

Short Bio

Ryan Monroe is an Assistant Professor in the School of Engineering and Computer Science at Oakland University. He has an MS and PhD from Michigan State University, where he performed analytical and experimental studies on vibration absorbers for rotating machinery with automotive applications. During this time, he made fundamental contributions to the understanding of transient dynamics in nonlinear systems and collaborated with automotive OEMs for applications to expand engine operation for fuel economy modes including cylinder deactivation and torque converter lockup. After completing his PhD, he served nine years as a dynamics engineer in industry, which included five years in aerospace at a university-affiliated research center (Johns Hopkins Applied Physics Lab) and four years in automotive at Fiat Chrysler Automobiles. During this time, he received multiple awards (including one patent) for developing new technologies for automotive vehicle drive quality and growing new dynamics-related business areas in sea-based missile launch. His research focus is in the area of dynamical systems and vibration with special interest in nonlinear and transient system behavior. His applied focus is in advanced vehicle simulation, design, and control. Specific applications include automotive sound and drive quality, vibration absorbers for rotating machinery, and aerospace vehicle launch dynamics.

