

MechE Distinguished Alumni Seminar

Product Mechanical Design: The Consumer Challenge



Roger McCarthy

Founder and Owner
Roger McCarthy Engineering

on Friday, May 1st at 4:00pm in 3-270

Cutting edge mechanical design research programs at leading academic institutions are often daunting theoretical exercises exploring the stress, strain, dynamics, response, and control problems at the limits of our technology. In service, product mechanical failures can occur when the design is flawed, improperly executed with flawed materials, quality, or improperly designed controls, and typically these types of failures are well understood. But sometimes mechanical designs perfectly executed have highly undesirable real world dangers and accident modes in consumer use that were never contemplated or addressed at any point in the design process. A risk doesn't need an underlying theoretical basis to present itself. Experience of almost 40 years investigating failures and disasters will be shared, and some dearly paid for lessons learned from different product mechanical design accident modes in the real world presented. The importance of understanding the human interface challenges in product design will be illustrated. The brave new world on the horizon posed by consumer additive manufacturing of currently regulated products and unregulated robotic drones will be discussed.

Refreshments will be served before the seminar.
Please contact Tony Pulsone at pulsone@mit.edu with any questions.