Bio: Dr. Mazen Eldeeb

Mazen Eldeeb is an Assistant Professor of Mechanical Engineering in California State University, Fresno, USA. He was born in 1987. He received the M.S. degree in mechanical engineering from Cairo University, Egypt, in 2010 and the Ph.D in mechanical engineering from Syracuse University, USA, in 2015. In January 2016 he joined the Department of Mechanical Engineering, California State University, Fresno, as an assistant professor. His research expertise includes experimental characterization of the auto-ignition behavior of pure second-generation biofuels and their blends with gasoline surrogates, through shock tube ignition delay time measurements, as well as chemical kinetic modeling and model reduction. His most recent work includes the development of a chemical kinetic model reduction method, Stochastic Species Elimination (SSE) method, and the preliminary proposal of another model reduction method, Species Propensity (SP) method. Dr. Eldeeb's past work include several numerical simulation efforts and reaction pathway explorations of the combustion of various fuels including 2,5-dimethylfuran and its blends with iso-octane, 2-methylfuran, 2-methyltetrahydrofuran, and 2,5-dimethylcyclohexane. His work also includes the development of a novel chemical kinetic model for combustion simulations of 2,5-dimethylfuran blends with a gasoline surrogate from the individual models of both pure fuels, through reduction, rate constant modification, and combination. Recently, Dr. Eldeeb co-authored a major journal review article about the recent developments in the production, combustion characterization, and modeling efforts of furan-based fuels.