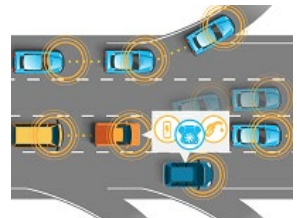


Integrated Power and Thermal Management for Connected and Automated Vehicles (*iPTM-CAVs*) through Real-Time Adaptation and Optimization

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Publication List

June, 2019



Publications/Presentations (I)

□ Traffic Modeling

- [1] Gong, X., Gao, Y., Feng, Y., Sun, J. and Zhao D., ["Evaluation of the Energy Efficiency in a Mixed Traffic with Automated Vehicles and Human Controlled Vehicles"](#), 21st IEEE International Conference on Intelligent Transportation Systems, Maui, HI, USA, November 2018.
- [2] Chang, Y., Yang, W., and Zhao D., ["Energy Efficiency and Emission Testing for Connected and Automated Vehicles Using Real-World Driving Data"](#), 21st IEEE International Conference on Intelligent Transportation Systems, Maui, HI, U.S., November 2018.
- [3] Yang Z., Feng Y., Gong X., Zhao D., and Sun J. ["Eco-trajectory Planning with Consideration of Queue Along Congested Corridor for Hybrid Electric Vehicles"](#), Transportation Research Board (TRB) 98th Annual Meeting, Washington D.C., USA, January 2019.

□ Vehicle Power and Thermal Management

- [4] Wang, H., Kolmanovsky, I., Amini, M.R. and Sun, J., ["Model Predictive Climate Control of Connected and Automated Vehicles for Improved Energy Efficiency"](#), 2018 American Control Conference, Milwaukee, WI, USA, June 2018.
- [5] Amini, M.R., Wang, H., Gong, X., Sun, J., and Kolmanovsky I., ["Optimization-Based Thermal Management of Connected and Automated HEVs for Improved Energy Efficiency"](#) SAE Thermal Management Systems Symposium, San Diego, CA, October 2018.
- [6] Amini, M.R., Sun, J., and Kolmanovsky I., ["Two-Layer Model Predictive Battery Thermal and Energy Management Optimization for Connected and Automated Electric Vehicles"](#), 57th IEEE Conference on Decision and Control, Miami, FL, USA, December 2018 .
- [7] Amini, M.R., Wang, H., Gong, X., Liao-McPherson, D., Kolmanovsky, I., and Sun, J., ["Cabin and Battery Thermal Management of Connected and Automated HEVs for Improved Energy Efficiency using Hierarchical Model Predictive Control"](#), IEEE Transactions on Control Systems Technology [accepted in June 2019].
- [8] Amini, M.R., Gong, X., Feng, Y., Wang, H., Kolmanovsky, I., and Sun, J., ["Sequential Optimization of Speed, Thermal Load, and Power Split in Connected HEVs"](#), 2019 American Control Conference (ACC), Philadelphia, PA, USA [accepted in January 2019].
- [9] Amini, M.R., X., Feng, Y., Wang, H., Kolmanovsky, I., and Sun, J., ["Thermal Responses of Connected HEVs Engine and Aftertreatment Systems to Eco-Driving"](#), 3rd IEEE Conference on Control Technology and Applications (CCTA 2019), Hong Kong, China [accepted in April 2019].
- [10] Gong, X., Wang, H., Amini, M.R., Kolmanovsky, I., and Sun, J., ["Integrated Optimization of Power Split, Engine Thermal Management, and Cabin Heating for Hybrid Electric Vehicles"](#), 3rd IEEE Conference on Control Technology and Applications (CCTA 2019), Hong Kong, China [accepted in January 2019].
- [11] Wang, H., Meng, Y., Zhang, Q., Amini, M.R., Kolmanovsky, I., Sun, J., and Jennings, M., ["MPC-based Precision Cooling Strategy \(PCS\) for Efficient Thermal Management of Automotive Air Conditioning System"](#), 3rd IEEE Conference on Control Technology and Applications (CCTA 2019), Hong Kong, China [accepted in January 2019].
- [12] Amini, M.R., Sun, J., Kolmanovsky, I., and Wang, H., ["Actively Controlled Coolant Tank To Increase Thermal Storage Capacity of HEVs,"](#) U.S. Provisional Application No.: 62/752,427, Filed on October 30, 2018.
- [13] H. Wang, M.R. Amini, Z. Song, I. Kolmanovsky, and J. Sun, ["Combined Energy and Comfort Optimization of Air Conditioning System in Connected and Automated Vehicles,"](#) ASME 2019 Dynamic Systems and Control Conference (DSCC), Park City, UT, USA [accepted in June 2019].

Publications/Presentations (II)

□ Battery Thermal Management

[14] Zhu, C., Lu, F., Zhang, H., J. Sun, and Mi, C. “[*A Real-Time Battery Thermal Management Strategy for Connected and Automated Hybrid Electric Vehicles \(CAHEVs\) Based on Iterative Dynamic Programming*](#),” *IEEE Transactions on Vehicular Technology*, Vol 67, No. 9, 2018.

[15] Zhu, C., Lu, F., and Mi, C. , “[*A Finite-Set Model-Based Predictive Battery Thermal Management in Connected and Automated Hybrid Electric Vehicles*](#),” *IEEE Applied Power Electronics Conference (APEC)*, San Antonio, TX, March 4-8, 2018.

[16] Zhu, C., Lu, F., Zhang, H., and Mi, C. “[*Robust Predictive Battery Thermal Management strategy for Connected and Automated Hybrid Electric Vehicles Based on Thermoelectric Parameter Uncertainty Compensation*](#),” *IEEE Journal of Emerging and Selected Topics in Power Electronics*, Vol 6, No. 4, 2018.

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