  



**IEEE Los Angeles and Orange County EMC Chapters and**

**Los Angeles MTT/AP Chapter Seminar Announcement**

**Recent Developments in Aerospace and Military Electromagnetics**

***This is a free seminar, but you must register IN ADVANCE***

***no later than Friday, May 19 to ensure adequate seating and catering. The Toyota Automotive Museum exhibits are also available for viewing at no charge to IEEE seminar attendees.***

**Date: Tuesday, May 23, 2017**

**Time:**  1:00 pm – 2:15 pm Registration, complimentary lunch, tour of museum exhibits

2:15 pm – 2:25 pm Chapter announcements

2:25 pm – 3:10 pm **Presentation 1: Military and Aerospace EMC Testing: Recent Advancements and Future Changes**

*By Erik Borgstrom, Element Materials Technology*

3:10 pm – 3:20 pm Break

3:20 pm – 5:00 pm **Presentation 2: Electromagnetic Environmental Effects in the Military**

*By Kris Hatashita, IEEE EMC Society Distinguished Lecturer*

**Location:** The Toyota Automotive Museum, 19600 Van Ness Ave., Torrance, CA 90501

 Museum Phone: 310-468-8726,Website: [www.toyotausamuseum.com](http://www.toyotausamuseum.com/)

See map for directions. There is plenty of free parking near the entrance to the museum.

**RSVP:** Contact Eric Hahn with Altamont Technical Services at (858) 472-7666 or email eric@atsemc.com for more information and to RSVP. Or, [click here](https://www.eventbrite.com/e/ieee-la-orange-county-emc-chapters-and-la-mttap-joint-chapter-meeting-tickets-34287198935) to reserve your seat on line.

**SPACE IS LIMITED – RESERVE EARLY TO SAVE YOUR SPACE!**

**Lunch Provided Courtesy of:**

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**TECHNICAL PROGRAM**

**Presentation 1: Military and Aerospace EMC Testing: Recent Advancements and Future Changes**

*By Erik Borgstrom, Department Manager, EMI, Element Materials Technology, Minneapolis, Minnesota*

**Abstract:** The primary test standard for Military EMC testing, MIL-STD-461, has recently been released at a new revisions level -- 461G.  This latest revision of MIL-STD-461 includes new (to the military) EMC tests that are a significant departure from previous versions of the standard.  On the Aerospace side, the global standard for Aircraft EMC, RTCA/DO-160, is in the process of major revisions to some of the more difficult sections, which will also be a significant change from previous versions.

This presentation will provide an overview of the EMC requirements in both of these standards, highlighting and delving deeper into:

* The similarities and differences between the two standards
* The significant changes in the recently published MIL-STD-461G
* The changes in progress for DO-160
* The lightning induced/indirect effects testing requirements in both standards

**Presentation 2: Electromagnetic Environmental Effects in the Military**

*By Kris Hatashita, IEEE EMC Society Distinguished Lecturer, Ottawa, Ontario, Canada*

**Abstract:** Military electromagnetic compatibility (EMC) is a matter of life and death as modern war-fighters rely on the safe, secure and reliable functioning of their devices.  Military EMC includes aspects of electronic interoperability that are seldom or never considered in the commercial realm.  This talk presents technical details of EMC consideration in tactical and strategic military operations. The topics discussed include hazards of electromagnetic radiation to ordnance (HERO), electromagnetic data security (EMSEC), counter improvised explosive device (CIED) EMC issues and includes first-hand experiences of work done in the Afghan theatre.

**SPEAKER BIOGRAPHIES**

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**Erik Borgstrom** has worked in the Electromagnetic Compatibility testing field for more than 30 years.  As the EMI Department Manager at Element Materials Technology’s Minneapolis Lab (formerly Environ Laboratories), he specializes in EMI testing for the Defense and Aerospace industries.  Mr. Borgstrom is one of Element’s representatives on RTCA Special Committee 135 (responsible for revising DO-160), where he has been active for over 20 years, serving as Change Coordinator for DO-160 Section 22 (Lightning Induced Transient Susceptibility) and Section 25 (Electrostatic Discharge).  Mr. Borgstrom is also an active member of SAE, where he serves as the DO-160 Task Group Leader on the AE-2 Aircraft Lightning Committee, a contributing member of the AE-4 Aircraft HIRF Working Group, and as Secretary for the AE-4 Aircraft EMC Working Group.  Mr. Borgstrom has written several articles and presented many papers at Symposia and Conferences hosted by IEEE, SAE, and other related organizations, all focused on EMC and/or Lightning for the Defense and Aerospace industries.

**Kris Hatashita** has been the Electromagnetic Environmental Effects subject matter expert for the Canadian Army tactical communications group since 2002 where he plans and oversees Canadian Army compliance with EMI, EMC, EMSEC, and RF safety requirements. Prior to this, Kris was an independent E3 consultant and President of ISOTEC Corporation whose clients included the Canadian Department of National Defence, the Canadian Army, Navy and Air Force, the Royal Canadian Mounted Police (RCMP), the Communication Security Establishment (CSE) and the Department of Foreign Affairs and International Trade. Kris has worked at or with many technology corporations throughout his career including General Dynamics Canada, Digital Equipment Corporation, Zenith Corporation and Hewlett-Packard. Kris’s career in E3 began in 1985 in the aerospace industry after completing a BSc in Physics at the University of Waterloo.  While working for Garrett Aerospace, Kris was selected to undergo training through CSE in the joint Canada-US Industrial TEMPEST Program. Through this program, Kris became the first non-American to become a Certified TEMPEST Professional – Level II by the United States National Security Agency – a certification he holds to this day.

Kris Hatashita was a member of the IEEE EMC Society Board of Directors in 2014-2015 and the General Chair of the 2016 IEEE International Symposium on EMC in Ottawa, Canada. Currently, Kris is an IEEE EMC Society Distinguished Lecturer, a lecturer at the Canadian Forces School of Communication and Electronics at the Royal Military College in Kingston and a consultant to the Canadian Department of National Defense for the Army Communications Group.