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xEV Systems Engineering Lead  
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**Program Co-Chair**  
2017 IEEE Transportation Electrification Conference & Expo (ITEC)  
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**Biography:** Ryan is currently a xEV Systems Engineering Lead at Samsung Inc. in Auburn Hills, MI, USA. Ryan holds a doctorate degree in Mechanical Engineering, with specialization in battery management systems and control from McMaster University. Ryan is also an adjunct professor and sessional instructor at McMaster University. Ryan received a Master's degree in Mechanical Engineering from McMaster, with focus on artificial intelligence and engine fault detection. Prior to joining Samsung, Ryan held different engineering positions in both industrial and academic settings. Most recently, he worked as a Sr. Scientific Research and Experimental Development Technical Specialist at the Automotive Research and Development Center (ARDC) – Fiat Chrysler Automobiles (FCA).

Ryan has authored over 20 peer-reviewed journal and conference papers in the area of hybrid vehicles control, engine management and fault detection, battery state-of-charge, state-of-health estimation, and battery monitoring and control. He has been an active speaker at several international conferences including the Advanced Automotive Battery Conference (AABC, Strasbourg, France, 2013), AVL Advanced Simulation Technologies Conference (AVL AST, Graz, Austria, 2013), the Battery Safety Conference (San Diego, CA, USA, 2013), and the Battery Show (Novi, MI, USA, 2014). Ryan has taught several courses on management and control of electric vehicle batteries at McMaster University and at the educational EV/HEV boot camp at the IEEE Transportation Electrification Conference and Expo (ITEC 2015) in Dearborn, MI, USA.

Ryan was the co-recipient of best paper award at the IEEE Transportation Electrification Conference and Expo (ITEC 2012) in Detroit, MI, USA. He is currently a Stanford Certified Project Manager (SCPM), certified Professional Engineer (P.Eng.) in Ontario, a member of the Green Auto Powertrain (GAPT) research team, a member of the Society of Automotive Engineers (SAE), and a member of the Institute of Electrical and Electronics Engineers (IEEE).

**Research Interests:** Hybrid technology, battery modeling and condition monitoring, state and parameter estimation, diesel engine controls, fault detection and diagnosis, artificial intelligence (Artificial Neural Networks), variable structure systems theory, intelligent and multivariate control, actuation systems, optimization, and fluid power and hydraulics.