

CMSE Components for Military and Space Electronics

<https://www.tjgreenllc.com/cmse/>



- Started 26 years ago by a retired NASA component engineer Leon Hamiter
- Tom Green TJ Green Associates took over in 2017
- Tom is an expert in hybrid technology and a retired AF LtCol. He worked at RADC and at Lockheed Denver as a process engineer and very active in the community as a teacher and industry consultant.
- CMSE evolved from the CARTS Capacitor and Resistor Technology Symposium conference and today is attended by just about every major capacitor supplier along with many others from the active device community, especially those focused on the integration of both active and passive components into a single package...e.g. Hybrids, SHIP next generation packaging, non-hermetic alternatives for mil and space.
- Besides capacitor technology CMSE has addressed a diverse array of critical issue such as PEMS, counterfeiting, trusted foundries etc. More recently supply chain issue, use of alternate grade parts, automotive specs, plastic packages, GaN on SiC, thermal management, super caps, magnetics, connectors and other essential components.
- CMSE is guided by a very active committee made up of technical leaders in the industry including two Raytheon fellow engineers and senior technical people from NGC.
- CMSE Program Committee: <https://www.tjgreenllc.com/wp-content/uploads/2024-CMSE-CFP.pdf>
- Interested in serving on the CMSE Program Committee? Send me an email tgreen@tjgreenllc.com

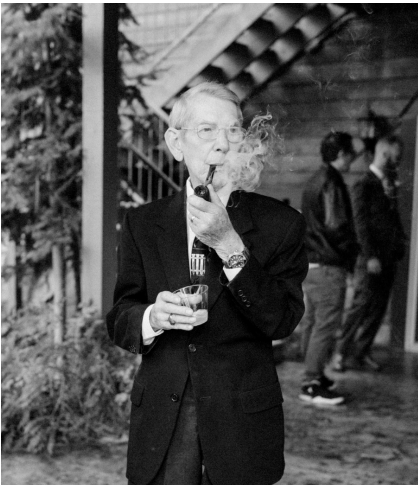
CMSE focus on education of young component engineers



- CMSE is where “ Component Engineers Meet” and each year provides 1 to 2 days of education on topics such as component engineering, capacitor technology, failure analysis etc.
- Education continues to be a primary focus of CMSE in 2024
- At CMSE 2023 there were 45 people registered for training, more than half were “young engineers” with 3 years or less experience.
- [Short Video of CMSE Component Engineering Training](#) session video



- In 2022 we initiated a 1,500 cash prize for best presentations at CMSE in memory of John Devaney Hi Rel Labs who was a legend in the industry
- In 2023 the winner was Pedram Yousefian (Penn State) for his talk on life testing of capacitors.
 - Runner up for the award last year was Kaysar Rahim NGC for his talk titled “Advanced Packaging: Critical Ecosystem and Reliability Considerations”



Best paper at CMSE In memory of John R. Devaney 1939-2021

John’s career in Failure Analysis began in June of 1961 on the Minute-Man Program. He worked at Autonetics, TI, JPL, and spent the last 49 years at Hi-Rel Laboratories, Inc.

His career ended October 8th 2021 after spending 60+ years following his passion working in the lab and training new engineers. He was proud that his career began on Minute-man and ended on Sentinel (the latest ICBM under development).