May 2018 Newsletter
The IEEE Reliability Society
Joint Section Chapter: Boston - New Hampshire - Providence
February 2018 – April 2018
http://www.ieee.org/bostonrel

After a number of late winter storms behind us spring has finally arrived. With that we are coming to the end of our 2017 / 2018 lecture series and are beginning to plan for 2018 / 2019. So if you would like to present a reliability based topic at a future meeting, have meeting topic suggestions or ideas about how to improve our meetings, we want to hear from you. Please send an e-mail to any of the AdCom members or go to our website listed above and click on Suggest a Meeting Topic.

We are happy to announce that we won 2rd place among all the IEEE Reliability Chapters worldwide! Thanks to your participation and enthusiasm in making this happen for this would not be possible if not for your dedication to the Chapter. IEEE is committed to advancing technology through being a trusted and unbiased source of technical information, and forums, for technical dialog and collaboration. The award monies will be applied directly to our Chapter treasury towards and future meeting's needs.

Regards

Kenneth P Rispoli
IEEE Life Member
IEEE Reliability Society AdCom Member '16-'18
Chair, IEEE Reliability Society Boston Chapter joint with Providence, RI and New Hampshire
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Recent Activities:

February 14, 2018	"**Software development process and reliability**" by Milena Krasich CANCELED
March 14, 2018	"**Advancements in Acoustic Micro Imaging**" by Jack H. Richtsmeier, Nordson Sonoscan
April 12, 2018	**"Integrated FMECA for Agile Diagnostics and Prognostics Development**" by Alastair Moubray and Thaddeus (Ted) Mateja, Raytheon Integrated Defense Systems

Upcoming Events:

All meetings will be held at MIT Lincoln Laboratory 3 Forbes Rd, Lexington MA 02420 unless otherwise indicated

May 9, 2018	"**From Interconnect to Innovation in the DoD**" by Dr. Livia M. Racz, MIT Lincoln Laboratory
June 13, 2018	**"Reliability Testing and Analysis with Intent"** by Adam Bahret, Apex Ridge Reliability

"**Advancements in Acoustic Micro Imaging".**

March 14, 2018 @ 5:30 pm – 7:00 pm

Jack H. Richtsmeier, Nordson Sonoscan

Abstract: Acoustic Micro Imaging is an established non-destructive inspection technique that applies ultrasound for the inspection of microelectronic and semiconductor devices, packaging and associated materials. The technology has been widely used for bond / dis-bond assessment, defect and flaw detection as well as materials characterization. Recent advancements and new technological developments have allowed more applications to be resolved within the marketplace.

The presentation will include the following:

- Principles and Fundamentals
- Micro-slicing – Sonolytics
- Very High Frequency Transducers
- Waterfall & Water Plume
- 3-D Imaging (Virtual Rescan Mode (VRM))
- Frequency Domain Imaging (FDI)
- Integral Mode Imaging
- Surface profilometry (Acoustic Surface Flatness (ASF))
- Subsurface profilometry (Profile Mode)
- Multi-layer analysis (Sonosimulator)

This presentation covered these latest advancements by showing examples and case studies through a variety of advanced packaging applications.

Author Bio: Mr. Jack H. Richtsmeier holds a Bachelor's Degree in Physical Science from The University of St. Thomas in St. Paul, MN. His professional background includes over 35 years of sales engineering and marketing experience within the industrial and scientific marketplace. He has a combined 25 years of expertise working in ultrasonics directly within the semiconductor and microelectronic market sectors. Mr. Richtsmeier is presently employed as Business Development Manager for Nordson Sonoscan, Inc. headquartered in Elk Grove Village, IL

"Integrated FMECA for AGILE Diagnostics and Prognostics Development"

April 12, 2018 @ 5:30 pm – 7:00 pm

Alastair Moubray and Thaddeus (Ted) Mateja, Raytheon Integrated Defense Systems

This presentation discussed an improved business method for leveraging Failure Mode, Effects, and Criticality Analysis (FMECA) with complimentary Built-In-Test Effectiveness (BEA) and Sneak Circuit Analysis (SCA) that are collectively known as Integrated FMECA to assure dependable system design in an Agile development environment. The transformation of the project Reliability/Maintainability (R/M) engineer/analyst's role was described and how it influenced by the confluence of Agile with modular open architecture design principles. These design approaches provide for affordable requirement changes during product development, while enabling the evolutionary acquisition, rapid prototyping and fielding of interoperable systems. The Integrated FMECA analyst role of identifier, quantifier, and mitigator of design risks/anomalous system behavior and independent Fault Detection / Isolation design verifier remains. However there are increased expectations to grow and assume the subject matter expert responsibilities of a Diagnostics and Prognostics System Architecture / Requirements Engineer as part of the Agile team.

The presentation included the realized benefits of using Integrated FMECA during Agile Diagnostics and Prognostics Development for several projects at a major defense firm. It highlights the R/M analyst's new role in the Agile design of dependable open systems using the latest technological advances contained in Developmental, Non-Developmental and Commercial off-the-shelf (COTS) hardware and software to speed up the product development process and deliver affordable best value solutions to both military and commercial customers.

Author Bio: Alastair Moubray is a Senior Systems Engineer at Raytheon Integrated Defense Systems in Marlborough, MA. Alastair has 15 years of experience in RAM-related fields in both military and commercial projects, the last 10 at Raytheon. At Raytheon, he has worked on air, sea, and ground based radar systems, naval combat systems and air defense missile programs. Prior to Raytheon, he worked in Reliability -Centered Maintenance and maintenance training in the petrochemical, utilities, and food-processing sectors. His background includes Design for Reliability and Maintainability, FRACAS, Maintainability Verification Testing, Reliability and Availability field performance monitoring, Preventive his MSME from the University of Rhode Island in 2010.

Thaddeus (Ted) Mateja is an Engineering Fellow at Raytheon Integrated Defense Systems (IDS) in Tewksbury, MA. Ted has over 4 decades of Reliability, Availability & Maintainability (RAM), System / Specialty Engineering experience over the entire life cycle with ground, sea and space based strategic & tactical sensors, effectors, platforms, BMC4I, system of systems, and life support medical electronics, the last 3 decades at Raytheon. Prior to Raytheon, Ted led RAM technical efforts at General Dynamics/Dynatronics, AVCO Systems, GTE Communications Systems and was the Design Assurance Manager at AVCO Medical Products. He received his BSEE degree from Northeastern University, is an IDS Program Management College graduate, and has an honorary title of 'Steely-Eyed Missileer' in Ballistic Missile Defense. His current interests include ubiquitous computing for preemptive maintenance and dependable system design. Ted is also a National Defense Industrial Association member and was the Software Reliability track moderator at 2009 RAMS.

In Memory of Milena Krasich

Milena Krasich was scheduled to present at our February 14 meeting on "Software development process and reliability" however had to cancel due to lingering illness from the flu.

On Wednesday, March 21, 2018 Milena passed on at Brigham and Women's Faulkner Hospital, Boston, MA. She was 81 years young. One of three girls, she was born Milena Pandurovic in Belgrade, Yugoslavia on December 16, 1936 to parents, Zivojin and Elisabeth Pandurovic. Excelling in her primary and secondary schools, she became a proud professional before emigrating to Switzerland and then on to the United States.

With her brilliant mind, she worked on projects ranging from naval weapons, to Mars spacecraft, and acoustic reliability. Milena was a trailblazer for women in the electrical engineering field, writing multiple publications, accepting numerous awards, and traveling the world on behalf of her professional affiliations; all this while raising a family of three. Although her work consumed many waking hours, she was an avid pet lover and was never without her furry friends.

Milena is survived by her three children Irena Homsher, Andre Krasich, and Emil Krasich; her grandchildren Julia Homsher and Ava Homsher; her son in law, Dustin Homsher, her daughter- in- law Sarah Ottow, and her ex-husband, Mihailo Krasich. Her beloved pets Mishko. Mimi, and Scarlet have all found new homes.

Milena was an active member of the IEEE Reliability Society with numerous presentations at the Reliability Availability Maintainability (RAM) Symposium and last presented at our local chapter meeting on January 2016 on "Reliability Growth Test Planning and Data Analysis What are the Final Results?"

Advisory Committee (AdCom) Members

Chair:	**Ken Rispoli** - Retired ken-rispoli@ieee.org
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Chapter Seeks Volunteers

We are interested in having you help out as a volu contributing as much or as little as you would like. We a good team of volunteers that help us keep things goi if you would like to join us, there is probably a opportunity to choose how you would like to contr Email or talk to any of us at the next monthly present or attend one of our Advisory Committee meetings.

For updates on upcoming events: http://ewh.ieee.org/r1/boston/rl/events.html.

Readers can contact chapter newsletter editor Ken Rispoli (ken-rispoli@ieee.org) with any comment/suggestion or if interested in contributing to our next issue. Thanks.

The IEEE Reliability Society Joint Section Chapter

Boston - New Hampshire - Providence

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Boston - New Hampshire - Providence Joint Chapter Newsletter

or copy and paste the URL below on your browser

http://ewh.ieee.org/r1/boston/rl/newsletters.html