**Design Optimization for Next-generation Technologies in Automotive Industry**

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As conventional vehicle design is adjusted to suit the needs of all-electric, hybrid, and fuel-cell powered vehicles, designers are seeking new methods to improve system-level performance and enhance structural efficiency.

This seminar will discuss current and next-generation technologies in system design and analysis in automotive industry.

* Lightweight Design using Multiple, Dissimilar Materials.
* Design for Additive Manufacturing (DfAM)
* Design Optimization for System Packaging Design
* Routing and Charging Optimization of Shared, Electric Vehicles

Prof. Il Yong Kim is an Associate Professor in the Department of Mechanical and Materials Engineering at Queen’s University, Kingston, Canada. His research interest is design optimization with applications in automotive and aerospace systems. KIM received his M.S. and Ph.D. degrees in mechanical engineering from the Korea Advanced Institute of Science and Technology (KAIST). He worked as an instructor and postdoctoral researcher in the Department of Aeronautics and Astronautics at M.I.T., where he taught undergraduate design course. KIM received a number of awards, including the best PhD thesis prize at KAIST, the Early Researcher Award in Canada, the recognition of the Experienced Humboldt Fellow in Germany, and the Research Excellence Award at Queen’s. KIM is actively collaborating with global, multi-national companies in the automotive and aerospace industries, including General Motors, Magna, Bombardier Aerospace, Pratt & Whitney, Safran Messier-Dowty Landing Systems, and General Dynamics.