allocation,” ASME Dynamic Systems and Control Conference (DSCC), DSCC 2014-6352, Oct 2014.
158. P. Gorzelic, P. Shingne, J. Martz, A. Stefanopoulou, J. Sterniak, L. Jiang, “A Low-Order HCCI Model Extended to Capture SI-HCCI Mode Transition Data with Two-Stage Cam Switching,” ASME Dynamic Systems and Control Conference (DSCC), San Antonio, DSCC2014-6275, Oct 2014.
157. M. Hand, A. Stefanopoulou, “Location Isolability of Intake and Exhaust Manifold Leaks in a Turbocharged Diesel Engine With Exhaust Gas Recirculation,” ASME Dynamic Systems and Control Conference (DSCC), San Antonio, DSCC2014-6175, Oct 2014.
156. Y. Parvini, J. B. Siegel, A. Stefanopoulou, A. Vahidi, “Preliminary results on identification of an electro-thermal model for low temperature and high power operation of cylindrical double layer ultracapacitors," American Control Conference, Portland, Oregon, June 2014.

155. Y. Kim, S. Mohan, N. Samad, J.B. Siegel, A. Stefanopoulou, "Optimal Power Management for a Series Hybrid Electric Vehicle Cognizant of Battery Mechanical Effects," American Control Conference (ACC), Portland, Oregon, p 3832-7, June 2014
154. S. Mohan, Y Kim, A. Stefanopoulou, Y Ding, "On the Warm-Up of Li-ion Cells from Sub-zero Temperatures," American Control Conference (ACC), Portland, Oregon, June 2014.
153. S. Nuesch, E. Hellstrom, L. Jiang, A. Stefanopoulou, "Mode Switches among SI, SACI, and HCCI Combustion and their Influence on Drive Cycle Fuel Economy," American Control Conference (ACC), p. 849 – 854, Portland, Oregon, DOI: 10.1109/ACC.2014.6858954, June 2014.
152. A. Knobloch, C. Kapusta, J. Karp, D. Lin, Y. Plotnikov, A. Stefanopoulou, J. Siegel, C. Monroe, B. Epureanu, K. Garipkipati, D. Anderson, "Ultra-thin sensors and multi physics models for new insights into Li-ion battery operation," AABC 2014 - Advanced Automotive Battery Conference, Feb 2014.

2013

151. Y. Kim, S. Mohan, J. B. Siegel, A. Stefanopoulou, Y. Ding, "The Estimation of Radial Temperature Distribution in Cylindrical Battery Cells under Unknown Cooling Conditions," 2013 IEEE 52nd Annual Conference on Decision and Control (CDC), 5680 - 5685, Dec 2013. doi: 10.1109/CDC.2013.6760784
150. S. Kim, L. Secondo, C. Monroe, J. B. Siegel, A. Stefanopoulou, "Key Parameters for Electrothermal Dynamics and Control of 15-Ah Prismatic Li-Ion Batteries," AIChE Annual Meeting, Nov 2013.
149. E. Hellström, A. Stefanopoulou, L. Jiang, "A linear least-squares algorithm for double-Wiebe functions applied to spark-assisted compression ignition," ASME Internal Combustion Engine Division Fall Technical Conference, Dearborn, MI, ICEF2013-19068, Oct 2013.
148. M. Hand, E. Hellström, D. Kim, A. Stefanopoulou, J. Kollien, C. Savonen, "Model and calibration of a diesel engine air path with an asymmetric twin scroll turbine," ASME Internal Combustion Engine Division Fall Technical Conference, Dearborn, MI, ICEF2013-19134, Oct 2013.
147. J. Larimore, S. Jade, E. Hellström, A. Stefanopoulou, J. Vanier, L. Jiang, "Online adaptive residual mass estimation in a multicylinder recompression HCCI engine," ASME Dynamic Systems and Control Conference, Palo Alto, CA, Oct 2013.
146. Y. Kim, S. Mohan, J. B. Siegel, A. Stefanopoulou, "Maximum Power Estimation of Lithium-ion Batteries Accounting for Thermal and Electrical Constraints," ASME Dynamic Systems Control Conference, Oct 2013.doi: 10.1115/DSCC2013-3935
145. S. Nuesch, E. Hellstrom, L. Jiang, A. Stefanopoulou, "Influence of Transitions between SI and HCCI Combustion on Driving Cycle Fuel Consumption," European Control Conference (ECC), Zurich, Switzerland, pp. 1976 – 1981 INSPEC Accession Number: 13950632, July 2013.
144. J. Chen, J.B. Siegel, T. Matsuura, A. Stefanopoulou, S. Yesilyurt, "Experimental validation of equilibria in fuel cells with dead-ended anodes," 2013 European Control Conference (ECC) July 2013.
143. X. Lin, A. Stefanopoulou, Y. Li, R.D. Anderson, "State of charge estimation of cells in series connection by using only the total voltage measurement," American Control Conference (ACC), June 2013. DOI: 10.1109/ACC.2013.6579918
142. X. Lin, A. Stefanopoulou, Y. Li, R. D. Anderson, "Estimating individual cell SOCs and voltages without single cell voltage measurement," American Control Conference, p 704 - 709, June 2013.
141. Y. Kim, J.B. Siegel, A. Stefanopoulou, "A computationally efficient thermal model of cylindrical battery cells for the estimation of radially distributed temperatures," American Control Conference (ACC), 698-703, June 2013.
140. B. Wang, A. Warnock, A. Stefanopoulou, N. Katopodes, "Model development for real time optimal control in pipe lines," American Control Conference (ACC), pp. 5536 - 5541, June 2013
139. J. Larimore, E. Hellström, S. Jade, L. Jiang, A. Stefanopoulou, "Controlling combustion phasing variability with fuel injection timing in a multicylinder HCCI engine," American Control Conference, Washington, DC, USA, pp. 4441–4446, June 2013.
138. S. Jade, J. Larimore, E. Hellström, L. Jiang, A. Stefanopoulou, "Enabling large load transitions on multicylinder recompression HCCI engines using fuel governors," American Control Conference, Washington, DC, pp. 4429–4434, June 2013.

2012

137. E. Hellström, A. Stefanopoulou, L. Jiang, "Reducing cyclic dispersion in autoignition combustion by controlling fuel injection timing," IEEE Conference on Decision and Control, Dec 2012. DOI: 10.1109/CDC.2012.6426870
136. H. Perez, J. B. Siegel, X. Lin, Y. Ding, M. Castanier, "Parameterization and Validation of an Integrated Electro-Thermal LFP Battery Model," 2012 ASME Dynamic Systems Control Conference, Oct 2012.

135. P. Gorzelic, E. Hellström, A. Stefanopoulou, L. Jiang, “Model-Based Feedback Control for an Automated Transfer Out of SI Operation During SI to HCCI Transitions in Gasoline Engines,” ASME Dynamic Systems and Control Conference, DSCC2012-MOVIC2012-8779, Oct 2012.
134. B. Wang, J. Siegel, N. Katopodes, A. Stefanopoulou, “Model and Hardware Development for Predictive Plume Control in Pipe Lines,” ASME Dynamic Systems and Control Conference, DSCC2012 8857, Oct 2012
133. Y. Kim, T. Ersal, A. Salvi, A. Stefanopoulou, Z. Filipi, “Engine-in-the-loop validation of a frequency domain power distribution strategy for series hybrid powertrains,” IFP Energies Nouvelles, France, Oct 2012. DOI: 10.3182/20121023-3-FR-4025.00058
132. J. B. Siegel, X. Lin, A. G. Stefanopoulou, “On the Accuracy and Simplifications of Battery Models Using In Situ Measurements of Lithium Concentration in Operational Cells,” 2012 American Control Conference, pp.1362-1367, June 2012.
131. T. Ersal, C. Ahn, I. Hiskens, H. Peng, A. Stefanopoulou, J.Stein, "On the effect of DC source voltage on inverter-based frequency and voltage regulation in a military microgrid," American Control Conference (ACC), pp.2965-2971, 27-29 June 2012
130. S. Jade, E. Hellström, L. Jiang, A. Stefanopoulou, “Fuel Governor Augmented Control of Recompression HCCI Combustion During Large Load Transients,” American Control Conference, pp.2084-2089, June 2012.
129. J. Larimore, E. Hellström, J. Sterniak, L. Jiang, A. Stefanopoulou, “Experiments and Analysis of High Cyclic Variability at the Operational Limits of Spark-Assisted HCCI Combustion,” American Control Conference, pp 2072-2077, Montréal, Canada, June 2012.
128. X. Lin, A. Stefanopoulou, H. Perez, J. B. Siegel, Y. Li, R. D. Anderson, “Quadruple Adaptive Observer of the Core Temperature in Cylindrical Li-Ion Batteries and Their Health Monitoring,” 2012 American Control Conference (ACC), pp.578-583, June 2012.
127. P. Gorzelic, E. Hellström, A. Stefanopoulou, L. Jiang, S. Gopinath, “A Coordinated Approach for Throttle and Wastegate Control in Turbocharged Spark Ignition Engines,” In 24th Chinese Control and Decision Conference, pp.1524-1529, 23-25 May 2012, doi: 10.1109/CCDC.2012.6244247
126. E. Hellström, J. Larimore, A. Stefanopoulou, J. Sterniak, L. Jiang, “Quantifying Cyclic Variability in a Multi-Cylinder HCCI Engine with High Residuals,” ASME Internal Combustion Engine Division Spring Technical Conference, Torino, Italy, ICEF2012-81107, May 2012.
125. E. Hellström, A. Stefanopoulou, J. Vávra, A. Babajimopoulos, D. Assanis, L. Jiang, and H. Yilmaz, “Understanding the Dynamic Evolution of Cyclic Variability at the Operating Limits of HCCI Engines with Negative Valve Overlap,” SAE World Congress, number 2012-01-1106 in SAE Technical Paper Series, Detroit, MI, April 2012.

2011

124. E. Hellström, A. G. Stefanopoulou, “Modeling Cyclic Dispersion in Autoignition Combustion,” 50th IEEE Conference on Decision and Control, pages 6834-6839, Dec 2011 doi: 10.1109/CDC.2011.6161383.
123. X. Lin, H. E. Perez, J. B. Siegel, A. Stefanopoulou, Y. Ding, and M. P. Castanier. “Parameterization and observability analysis of scalable battery clusters for onboard thermal management.” Les Rencontres Scientifiques d’IFP Energies nouvelles – International Scientific Conference on hybrid and electric vehicles – RHEVE 2011, Dec 2011
122. X. Lin, A. Stefanopoulou, D. Anderson, Y. Lin, “State of charge estimation error due to model parameter mismatch”, DSCC 11—finalist best paper award, Nov 2011.
121. S. Jade, E. Hellstrom, A. Stefanopoulou, J. Li, “On the Influence of Composition Steta on the Thermally-dominant Dynamics of Direct Injection Recompression HCCI Engines, ASME Dynamic Systems and Control Conference, pages 677–684, Arlington, VA, USA, Nov 2011.
120. T. Matsuura, J. B. Siegel, J. Chen, A. Stefanopoulou, “Multiple Degradation Phenomena in Polymer Electrolyte Fuel Cell Operation with Dead-Ended Anode,” ASME 5th International Conference on Energy Sustainability & 9th Fuel Cell Science, Engineering and Technology Conference, ESFuelCell2011-54344, Aug 2011
119. T.-K. Lee, Y. Kim, A. Stefanopoulou, Z. Filipi, "Hybrid electric vehicle supervisory control design reflecting estimated lithium-ion battery electrochemical dynamics," American Control Conference (ACC), 2011 , vol., no., pp.388-395, July 2011.
118. J. Chen, J. B. Siegel, A. Stefanopoulou, "Nitrogen blanketing and water fording front equilibria in fuel cell dead end anode operation," 2011 American Control Conference, pp.1524-1529, July 2011.

117. C. Speltino, A. Stefanopoulou, G. Fiengo, “Parameterization and estimation of surrogate critical surface concentration in lithium-ion batteries,” Special Issue on Int’l Journal of Vehicle Dynamics, MAR 2011.

2010

116. S. Moura, J. B. Siegel, D. J. Siegel, H. Fathy, A. Stefanopoulou, “Education on Vehicle Electrification: Battery Systems, Fuel Cells, and Hydrogen,” Vehicle Power and Propulsion Conference (VPPC), 2010 IEEE, pages 1-6, Sept. 2010. DOI: 10.1109/VPPC.2010.5729150
115. D. Lee, L. Jiang, H. Yilmaz, A. Stefanopoulou, “Preliminary Results on Optimal Variable Valve Timing and Spark Timing Control via Extremum Seeking,” DSCC 2010, Sept 2010.
114. S. Moura, J. Siegel, D. Siegel, H. Fathy, A. Stefanopoulou, “Education on electrochemical vehicle propulsion: Battery systems and hydrogen fuel cells,” 2010 IEEE Vehicle Power and Propulsion Conference (VPPC2010), Sept 2010.
113. D. Lee, L. Jiang, H. Yilmaz, A. Stefanopoulou, “Air Charge Control for Turbocharged Spark Ignition Engines with Internal Exhaust Gas Recirculation,” American Control Conference (ACC), 2010, pages 1471 -1476, July 2010.
112. D. Lee, A. Stefanopoulou, S. Makkapati, M. Jankovic, “Modeling and Control of a Heated Air Intake Homogeneous Charge Compression Ignition (HCCI) Engine,” American Control Conference (ACC), 2010, pages 3817 -3823, July 2010.
111. J. Siegel, A. Stefanopoulou, “Parameterization of GDL Liquid Water Front Propagation and Channel Accumulation for Anode Purge Scheduling in Fuel Cells,” American Control Conference (ACC2010), pp. 6606-6611, July 2010.
110. C. Speltino, D. Di Domenico, G. Fiengo, A. Stefanopoulou, “Cell Equalization in Battery Stacks Through State of Charge Estimation polling,” American Control Conference, pp.5050-5055, July 2010.
109. K. Ahn, L. Jiang, H. Yilmaz, A. Stefanopoulou, “Ethanol Content Estimation in Flex-Fuel Direct Injection Engines with Fault Detection under Fuel Injector Drifts,” IFAC2010 Symposium in advances in Automotive Control, July 2010.
108. J. B. Siegel, A. Stefanopoulou, S. Yesilyurt, “Modeling and simulations of PEMFCs operating with periodically purged dead-ended anode channels,” 8th International Fuel Cell Science, Engineering and Technology Conference, FuelCell2010-33341, Brooklyn, New York, June 14-16 2010.
107. J. B. Siegel, S. Yesilyurt, A. Stefanopoulou, “Reduced Complexity Models for Water Management and Anode Purge Scheduling in DEA Operation of PEMFCs,” ECS Meeting, vol 33, pp.1583-1596, April 2010.
106. K. Ahn, A. Stefanopoulou, L. Jiang, H. Yilmaz, “Ethanol content estimation in flex fuel direct injection engines using in-cylinder pressure measurements,” SAE 2010-01-0166, SAE World Congress, April 2010
105. L. Jiang, H. Yilmaz, M. Christie, K. Ahn, A. Stefanopoulou, “Optimally Controlled Flexible Fuel Vehicle.” 10th Stuttgart International Symposium - Automotive and Engine Technology, Mar 2010.

2009

104. G. Ripaccioli, J. B. Siegel, A. Stefanopoulou, S. Di Cairano, “Derivation and Simulation Results of a Hybrid Model Predictive Control for Water Purge Scheduling in a Fuel Cell,” 2nd Annual Dynamic Systems and Control Conference, Hollywood, CA, USA, October 12-14 2009.
103. C. Speltino, D. Di Domenico, G. Fiengo, A. Stefanopoulou, “Comparison of Reduced Order Lithium-Ion Battery Models for Control Applications,” Joint 48th IEEE Conference on Decision and Control and 28th Chinese Control Conference, October 2009.
102. K. Ahn, A. Stefanopoulou, M. Jankovic, “Estimation of ethanol content in flex-fuel vehicles using an exhaust gas oxygen sensor: Model, tuning and sensitivity,” Dynamic Systems and Control Conference (DSCC08), Paper TuAT5.3, Oct 2008.
101. K. Ahn, A. G. Stefanopoulou, M. Jankovic, “Tolerant Ethanol Estimation in Flex-Fuel Vehicles During MAF Sensor Drifts,” ASME 2009 Dynamic Systems and Control Conference, number DSCC2009-2708 in Paper MoAT4.3, Hollywood, California, USA, Oct 2009.
100. K. Ahn, A.G. Stefanopoulou, M. Jankovic, “Fuel Puddle Model and AFR Compensator for Gasoline-Ethanol Blends in Flex-Fuel Engines,” Vehicle Power and Propulsion Conference, 2009. VPPC '09. IEEE, pages 1148-1155, Sept. 2009.
99. C. Speltino, D. Di Domenico, G. Fiengo, A. Stefanopoulou, “Experimental identification and validation of an electrochemical model of a lithium-ion battery”, European Control Conference, ECC 2009, Aug 2009.
98. J. B. Siegel, A. Stefanopoulou, “Through the Membrane & Along the Channel Flooding in PEMFCs,” American Control Conference, 2009, ACC '09, pages 2666-2671, June 2009.

97. N. Oliverio, L. Jiang, H. Yilmaz, A. Stefanopoulou, “Modeling of Fuel Ethanol Concentration Effect on Cylinder Pressure Evolution in Direct-Injection Flex-Fuel Engines,” American Control Conference, June 2009.
96. J. B. Siegel, S. Yesilyurt, A. G. Stefanopoulou, “Extracting Model Parameters and Paradigms from Neutron Imaging of Dead-Ended Anode Operation,” FuelCell2009 Seventh International Fuel Cell Science, Engineering and Technology Conference, June 2009.
95. C. Speltino, D. Di Domenico, G. Fiengo, A. Stefanopoulou, “Experimental Validation of a Lithium-Ion Battery State of Charge Estimation with an Extended Kalman Filter: Part I,” The European Control Conference, Aug 2009.
94. S. Yesilyurt, J. B. Siegel, A. Stefanopoulou, “Effects of Nitrogen and Water Accumulation in the Dead-Ended-Anode Operation of PEM Fuel Cells,” 215th ECS Meeting, The Electrochemical Society, San Francisco, California, May 24-29 2009.
93. C. Speltino, D. Di Domenico, G. Fiengo, A. Stefanopoulou, “On the Experimental Identification of an Electrochemical Model of a Lithium-Ion Battery: Part II,” European Control Conference, Aug 2009.
92. N. Oliverio, A. Stefanopoulou, L. Jiang, H. Yilmaz, "Ethanol detection in flex-fuel direct injection engines using in-cylinder pressure measurements," SAE 2009-01-0657, SAE, April 2009.
91. L. Jiang, J. Vanier, H. Yilmaz, A. Stefanopoulou, “Parameterization and simulation for a turbocharged spark ignition direct injection engine with variable valve timing,” SAE 2009-01-0680, SAE, April 2009.

2008

90. B. McCain, A. Stefanopoulou, I. Kolmanovsky, “Stability Analysis for Liquid Water Accumulation in Low Temperature Fuel Cells,” 47th IEEE Conference on Decision and Control CDC 2008, pages 859-864, 9-11 Dec. 2008.
89. B. McCain, A. Stefanopoulou, K. Butts, “On Controllability and Observability of Linearized Liquid Water Distributions Inside a PEM Fuel Cell,” ASME 2008 Dynamic Systems and Control Conference (DSCC08), volume 2008, pages 385-392, Paper DSCC2008-2155, Oct 2008.
88. E. Muller, F. Kolb, L. Guzzella, D. McKay, A. Stefanopoulou, “Correlating Nitrogen Accumulation with Temporal Fuel Cell Performance,” volume 2008, pages 393-401. ASME, Oct 2008. doi:10.1115/DSCC2008-2156
87. K. Ahn, A. Stefanopoulou, M. Jankovic, “Estimation of Ethanol Content in Flex-Fuel Vehicles Using an Exhaust Gas Oxygen Sensor: Model, Tuning and Sensitivity,” 2008 Dynamic Systems and Control Conference (DSCC08), Paper TuAT5.3, Oct 2008
86. D. Di Domenico, A. Stefanopoulou, G. Fiengo, “SOC Estimation using an EKF based on an Average Electrochemical Model of a Lithium-Ion Battery,” 2008 IEEE Multi-conference on Systems and Control, Sept 2008.
85. D. Domenico, G. Di Fiengo, A. Stefanopoulou, “Lithium-Ion Battery State of Charge Estimation with a Kalman Filter Based on a Electrochemical Model,” IEEE International Conference on Control Applications CCA, pages 702-707, Sep 2008.
84. B. McCain, J. B. Siegel, A. Stefanopoulou, “Stack-level Validation of a Semi-Analytic Channel-to-Channel Fuel Cell Model for Two-Phase Water Distribution Boundary Value Control,” American Control Conference, pages 5098-5103, 11-13 June 2008.
83. D. McKay, A. Stefanopoulou, J. Cook, “Model and Experimental Validation of a Controllable Membrane-Type Humidifier for Fuel Cell Applications,” American Control Conference, pages 312-317, 11-13 June 2008.
82. D. McKay, A. Stefanopoulou, J. Cook, “A Membrane-Type Humidifier for Fuel Cell Applications: Controller Design, Analysis, and Implementation,” ASME Conference Fuel Cell Science and Technology, volume 2008, pages 841-850, June 2008.
81. J. B. Siegel, D. McKay, A. Stefanopoulou, “Modeling and Validation of Fuel Cell Water Dynamics using Neutron Imaging,” American Control Conference, pages 2573-2578, 11-13 June 2008.
80. J. B. Siegel, D. McKay, A. Stefanopoulou, “Measurement of Liquid Water Accumulation in a Proton Exchange Membrane Fuel Cell with Dead-Ended Anode.” volume 2008, pages 757-768. ASME Conference Fuel Cell Science and Technology, June 2008.
79. V. Tsourapas, J. Sun, A. Stefanopoulou, “Incremental step reference governor for load conditioning of hybrid fuel cell and gas turbine power plants,” American Control Conference, pages 2184-2189, 11-13 June 2008.

2007

78. B. McCain, A. Stefanopoulou, I. Kolmanovsky, "Multi-Component Spatially-Distributed Model of Two-Phase Flow for Estimation and Control of Fuel Cell Water Dynamics," 46th IEEE Conference on Decision and Control, pages 584-589, 12-14 Dec. 2007.
77. C. Chiang, A. Stefanopoulou, "Dynamics of Homogeneous Charge Compression Ignition (HCCI) Engines with High Dilution," American Control Conference, pages 2979-2984, 9-13 July 2007.
76. V. Tsourapas, J. Sun, A. Stefanopoulou, "Control Oriented Analysis of a Hybrid Solid Oxide Fuel Cell and Gas Turbine (SOFC/GT) System," FC-07-1086, ASME Conference on Fuel Cell Science and Technology, June 2007

2006

75. B. McCain, A. Stefanopoulou, K. Butts, "A Study Toward Minimum Spatial Discretization of a Fuel Cell Dynamics Model," 2006 ASME International Mechanical Engineering Congress and Exposition, IMECE2006-14509, Nov 2006.
74. O. Sundstrom, A. Stefanopoulou, "Optimal Power Split in Fuel Cell Hybrid Electric Vehicle with different Battery Sizes, Drive Cycles, and Objectives," IEEE Computer Aided Control System Design, IEEE International Conference on Control Applications, IEEE International Symposium on Intelligent Control, pages 1681-1688, 4-6 Oct. 2006.
73. C. Chiang, A. Stefanopoulou, M. Janković, "Nonlinear Control of Transitions Between Thermal Equilibria in Homogeneous Charge Compression Ignition (HCCI) Engines," AVEC 06, Aug 2006.
72. C. Chiang, A. Stefanopoulou, "Sensitivity Analysis of Combustion Timing and Duration of Homogeneous Charge Compression Ignition (HCCI) Engines," American Control Conference, pages 1857-1862, 14-16 June 2006.
71. B. McCain, A. Stefanopoulou, "Order Reduction for a Control-Oriented Model of the Water Dynamics in Fuel Cells," 4th International Conference on Fuel Cell Science, Engineering and Technology. FUELCELL2006-97075, June 2006.
70. A. Schilter, D. McKay, A. Stefanopoulou, "Parameterization of Fuel Cell Stack Voltage: Issues on Sensitivity, Cell-to-Cell variation, and Transient Response," ASME 4th International Conference on Fuel Cell Science, Engineering and Technology, FUELCELL2006-97177, volume 2006, pages 307-317, June 2006.
69. K. Suh, A. G. Stefanopoulou, "Inherent Performance Limitations of Power-Autonomous Fuel Cell System," American Control Conference, page 6pp., 14-16 June 2006.
68. V. Tsourapas, J. Sun, A. Stefanopoulou, "Performance Evaluation of a Thermally Integrated Fuel Cell System in the Presence of Uncertainties," ASME 4th International Conference on Fuel Cell Science, Engineering and Technology, volume 2006, pages 291-300, June 2006.
67. K.-W. Suh, A. Stefanopolou, "Effects of Control Strategy and Calibration on Hybridization Level and Fuel Economy in Fuel Cell Hybrid Electric Vehicle," SAE 2006-01-0038, Apr 2006. DOI: 10.4271/2006-01-0038

2005

66. A. Ingimundarson, A. G. Stefanopoulou, D. McKay, "Model Based Detection of Hydrogen Leaks in a Fuel Cell Stack," 2005 European Control Conference and 44th IEEE Conference on Decision and Control, pages 1017-1022, 12-15 Dec. 2005.
65. D. McKay, W. Ott, A. Stefanopoulou, "Modeling, Parameter Identification, and Validation of Reactant and Water Dynamics for a Fuel Cell Stack," 2005 ASME International Mechanical Engineering Congress and Exposition, pages 1177-1186. ASME, Nov 2005.
64. K.-W. Suh, A. Stefanopoulou, "Coordination of Converter and Fuel Cell Controllers," IEEE International Symposium on Mediterranean Conference on Control and Automation Intelligent Control, pages 563-568, June 2005.
63. C. Chiang, A. Stefanopoulou, "Control of Thermal Ignition in Gasoline Engines," American Control Conference the 2005, volume 6, pages 3847-3852, 8-10 June 2005.
62. V. Tsourapas, A. Stefanopoulou, Jing Sun. "Dynamics, Optimization and Control of a Fuel Cell Based Combined Heat Power (CHP) System for Shipboard Applications," American Control Conference the 2005, pages 1993-1998, 8-10 June 2005.
61. A. Vahidi, I. Kolmanovsky, A. Stefanopoulou, "Constraint Management in Fuel Cells: A Fast Reference Governor Approach," American Control Conference the 2005, pages 3865-3870, 8-10 June 2005.
60. K. Peterson, A. Stefanopoulou, J. Freudenberg, "Current Versus Flux in the Control Design of Electromechanical Valve Actuators," American Control Conference, FrC14.3 , p 5021-5026, June 2005

59. E. Muller, A. Stefanopoulou, “Analysis, Modeling, and Validation for the Thermal Dynamics of a Polymer Electrolyte Membrane Fuel Cell Systems,” ASME 2005 3rd International Conference on Fuel Cell Science, Engineering and Technology (FUELCELL2005-74050), volume 2005, pages 389-404, May 2005.
58. M. Kokkolaras, Z. Mourelatos, L. Louca, Z. Filipi, G. Delagrammatikas, A. Stefanopoulou, P. Papalambros, D. Assanis, “Design under Uncertainty and Assessment of Performance Reliability of a Dual-Use Medium Truck with Hydraulic-Hybrid Powertrain and Fuel Cell Auxiliary Power Unit,” SAE 2005 World Congress, SAE technical paper series 2005-01-1396, Feb 2005.

2004

57. C. Chiang, A. Stefanopoulou, “Steady-State Multiplicity and Stability of Thermal Equilibria in Homogeneous Charge Compression Ignition (HCCI) Engines,” 43rd IEEE Conference on Decision and Control, volume 2, pages 1676-1681, 14-17 Dec. 2004.
56. K. Peterson, J. Grizzle, A. Stefanopoulou, “Nonlinear Magnetic Levitation of Automotive Engine Valves.” IFAC Symposium on Mechatronic Systems, pages 645-650, Sept 2004. (Best Paper Award)
55. A. Stefanopoulou, “Mechatronics in Fuel Cell Systems,” International Federation of Control, Symposium in Mechatronics, Sydney, pp 565-576, Sept 2004. (paper on Plenary talk)
54. D. Rausen, A. Stefanopoulou, J. Kang, J. Eng, T. Kuo, “A Mean-Value Model for Control of Homogeneous Charge Compression Ignition (HCCI) Engines,” American Control Conference, volume 1, pages 125-131, 30 June-2 July 2004.
53. D. McKay, A. Stefanopoulou, “Parameterization and Validation of a Lumped Parameter Diffusion Model for Fuel Cell Stack Membrane Humidity Estimation,” American Control Conference the 2004, volume 1, pages 816-821, June 2004.
52. A. Vahidi, A. Stefanopoulou, Huei Peng, “Model Predictive Control for Starvation Prevention in a Hybrid Fuel Cell System,” American Control Conference the 2004, volume 1, pages 834-839, June 2004.
51. J. Pukrushpan, A. Stefanopoulou, S. Varigonda, “Control-Oriented Model of Fuel Processor for Hydrogen Generation in Fuel Cell Applications,” IFAC Symposium in Advances in Automotive Systems, Salerno, April 2004.
50. V. Tsourapas, J. Sun, A. Stefanopoulou, “Modeling and Dynamics of a Fuel Cell Combined Heat Power System for Marine Applications,” 1st WSEAS/IASME Int. Conf. on electroscience applications in Naval Engineering and All-electric ship, pp.288-293, April 2004.
49. Z. Filipi, L. Louca, A. Stefanopoulou, J. Pukrushpan, B. Kittirungsi, H. Peng, "Fuel Cell APU for Silent Watch and Mild Electrification of a Medium Tactical Truck", SAE 2004-01-1477, March 2004.

2003

48. K. Peterson, A. Stefanopoulou, “Rendering the Electromechanical Valve Actuator Globally Asymptotically Stable,” 42nd IEEE Conference on Decision and Control, 2003, volume 2, pages 1753-1758, Dec 2003.
47. K. Peterson, A. Stefanopoulou, Y. Wang, T. Megli, “Virtual Lash Adjuster for an Electromechanical Valve Actuator through Iterative Learning Control,” ASME 2003 International Mechanical Engineering Congress and Exposition (IMECE2003), volume 2003, pages 295-301. ASME, Nov 2003.
46. S. Gelfi, A. Stefanopoulou, J. Pukrushpan, H. Peng, “Dynamics of Low-Pressure and High-Pressure Fuel Cell Air Supply Systems,” American Control Conference the 2003, volume 3, pages 2049-2054, June 2003.
45. J. Pukrushpan, A. Stefanopoulou, S. Varigonda, L. Pedersen, S. Ghosh, Huei Peng, “Control of Natural Gas Catalytic Partial Oxidation for Hydrogen Generation in Fuel Cell Applications,” American Control Conference the 2003, volume 3, pages 2030-2036, June 2003.
44. H. Yilmaz and A. Stefanopoulou. “Control of Charge Dilution in Turbocharged Diesel Engines via Exhaust Valve Timing.” American Control Conference, 2003, volume 1, pages 761-766 vol.1, June 2003.
43. A. Vahidi, M. Druzhinina, A. Stefanopoulou, H. Peng, “Simultaneous Mass and Time-Varying Grade Estimation for Heavy-Duty Vehicles,” 2003 IEEE American Control Conference, pp.4951-4956, June 2003
42. S. Varigonda, J. Pukrushpan, A. G. Stefanopoulou. “Challenges in Fuel Cell Power Plant Control: The Role of System Level Models.” AIChE Spring Meeting, April 2003.
41. A. Vahidi, A. Stefanopoulou, H. Peng. “Experiments for Online Estimation of Heavy Vehicle’s Mass and Time-Varying Road Grade.” IMECE DSCD 2003_42807, 2003.

2002

40. K. Peterson, A. Stefanopoulou, Y. Wang, M. Haghgooie, “Nonlinear Self-Tuning Control for Soft Landing of an Electromechanical Valve Actuator.” 2nd IFAC Mechatronic Systems Conference, pages 191-196, Dec 2002.

39. J. Pukrushpan, A. Stefanopoulou, H. Peng, “Simulation and Analysis of Transient Fuel Cell System Performance based on a dynamic reactant flow model.” 2002 IMECE conference, IMECE2002-DSC-32051, Nov 2002.
38. K. Peterson, W. Hoffman, A. Stefanopoulou, “Experimental Results and Implementation Issues of an Iterative Learning Controller for Soft Landing of an Electromechanical Valve Actuator.” 10th Mediterranean Conference on Control and Automation - MED2002, Lisbon, Portugal, July 9-12, 2002.
37. J. Pukrushpan, A. Stefanopoulou, H. Peng, “Modeling and Control of PEM Fuel Cell Stack Systems,” American Control Conference the 2002, volume 4, pages 3117-3122, May 8-10 2002.
36. M. Druzhinina, A. Stefanopoulou, “Speed Control Experiments for Commercial Heavy Vehicles with Coordinated Friction and Engine Compression Brakes,” 2002 American Control Conference, pp 2546-2551, May 2002.
35. K. Peterson, A. Stefanopoulou, T. Megli, M. Haghgooie, “Output Observer Based Feedback for Soft Landing of Electromechanical Camless Valvetrain Actuator,” 2002 American Control Conference, volume 2, pages 1413-1418, May 2002.
34. Y. Wang, A. Stefanopoulou, K. Peterson, T. Megli, M. Haghgooie, “Modeling and Control of Electromechanical Valve Actuator,” SAE 2002-01-1106, March 2002.

2001

33. M. Druzhinina, A. Stefanopolou, L. Moklegard, “Further Results on Adaptive Compression Braking Control for Heavy-Duty Vehicles,” ASME IMECE 2001, Dynamic Systems and Control, vol 2, DSC-24516, Nov 2001.
32. W. Hoffmann, A. Stefanopoulou, “Learning Control of Electromechanical Camless Valve Actuator.” In American Control Conference, volume 4, pages 2860-2866, June 2001.
31. W. Hofmman, A. Stefanopoulou, “Valve Position Tracking for Soft Landing of Electromechanical Camless Valvetrain”, IFAC workshop on Automotive Control, pp. 305-310, Kalsruhe, March 2001.

2000

30. O.F. Storset, A. Stefanopoulou, R. Smith, “Air Charge Estimation for Turbocharged Diesel Engines.” 2000 American Control Conference, volume 1, pages 39-44, Sep 2000.
29. L. Moklegaard, M. Druzhinina, A. Stefanopoulou, “Brake Valve Timing and Fuel Injection: a Unified Engine Torque Actuator for Heavy-Duty Vehicles.” 5th International Symposium on Advanced Vehicle Control (AVEC 2000) August 22-24, 2000. (nominated for the “Best Paper Award”)
28. M. Druzhinina, L. Moklegaard, and A. Stefanopoulou, “Speed Gradient Approach to Longitudinal Control of Heavy-Duty Vehicles Equipped with Variable Compression Brake.” In Proceedings of the 5th International Symposium on Advanced Vehicle Control (AVEC 2000) August 22-24, 2000.
27. Y. Wang, A. Stefanopoulou, I. Haghgooie, M. Kolmanovsky, M. Hammoud, “Modeling of an Electromechanical Valve Actuator for a Camless Engine.” 5th International Symposium on Advanced Vehicle Control (AVEC 2000), number 93, Aug 2000.
26. S. Liu, A. Stefanopoulou, B. Paden, “Effects of control structure on performance for an automotive powertrain with continuously variable transmission”, AVEC 2000, 5th Int'l Symposium on Advanced Vehicle Control, no. 54, Aug 2000.
25. M. Druzhinina, L. Moklegaard, A. G. Stefanopoulou, “Compression Braking Control for Heavy-Duty Commercial Vehicles”, 2000 American Control Conference, vol.4, pp. 28-30, June 2000
24. A. Stefanopoulou, “Multivariable design limitations for advanced technology automotive powertrains,” 2000 American Control Conference, vol.5, pp: 28-30, June 2000
23. O. Storset , R. Smith, A. Stefanopoulou, “Cylinder Air Charge Estimation in Variable Geometry Turbochargiing”, 2000 American Control Conference, vol.1, pp. 28-30, June 2000.
22. I. Kolmanovsky, A. Stefanopoulou, “Evaluation of Turbocharger Power Assist System Using Optimal Control Techniques”, SAE 2000-01-0519, SAE World Congress, March 2000.
21. L. Moklegaard, A. Stefanopoulou, J. Schmidt, “Transition from Combustion to Compression Braking”, SAE 2000-01-1228, SAE World Congress, March 2000.

1999

20. M.-S. Ashhab, A. Stefanopoulou, J. Cook, and M. Levin, “Control-Oriented Model for Camless Intake Process (Part I),” International Mechanical Engineering Congress & Exposition (IMECE) and Dynamic Systems & Control Division (DSCD), 1999.
19. M.-S. Ashhab, A. Stefanopoulou, J. Cook, M. Levin, “Control of Camless Intake Process (Part II),” the International Mechanical Engineering Congress & Exposition (IMECE) and Dynamic Systems & Control Division (DSCD), 1999.

18. S. Hsieh, J. Freudenberg, A. Stefanopoulou, “Multivariable Controller Structure in a Variable Cam Timing Engine with Electronic Throttle and Torque Feedback,” 1999 IEEE International Conference on Control Applications, volume 1, pages 465-470 vol. 1, 1999.
17. I. Kolmanovsky, A. Stefanopoulous, B. Powell, “Improving Turbocharged Diesel Engine Operation with Turbo Power Assist System,” 1999 IEEE International Conference on Control Applications, volume 1, pages 454-459, 1999
16. Y. Wang, A. Stefanopoulou, M. Levin, “Idle Speed Control: An Old Problem in a New Engine Design,” the American Control Conference, volume 2, pages 1217-1221 vol. 2, Jun 1999.
15. A. Stefanopoulou, R. Smith, “Emissions and Performance Tradeoffs for Advanced Marine Diesel Propulsion”, IFAC Conf. in Marine Systems, pp.39-44, Fukuoka, Japan, 1999.

1998

14. M. Ashhab, A. Stefanopoulou, J. Cook, M. Levin, “Camless Engine Control for Robust Unthrottled Operation,” Society of Automotive Engineers Special Publication Series SP-1346 SAE981031, 1998.
13. M. Van Nieuwstadt, P.E. Moraal, I.V. Kolmanovsky, A. Stefanopoulou, P. Wood, M. Criddle. “Decentralized and Multivariable Designs for EGR/VGT Control of a Diesel Engine,” 2nd IFAC Workshop on Advances in Automotive Control, pp 191-196, 1998.
12. A. Stefanopoulou, R. Smith, “Emissions and Performance Tradeoffs for Advanced Marine Diesel Propulsion,” IFAC Workshop on Advances in Automotive Control, 1998.
11. I. Kolmanovsky, A. Stefanopoulou, P. Moraal, M. van Nieustandt, “Issues in Modeling and Control of Intake Flow in Variable Geometry Turbocharged Engines”, 18th IFIP Conference on System Modelling and Optimization, 1998.
10. A. Stefanopoulou, I. Kolmanovsky, J. Freudenberg, “Control of Variable Geometry Turbocharged Diesel Engine for Reduced Emissions”, American Control Conference, pp.1383-1388, Philadelphia, June 1998.

1997

9. S. Hsieh, A. Stefanopoulou, J. Freudenberg, K. Butts, “Emission and Drivability Tradeoffs in a Variable Cam Timing SI Engine with Electronic Throttle,” American Control Conference, 1997, volume 1, pages 284-288 vol.1, Jun 1997.
8. I. Kolmanovsky, P. Moraal, M. van Nieuwstadt, and A. Stefanopoulou, “Issues in Modeling and Control of Intake Flow in Variable Geometry Turbocharged Engines,” In Proceedings of the 18th IFIP conference on system modeling and optimization, page 436, 1997.
7. A. Stefanopoulou, I. Kolmanovsky, “Dynamic Scheduling of Internal Exhaust Gas Recirculation Systems,” IMECE 1997, Sixth ASME Symposium on Advanced Automotive Technologies, volume 61, pages 671-678, 1997.

1995

6. A. Stefanopoulou, K. Butts, J. Cook, J. Freudenberg, J. Grizzle, “Consequences of Modular Controller Development for Automotive Powertrains: A Case Study,” 34th IEEE Conference on Decision and Control, volume 1, pages 768-773, Dec 1995.
5. A. Stefanopoulou, K. Butts, J. Cook, J. Freudenberg, J. Grizzle, “Automotive Powertrain Control for Modular Controller Architectures: A Case Study”, IEEE Conference on Decision and Control, pp. 768-773, Dec 1995.
4. A. Stefanopoulou, J. Freudenberg, J. Grizzle, M. Haghgooie, P. Szpak, “Modeling and Control of a Spark Ignition Engine with Variable Cam Timing”, 1995 American Control Conference, pp. 2576-2581, Jun 1995.

1994

3. A. Stefanopoulou, J. Grizzle, J. Freudenberg, “Engine Air-Fuel Ratio and Torque Control Using Secondary Throttles,” 33rd IEEE Conference on Decision and Control, volume 3, pages 2748-2753 vol.3, Dec 1994.
2. S. Diop, J. Grizzle, P. Moraal, A. Stefanopoulou. “Interpolation and Numerical Differentiation for Observer Design,” American Control Conference, volume 2, pages 1329-1333 vol.2, June-1 Jul 1994.
1. M. Parsons, A. Chubb, Y. Cao, A. Stefanopoulou, “An Initial Assessment of Fuzzy Logic Vessel Path Control,” Symposium on Autonomous Underwater Vehicle Technology, (AUV '94), pages 225-232, Jul 199

Recent Courses taught

University of Michigan (best score for Q1 and Q2 is 5)

W21: EECS419 Journal Club on EV transition, equity, and jobs (Q1:4.50, Q2:4.50) 8 grads
F20: ME569 Powertrain Control (Q1:4.8, Q2:4.9) 46 grads
F19: ME569 Powertrain Control (Q1:4.70, Q2:4.9) 45 grads
W19: ME 360 Modeling, Analysis and Control (Q1:4.4, Q2: 4.5) 101 undergrads
F18: ME569 Powertrain Control (Q1:4.70, Q2:4.93) 52 grads
W18: ME360 Modeling, Analysis and Control (Q1:4.50, Q2: 4.33) 99 undergrads
W17: ME360 Modeling, Analysis and Control (Q1:4.28, Q2: 4.23) 111 undergrads
F16: ME569 Powertrain Control (Q1:4.70, Q2:4.93) 52 grads
W16: ME 565: Battery Controls (Q1:4.69, Q2:4.75) 40grad, s
W16: ME 565-881 Battery Controls-Distance Learning (Q1:3.50, Q2:3.83) 14grad
F15:ME569; Powertrain Control (Q1: 4.86, Q2: 4.95) 7 ugr, 43grad, 15 on-line
F15: ME569; Powertrain Control Distance Learning (Q1: 4.00, Q2: 4.50) 15 on-line
W15: ME 599: Battery Controls (Q1: 4.79, Q2: 4.85) 9 ugr, 22grad
W15: ME 599: Battery Controls Distance Learning (Q1: 4.63, Q2: 4.80) 16 on-line
F14: ME 569: Powertrain Control (Q1: 4.78, Q2: 4.78) 45 students
W14: sabbatical -- F13: sabbatical
W13: ME 599/499/599 on-line Battery Controls (Q1: 4.64, Q2: 4.75) 9ugr, 17 gr, 21 on-line
F12: ARC renewal -- Proposal Duties
W12: ME 499/599/599onl: Battery Control and Systems (Q1: 4.57, Q2: 4.78) 3 ugr, 23 grad, 42 onli
F11: ME 499/599 (Q1: 4.31, Q2: 4.82) 7 ugr 20 grad
W11: ME599 NEW: Hydrogen and Fuel Cells (43 Students) (co-taught with D. Siegel) (Q1: 4.11, Q2: 4.24)
W11: ME 599 On Line NEW course: Hydrogen and Fuel Cells (co-taught with D. Siegel) (4 students) (Q1: 4.50, Q2: 4.83)
F10: ARC extension -- Proposal Duties
W10: ME 599/499 NEW course: Batteries Modeling and Control (co-taught with Dr. Fathy) (53 students) (Q1: 4.47, Q2: 4.53)
W10: ME 599 On Line NEW course: Batteries Modeling and Control (co-taught with Dr. Fathy) (5 students) (Q1: 4.33, Q2: 433)
F09: ME 569 Powertrain Control Systems (24 students) (Q1: 4.90, Q2: 4.83)
W09: ME 561 Digital Control (47 students) (Q1: 4.00, Q2: 4.08)
F08: Analysis and Control of Dynamic Systems, (75 students ME) (Q1: 3.89, Q2: 4.50)
W08: ME 360 Analysis, and Control of Dynamic Systems, (90 students ME) (Q1: 4.11, Q2: 4.26)
F07: ME 569 Powertrain Control Systems, (16 students) (Q1: 4.17, Q2: 4.25)

Recent Short courses, lectures, and workshops

- Dec 2016: 2016 IEEE Workshop on Open Problems and Challenges in Automotive Control, CDC, Las Vegas
- Nov 2015: IMECE 2015 mini-symposium on "Multiphysics Coupling in Energy Storage"
- April 2014: Material Research Society, Symposium on Sensors, Controls and Battery Management
- May 2013: General Electric Research Center—Workshop on Power Systems and Control
- Workshops for Middle and High School Students and Teachers: "The Ideas and Technology of Control Systems: The Power of a Field that Spans Science, Technology, Engineering and Mathematics (STEM)"
- Dec 2012, Conference on Decision and Control, Maui, "The Power of Controls"
- June 2013, American Control Conference, Washington DC, "The Beauty of Controls"
- June 2015, American Control Conference, Chicago, "Controlling Mysterious Ions"
- August 2011: Workshop, Scalable ElectroThermal Dynamics of Packs with Li-ion Cylindrical Cells, UMICH
- August 2010: Workshop, Vehicle Electrification to high school students (DOE Vehicle Electrification Outreach)
- Oct-Nov 2006: Block Course, Powertrain Control at ETH, Zurich
- Dec 2004: Workshop, Control of Energy Processing and Power Systems in 43rd IEEE Conf. on Decision and Control.
- May 2005: Workshop, "Control of Fuel Cell Systems," sponsored by Mathworks, Ann Arbor, MI
- April 2004: Short Course, "Controlled Engine Breathing," Global Research Center, General Electric, NY

- March 2004: Lecture, "Control of Breathing in Internal Combustion Engine and Fuel Cell Systems," Toyota, MI
- Jan 2004: Short Course, Powertrain Control, BorgWarner, Auburn Hills, MI

PostDoc Supervising

1. Tino Sulzer (Carnegie Mellon Univ.)
2. Erik Hellstrom, (Control of Auto-Ignition, Technical Specialist, Ford)
3. Maria Druzhinina (Truck Platooning, GM)
4. Huan Lian (Combustion Statistics, now at Institute of Mechanics Chinese Academy of Sciences, Beijing)
5. Ashley Wiese (Combustion Control, Ford)
6. Tomas Poloni (Estimation & Diagnostics, Siemens)
7. Rasoul Salehi (Connected Vehicle Engine Control, GM)
8. Hector Perez (Battery Management, Romeo Power)
9. Shanshan Xu (Battery Safety, A123)

PhD Students (graduated)

1. Suhak Lee, Battery Aging Diagnostics, 2021, Apple
2. Peyman Mohtat, Battery Expansion as Aging Diagnoser, 2021, Apple
3. Miriam Figueroa, Control of Fuel Cell Thermal and Power split, 2021, GVSC
4. Mitchell Bieniek, Diesel Closed Loop Combustion and Diagnostics, 2021, SpaceX
5. Saravanan Duraiarasan, Diesel Model Predictive Control 2021, SWRI
6. Chunan Wang, Connected Automated Diesel Vehicle Fuel Efficiency, 2021, TUSIMPLE
7. Di Chen, 2021, Connected Automated Plug-in Hybrid Vehicle Fuel Efficiency, 2021, Ford
8. Ting Cai, Battery Faults from Venting and Thermal Runaway, 2021, Rivian
9. Bryan Maldonado, Combustion Limit Control and Learning, 2020, ORNL
10. Niket Prakash, Connected Automated Vehicle Controlled Fuel Efficiency, 2019, APTIV
11. Shima Nazari, Engine Hybrid Micro-Breathing Control, 2019, UC Davis
12. Rani Kiwan, Control and Measurements of Pulsating Flows 2018, Ford
13. Pengchuan Wang, Transmission Control-Oriented Modals, 2018, Ford
14. Shankar Mohan, "Optimal Warm-up of Li-ion Batteries", Dec 2016, Ford
15. Nassim Abdul Samad, "Improved Battery State Estimation Using Novel Sensing", April 2016, Apple
16. Sandro Nuesch, "Multi-Mode Combustion Switching," Nov 2015, Functional Safety Engineer, Ford
17. Patrick Gorzelic, "Control of Multi-Mode SI-HCCI Combustion with Cam-Switching" May 2015, Energy Systems Control Specialist, EtaGen Inc, San Francisco, Ca
18. Boyun Wang, "Real-time Control of Solute Plume in Closed Conduit Flow," May 2015, Owner AA start up.
19. Jungdon Cho, "A predictive wet clutch model based on a CFD/FEM approach", 2015 Co-chair with Katopodes
20. XinFan Lin*, "Battery Cluster Electrothermal Observability and Estimation under Imbalance", May 2014 Assistant Prof UC Davis
21. Jacob Larimore, Modeling and Control of cyclic variability in HCCI engines, co-chair with Erik Hellstrom, March 2014, Sr Systems Engineer, Bosch
22. Shyam Jade, Control of HCCI engines during large Transients, co-chair with Erik Hellstrom Dec 2013, Senior Systems Engineer, Bosch
23. Youngki Kim*, Power Management Accounting for Electrical and Thermal Constraints, co-chair with Zoran Filipi 2013, Assistant Prof, UM Dearborn.
24. Jixin Chen, Modeling and Optimization of Dead-Ended Anode Fuel Cells, Spring 2013, co-Chair with Jason Siegel, Ford
25. Sun Ung Kim, "Multicomponent diffusion systems" co-chair with Charles Monroe, Battery Research Engineer at Robert Bosch Research and Technology Center Palo Alto CA.
26. DongHoon Lee, "Closed loop Combustion of Advanced Engines" Chair (Jan 2011), Hyundai
27. KyungWon Ahn, "Diagnostics and Adaptation for Varying Ethanol Content in Flex Fuel Port-Fuel Injection Engines", Chair (Nov 2010), Hyundai
28. Jason Siegel*, "Testing, Modeling, and Design of Dead-Ended PEM Fuel cells" Chair, Sept 10, Research Scientist and Adjunct Lecturer, University of Michigan
29. Denise McKahn (formely McKay)*, "Diagnostics and Fault Detection for Fuel Cell Systems", co-Chair with Prof. Katopodes from Civil and Environmental Engineering, now Associate Prof Smith College (Feb08)

30. Buz McCain, "Model Order Reduction in Multi-Domain Power Systems," Chair (Feb08), now Systems Engineering Manager at Ballard Power Systems
31. Vasilios Tsourapas, "Modeling and Control of Fuel Cell Combined Heat Power Integrated Systems," Winter 07, now Engineering Manager, Vehicle Software and Control, EATON, co-Chair with Prof J. Sun in NAME dept.
32. Chia-Jui (Ray) Chiang*, "Modeling and Control of Thermal Ignition," Winter 07, now Associate Prof. at National Taiwan University of Science and Technology, Chair.
33. Kyungwon Suh, "Control of Hybrid Fuel Cell Vehicle Power," Winter 06, now Senior Research Engineer at Hyundai Motor Company, Chair.
34. Amey Karnik*, "Dynamics and Control of Fuel Cell Stacks with Hydrogen Recirculation", Winter 07, was Ford Motor Co now Associate Prof at Indian Institute of Technology, Gandhinagar, co-Chair with Prof J. Sun in NAME dept.
35. Ardalan Vahidi* "Adaptive and Model Predictive Control Methods for Fuel Cell Vehicles" (July 05), Chair, now Prof. at Clemson University
36. Kathy Peterson*, "Nonlinear and Learning Control for Automotive Electromechanical Valve Actuators" (May 05), Chair, was Assistant Prof. Purdue University, since 2015 Medical Doctor at Chicago.
37. Jay T. Pukrushpan*, "Modeling and Control of Fuel Cell Systems and Fuel Processor Systems" (Winter 03), co-Chair with H. Peng, now Professor, Department of Mechanical Engineering, Kasetsart University, Bangkok, Thailand.
    --- At UCSB --
38. Lasse Moklegaard, "Modeling and Control of Variable Compression Braking in Heavy Duty Vehicles," (Winter 02), Chair at UCSB, Research Associate in Univ. of Cambridge, UK, since 2012 CTO and Co-Founder Altigreen Propulsion Labs.
39. Yan Wang, "Camless Valvetrain: Enabling Technology and Control Techniques" (Fall 01), Chair at UCSB, Technical Expert, Ford Research Labs.
40. Sami Ashhab*, "Dynamical Analysis and Application of Advanced Control Techniques to Atomic Force Microscopes and Camless Engines" (Spr 98), co-Chair with M. Dahleh at UCSB, now Professor at Hashemite University in Jordan

* with Academic position

<u>PhD Students</u> (current 5)

1. Eunjeong Hyeon, candidate
2. Sravan Pannala, candidate
3. Joe Drallmeier, candidate
4. Vivian Tran, candidate
5. Andrew Weng, candidate

<u>Notable and current MS Students</u>

1. Ziyang Zhong, battery aging (W18)
2. Pavan Kumar Mukkara Srinivas, Diesel cold start (F18)
3. Fucong Wang Diesel aftertreatment (W19)
4. Yu Han Solid Oxide Fuel Cells (W18)
5. Sravan Pannala, Detecting battery Shorts (W19)
6. Ting Cai, Recycling batteries (F18)
7. YuanZhan Wang on Fuel Cell Robotic Propulsion 2016 (currently at TRW)
8. Mike Hand, Diesel Controls, 2014 Ford
9. Justine Negrete, Flexible Fuel Diesel Engines, 2012 Ford
10. Hector Perez, MS2012, Electro-thermal Battery model, 2017PhD in UC Berkely and currently back as Postdoc
11. James Marcicky, Electrochemical Battery Model, 2010, Ford
12. Phil Bonkosky: Model Order Reduction of the Air-Path in a Turbocharged SI Engine, 2010 IAV
13. Vasilis Tsourapas, MS: "Modeling and Control of Fuel Cell Combined Heat Power Integrated Systems," (W05), Eaton
14. Vernon Newhouse, MS:, "Engine Dynamics and Time Resolution", (W05), General Motors, (non-thesis)
15. William Ott, MS: "Dynamics of Water Vapor and Liquid in PEM Fuel Cells," (W05), Senior Lead Engineer South West Research Institute, (non-thesis)

16. David Rausen, MS: "A Control-Oriented Model of HCCI Engine", Research Scientist NREL (F04)
17. Don Lochner, MS: "Control and Sensitivity Analysis of Air Flow in Proton Exchange Membrane Fuel Cell, , Senior Engineer Lockheed Martin (W03)
18. Hakan Hilmaz, Variable Valve timing in Diesel Engines, Chief Technology Officer at BorgWarner Inc. (W02)

Recent Invited Seminars

2017 Oct: Andlinger Center for Energy jointly with the Mechanical and Aerospace Eng. Dept, Princeton
2017 June: Roads to the Future, Swedish Electromobility Centre's annual conference, Stockholm, SE
2017 Mar: International Battery Seminar, invited on "Engineering Battery Safety" symposium
2016 July: United States Military Academy, West Point, USA
2016 May: Mechanical Engineering, MIT, Boston, USA
2015 Oct: Applied Electrochemistry, School of Chemical Sc. and Eng., Royal Inst. of Technology (KTH), SE
2015 May: Invited Lecture, Honeywell Sponsored annual dinner during SAE Congress
2015 Jan: Signals, Systems and Control Center, University of Cambridge, UK
2014 Dec: Mechanical and Process Engineering, ETH, Zurich, CH
2013 Nov: Mechanical Engineering, Imperial College, UK
2013 Oct: Mechanical Engineering,-- Engineering Mechanics, Michigan Technical University
2013 Oct: Fuel Cell Research Center, University of California, Irvine
2013 Feb: TAMU: Control Systems Seminar Series
2012 Nov: Collaborative Systems Lab: University of Illinois Urbana Champaign
2012 Oct: Oak Ridge National Laboratory, Vehicle & Engine Division
2012 Oct: Safety and Battery Controls, Invited Lecture, NHTSA
2012 June: Electrical Engineering Department, Chalmers, SE
2011 Oct: Mechanical Engineering Department, Ohio State
2011 Oct: Carnegie Mellon, Mechanical Engineering Department
2011 June: Prognostics & Diagnostics Team, NASA, Ames
2010 Oct: Automotive Engineering, Clemson University
2010 Oct: Mechanical Engineering Department, Michigan State
2008 Sept: Mechanical Engineering Department, Penn State University
2008 Apr: Mechanical Engineering Department, University of Minnesota, Minneapolis
2008 Feb: Distinguished Lecture Series, School of Engineering, University of Connecticut.
2008 Jan: Mechanical Science and Engineering Department, University of Illinois at Urbana-Champaign
2007 Sept: Mechanical Engineering Department, Clemson University
2007 Aug: National Institute for Standards and Technology (NIST), Gaithersburg
2007 May: University of Seville, Spain
2007 May: Universitat Politecnica de Catalunya, Barcelona, Spain
2007 April: United Technologies Research Center, Hartford.

Consulting:

Turbodyne Inc., CA., Mack Trucks, MD, Caterpillar, IL, United Technologies Research Center, CT, BorgWarner, MI, The US Department of Justice, DC

Membership (Professional)

Fellow IEEE Control Systems Society,
Fellow ASME Dynamic Systems and Control Division
Member Society of Automotive Engineers
Member of Electrochemical Society
Member of Hellenic Institute of Marine Technology
Member of Technical Chamber of Greece

Membership (Institutional)

Member, U-M Carbon Neutrality Committee 2018-2021
Member, University Conflict of Interest Committee 2014-2016
Member, Research Policies Committee, UMICH, 2010-2011
Member, Chair Search NAME Department, 2010-2011
Member, Mechanical Advisory Com, 2008-2009

Chair, College-Wide Faculty Search (Electric Power/Transportation) 2007-2008
Member, ME Faculty Search 2007-2008, 2010, 2013
Member, EECS Department review committee (external member) 2003-2004,
Member, ME Honors and Awards Committee 2002, 2004, 2005, 2015-17
Member, ME Graduate Studies Committee, 2001-2002, 2003-2005,
Member, ME Department, Advisory Committee ME Chair search, 2000-01, 2016
Member, ME Department, Safety Committee, 2000-2001

Reviewing and Refereeing Activity:

In Mechanical Engineering society: ASME Journal of Dynamic Systems Measurements and Control and ASME, Journal Energy Gas Turbine and Power

In Electrical Engineering society: IEEE Transactions on Control System Technology, Control System Magazine, and Energy Conversion Systems, and IEEE/ASME Transactions in Mechatronics.

In Chemical Engineering: Journal of Process Control, Chemical Engineering Science

In Marine Engineering society: NAME, Journal of Ship Research

In Automotive Engineering Society: SAE Congress and Transactions (SAE), IJVD, International Journal of Vehicle Dynamics

In Environmental Engineering: The environment magazine (Princeton), MIT Technology Review

Funding organizations: National Science Foundation (CAREER, SBIR, International Collaborations, Sensors, ITR), Australian Research Council (ARC/DETYA), Swedish Council, Norwegian Research Grants, California Energy Commission, PATH, CARB, Canada Research Council.