The ASQ Reliability & Risk Division is the largest group in the world promoting reliability training and education. This newsletter covers professional development opportunities, plus division activities, information and news.

**Chair’s Note**

**Marc Banghart, Chair**  
Reliability & Risk Division of ASQ  
marc@asqrd.org

Dear members,

I am pleased to announce that Dan Burrows will be our incoming chair for the 2018-2019 term after conclusion of the Division election process. Dan is a highly skilled reliability engineer with extensive experience leading engineering organizations. Dan brings unique perspectives and I am excited to see where he will lead the Division.

2017 was a busy and productive year for the Division. One of the most exciting changes made was the Division name and scope of service, which now includes risk. Migration to the new name, the Reliability and Risk Division, and the addition of new content is underway! We are also overhauling our website and will be launching an updated portal early in 2018. If you would like to be part of a users group to test and support the site concept, please send me an email at marc@asqrd.org.

The Division also continues to participate in the Reliability and Maintainability Symposium as a key sponsor. Be sure to check out this conference at [www.rams.org](http://www.rams.org) if you have not attended in the past. We held our first international course in Dubai coupled with a regional conference. The course was a success and we hope to expand further in the Middle East, Africa, and Europe.

I would like to thank all the volunteers that spend countless hours supporting Division efforts, as well as our members for their continued support and engagement.

Happy Holidays to all!

Thank you
Checking account as of December 3, 2017:
$58,510.13 As of December 3, 2017 Income over expenses $71,507.65 - $40,734.30 = $30,773.35

Other funds/investments:
Investing in ASQ: $32,763.49 (as of Oct 31, 2017)
PNC investment account: $103,744.46 (as of Sept 30, 2017)
ASTR total Net: $20,115.81
Dues reimbursement for 2017 is projected to be $19,500.
(through end of Sept 2017 dues reimbursement is $16,344)

William Gordon Hunter, or Bill Hunter, was a statistician at the University of Wisconsin–Madison. He was co-author of the classic book Statistics for Experimenters, and co-founder of the Center for Quality and Productivity Improvement with George E. P. Box.

Hunter was born March 27, 1937 in Buffalo, New York. In 1959 he received a bachelor's degree from Princeton and in 1960 a master's from the University of Illinois in chemical engineering. He then became the first doctoral student at the new department of statistics at the University of Wisconsin–Madison founded by George Box. He contributed to the book Statistics for Experimenters by Box, William Hunter, and Stuart Hunter (no relation to William Hunter). He founded the Statistics Division of the American Society for Quality and the Center for Quality and Productivity Improvement in Madison, Wisconsin. The Statistics Division of the American Society for Quality gives an annual award called the William G. Hunter Award.

According to Box, "[Hunter] wanted to make a difference in the lives of less fortunate people, and he and his family spent extended periods of time helping third world countries." Hunter taught in Singapore for a year and half and Nigeria for a year, both in the 1970s. In the early 1980s, before China allowed in many foreign experts, he spent a summer lecturing there. He helped build Singapore's quality movement.

Hunter was a leader in the effort to adopt the Deming system of Profound Knowledge and related ideas in the public sector. He contributed to Deming's Out of the Crisis, relating how the city of Madison applied Deming's ideas to a public sector organization.

He was a fellow of the American Statistical Association, the American Association for the Advancement of Science, and the American Society for Quality Control. From 1963 to 1983 he was an associate editor of Technometrics. He was the chairman of the Section on Physical and Engineering Sciences of the American Statistical Association and also served on that organization's board of directors. He served on boards for the National Research Council of the National Academy of Sciences and the National Academy of Engineering.

Hunter died of cancer on December 29, 1986 at the age of 49.
The Relyence products take advantage of our team’s decades of experience in advancing the art and science of reliability analysis. Built using today’s technology innovations in combination with industry best practices, Relyence’s software solutions offers unparalleled power, integration, and access.

With built-in integration between your FMEAs, FRACAS analyses, Fault Tree analyses, Reliability Predictions, and Reliability Block Diagrams, Relyence provides the power to manage and organize your analysis activities in one cohesive framework, enabling you to effectively meet and exceed your reliability objectives.

Relyence's Reliability Suite can be accessed from any computer, tablet, or smartphone, and is offered as either a traditional on-premise installation or a zero-client Internet platform with your data hosted in the Microsoft cloud. The choice is yours.

Relyence - the integrated reliability solution you can rely on!
Connect the Engineering Community

Join us in Portland, Oregon for an opportunity to connect with a community of thousands of engineers, offering global connections, opportunity, collaboration and support from subject matter experts, thought leaders and fellow professionals. Come be a part of the ever growing community that makes ARDC a unique experience.

Your attendance to a live event includes access to a year round ARDC community platform providing you with:

- All knowledge-rich papers and resources presented during the event
- An interactive platform to connect online anytime with presenters and attendees
- Collaboration and engagement throughout the event with interactive sessions and workshops
- Continued accreditations, qualifications and professional endorsements

Learn

Discuss current best practices and real-world solutions
The schedule offers presentations, tutorials and discussion panels on reliability, durability and maintainability

Network

Network with industry professionals
Join peers, sponsors and exhibitors for great networking opportunities

Achieve

Gain relevant takeaways with quantifiable results
Find cost-saving ideas and strategies from professionals across a wide range of industries

Register today to join the community!
www.ardconference.com
ReliaSoft promotes the use of engineering methodologies to evaluate and improve reliability and maintainability through software, support and services. Our products facilitate a comprehensive set of reliability and related analysis techniques, including life data analysis (Weibull analysis), quantitative accelerated life testing, system reliability/maintainability, reliability growth, design of experiments, standards based reliability prediction, FMEA, RCM, RBI, FRACAS and others. We also offer an extensive curriculum of reliability training courses that provide thorough coverage of both the underlying principles and theory, as well as the applicable software.
Attend RAMS® 2018:
“RAMS® Throughout the Product Lifecycle”

RAMS® is the leading global conference for Reliability and Maintainability (R&M) professionals combining tutorials, presentations, CEUs, certifications, and networking into one week-long program. RAMS® 2018 will bring together an international audience of R&M leaders and professionals, in-depth sessions and tutorials presented by top R&M experts, exhibit floor featuring leading companies, keynote session insights, networking and job related opportunities, and more.

The premier event for the reliability, availability, and maintainability engineering disciplines.

5 Reasons to Attend:
1. Gain new insights into creating more efficient and effective reliability programs
2. Take actionable knowledge back to your organization
3. Make valuable contacts by networking with industry leaders and professionals
4. Gain new skills, CEUs and certifications that can advance your career including ASQ exams (CRE, CQE, and others) and continuing education courses offered both pre- and post-symposium by ASQ Reliability Division
5. Extend your stay and enjoy a fabulous family vacation at Reno Nevada, close to dozens of attractions

● Tutorials - basic to advanced
● Technical paper sessions
● Panel sessions
● Exhibits program
● Certificate program
● Networking opportunities

Register at rams.org
Accelerated Stress Testing and Reliability (ASTR) 2017 was held Sept 27-29, 2017 at the Hilton Garden Inn, Downtown Austin, TX. ASTR 2017 was co-sponsored by ASQ-RRD and IEEE– Reliability.

Final Statistics:

- 81 Registered (final count)
- 3 Exhibitors:
  - MINITAB
  - Vibration Research
  - Espec/Qualmark
- Registration Breakdown
- ALT pre- conference course had 23 attendees

You can see pictures of many of the speakers and others:


NEW ASQ-RRD CONFERENCE COMING

The ASQ Reliability and Risk Division will be bringing you a new conference beginning in 2019. It will be in the fall of that year - details will come out in 2018. It is expected to be an annual event, but the kickoff year in 2019 will be a very special event when it will also be a 50th anniversary celebration. The division has stepped away from its annual sponsorship of the ASTR conference. This new conference will enjoy a focus of the content that has been shared and presented at the ASTR conference, but it will also exemplify the division' focus on reliability, risk and associated topics. Stay tuned to future newsletters and our website for news.

- Trevor Craney, 2019 Conference General Chair
The Certified Reliability Engineer Handbook 3rd Edition is available now. This handbook is fully updated to the 2018 Body of Knowledge for the Certified Reliability Engineer (CRE), including the new sections on leadership, performance monitoring, root cause analysis, and quality triangles. Its purpose is to assist individuals preparing for the examination and to provide a reference for the practitioner. Several “typical” examples are provided throughout based on the collective experience and knowledge of the authors and editor.

The chapters and sections are numbered by the same format used in the Body of Knowledge (BoK) for the CRE examination. It also includes a comprehensive glossary of reliability-related terms and appendices with, among other things, various useful distribution tables.

The following individuals are to be recognized as contributing chapter authors for this handbook: David Auda, Jim Breneman, Dan Burrows, Mark Durivage, Tim Gaens, and Rong Pan. By using several individual subject matter experts, the overall quality and technical content of this handbook has been greatly enhanced.

WHY BECOME A CERTIFIED RELIABILITY ENGINEER?

A Certified Reliability Engineer is a professional who understands the principles of performance evaluation and prediction to improve product/systems safety, reliability and maintainability.

What Is the Value to You?

• There is a demand for Certified Reliability Engineers due to the increase of warrantied products across markets.
• CREs make $7,423 more on average than those who do not have a certification. *

(Salary data can be found in the Quality Progress Salary Survey, December 2016, pp. 14-42.)

Download the Reliability Engineer Certification Brochure (PDF, 324 KB).
Download the Reliability Engineer Certification Fact Sheet (PDF, 76 KB).

Computer-Based Testing

ASQ certification examinations are now delivered by ASQ's testing partner, Prometric.

For more information about certification: https://asq.org/cert/reliability-engineer

CRE already? Consider volunteering to support CRE exam development.
Contact bart.c.chase@gmail.com
CALL FOR PAPERS

$1000 Annual Award for Best RELIABILITY Paper

Continuing in 2017-2018, the ASQ Reliability & Risk Division will administer a $1000 annual award for the Best Reliability Paper published in Quality Engineering. To be eligible for the award, at least one of the authors of the paper must be a member of the ASQ Reliability & Risk Division at the time when their paper was published. The reliability focused papers appearing in the four issues from July 2017 to June 2018 will be considered. For more information, please contact Prof. Rong Pan at rong.pan@asu.edu.
Call for Instructors

The Division is looking to expand its cadre of Reliability and Maintainability instructors! If you are interested in teaching and reside in the USA or Europe please send your resume and course abstract to our education chair, Trevor Craney at tacraney@yahoo.com. Instructors may be required to provide a short sample course via WebEx.

ASQ RD invites the interested professional to submit the proposed courses to ASQRD for RAMS 2017. Send the course Description to the ASQ RD education chair, Trevor Craney at tacraney@yahoo.com.

The ASQ Reliability & Risk Division is seeking volunteers for our Practice Area effort.

What is the Practice Area effort?

It is our effort targeted at strengthening the ASQ Reliability and Risk Division’s presence, thought leadership, and service to the reliability and risk profession by providing practice area specific content, training, and support. The intended audience are folks who have or are moving up in their career from basic reliability practices to specialized reliability practices.

What are the Practice Areas?

Currently identified practice areas include but are not limited to Product, Process/Manufacturing, Site/Network, Software, and Medical Devices. This list may change as industry and academic trends evolve.

How do I volunteer?

You can volunteer as a Team Member or an Advisor:

Team Members – Members of the ASQ Reliability & Risk Division responsible for active participation and support, accomplishing agreed upon tasks and deliverables. Members may also have specific subject matter expertise, depth, breadth, and future vision to contribute to the effort.

Advisors – May or may not be an ASQ Reliability & Risk Division member, responsible for providing specific subject matter expertise, depth, and breadth to the team and providing future vision.

Whom do I contact to volunteer?

Product Reliability – Dan Burrows, dan@asqrd.org

Process/Manufacturing Reliability – JD Solomon, jd.solomon@ch2m.com

Site/Network Reliability – Norma Antunano, normaantu@aol.com

Software Reliability – Robert Stoddard, rstoddard@sixsigma-ids.com

Medical Device Reliability – Bart Chase, Chase, bart.chase@abbott.com
Some Membership Statistics

Top 21 countries represented in ASQ RRD (Total of 68)

4.3% “Other” made up of 47 countries

2643 members as of Nov 2017
However, 352 unpaid members.
English webinars:
Dec 14, 2017, “Head To Head Accelerated Testing for Improvement ,” Thim Guaranatha
Jan 11, 2018 “Basic Quantitative RMA for the Practitioner”
   Tim Adams
Feb 8, 2018 “Causal Learning “ Bob Stoddard
March 8, 2018 Reliability Centered Maintenance (RCM )
   Nancy Regan

* English series webinars always run at the same time on the same day; 2nd Thursday of the month at 12:00 EDT (Unless otherwise Instructed).

Chinese webinars:
No Upcoming Webinar

Spanish Webinars:
No Upcoming Webinar

ASQ- Reliability Division Webinar Series
Reliability division offers free Webinars in English, Spanish, and Chinese featuring leading international practitioners, academicians, and consultants. Enhance your reliability knowledge. For more information, click here: http://asqrd.org/webinars/
The ASQ Reliability Division Webinar Series remains popular. Since the Webinar and Short Course programs were first offered in November 2010, the Reliability Division has provided 180 webinars of professional development to its members at no cost. The most recent topics included webinars on:
• Communicating Reliability and Risk to Decision Makers
• Leading Change Without Resistance
• The Function, the “Job To Be Done”, Not the Product
• GD&T

Webinar Outreach
Executive Producer & Speaker Manager
David Auda
davidauda@yahoo.com
Chinese Host
Frank Sun
franksun99@yahoo.com
English Host
David Auda
davidauda@yahoo.com
Kiruthika Sundarajankiru31@yahoo.com
Susan Czyrny
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Video Editor
Ward Baun
wardbaun@gmail.com
Webinar Support
Elahheh Rabiei
elirab@umd.edu
Frank Sun
franksun99@yahoo.com

For previously recorded webinars on topics relevant to reliability engineers delivered by subject matter experts. Visit : http://www.asqrd.org/past-webinars
ASQ Learning Institute™ Training

The ASQ Learning Institute™ provides you with career enhancing training to help you make an impact in your professional path and your organization. Take advantage of member pricing, and register for one of these upcoming courses. To register, click here or call 800-248-1946 and provide promo code MFGEM.

Onsite Training

Customize ASQ learning to meet your organization's unique needs and eliminate travel expenses with on-site training.

Courses

- Certified Quality Engineer Certification Preparation
- Failure Modes and Effects Analysis -- Design
- Failure Modes and Effects Analysis -- Process
- Lean Six Sigma Black Belt Training
- Lean Six Sigma Green Belt Training
- International Courses

See ASQ courses offered outside of the United States and Canada.

CRE Exam Information and Facts

Current CRE statistics:

The total number of CREs as of the March 2015 exam was 5,961. Local ASQ Sections and international organizations host exams all over the world. You will be asked to designate a preferred examination site on your application. If you are not a member of ASQ, please find the Section that is closest to your location. If you live in a country other than the United States, Canada or Mexico, international certification affiliates administer certification exams. Find an international certification exam location. ASQ will make every effort to accommodate your request. ASQ offers some translated certification exams.

The ASQ certification exam dates (by type of certification) is at:

http://prdweb.asq.org/certification/control/dates
The ASQ Reliability Division Regional Councilor effort continues to provide outreach and engagement at the local level, often interacting with local ASQ sections in other professional and educational gatherings.

Since ASQ Regions are large (multi-state and entire countries), we welcome having more than one Regional Councilor per region to broaden our reach. If you are interested in serving, please contact Dan Burrows, our Regional Councilor Coordinator, at dan@asqrd.org and he will send you more information.

Up-to-date Regional Councilor information is at url:
http://www.asqrd.org/home/asq-reliability-division-regional-councilor-roster/
Meet Some ASQRD Regional Councilors

Spyros Vrachnas
Spyros is the Regional Councilor for Greece, living in Athens, GREECE.
Spyros has a varied industrial background including:
INTRACOM DEFENSE ELECTRONICS, 1990-2011
HEWLETT PACKARD HELLAS, 1989-1990
MANAGEMENT SCIENCES APPLICATIONS INC. (USA), 1985-1988
RELIABILITY SCIENCE INC. (USA), 1980-1985
TRACOR INC. (USA), 1978-1980
SOLAREX CORP. (USA), 1977-1978
35 years of engineering experience (USA and Greece) in Reliability and Quality Assurance/Quality Control in the electronics industry. Written papers and developed/presented seminars on topics: Reliability of Electronic Systems, Electrostatic Discharge (ESD) Protection, Quality Management Systems (ISO 9000), Statistical Process Control (SPC), Methods and Techniques for Quality Improvement. Spyros was introduced to Quality Systems in 1988, while attending a presentation (at NAVSEA, USA) on MIL-Q-9858 Quality Program Requirements and an introduction to ISO 9001.
Senior member of the ASQ, member since 1990, ASQ CRE 1988.
Spyros enjoys setting-up and executing reliability tests and accelerated life tests on electronic hardware. He enjoys Music, Reading, Science.
His definition of Reliability in his own words: “The ability to function for a specified period of time, under stated conditions.

Ramesh Gulati is a Regional Councilor for Region 11A (Virginia, Tennessee, North & South Carolina).
Ramesh lives in Murfreesboro, TN
Ramesh's educational background:
BSME, MSIE, EMBA
Professional certification: PE, CMRP, CMRT, CRE, CRL, CAMA.
He has over fifty years of diversified experience in people and process improvements in consumer products, process – service and heavy metal industry. Broad background in operations analysis, performance measurement – metrics, plant reliability & maintenance process improvement tools/techniques – CBM/PdM, TPM, RCM etc., and implementation of asset management systems (ISO Certified).
Ramesh has been involved in establishing plant equipment reliability programs from scratch.
He presented over 100 papers at many conferences such as ASQ, IIE, SMRP, PEMAC, IMC, etc.. Supported development of ISO 55000 standard as a US team member. Supported development of CMRP/CMRT/CRL certification. Heavily involved with societies ASQ, IIE, SMRP etc.. at grass roots level. In addition, he teaches Maintenance Reliability Best Practices seminars-short courses at the University of Tennessee, University of Wisconsin, Mississippi State and others.
Author of 5 Maintenance, Reliability & Asset Management related books.
Ramesh enjoys writing and teaching Reliability-Asset Management.
In his “spare” time, Ramesh reads and writes about maintenance reliability and watches movies.
Ramesh’s definition of Reliability:
Delivers “Peace of Mind” (with) minimum failures and lower total cost of ownership.

We continue to recruit for Regional Councilors in regions that are not represented:
Region 2 - Western/Upstate New York & Northern Pennsylvania
Region 3 - New York City/New Jersey Metro
Region 7 - Southern California, Arizona, Southern Nevada
Region 15B - Alabama, Mississippi, eastern Louisiana
Global - Countries outside of the USA
Elected Positions

Chair
Dan Burrows
dan@asqrd.org

Chair-elect
Trevor Craney
tacraney@yahoo.com

Secretary
Tim Gaens
tim.gaens@gmail.com

Treasurer
Jim Breneman
weibullman@gmail.com

Past Chair
Marc Banghart
Marc@asqrd.org

Appointed Positions (continued)

Nominating Chair
Marc Banghart
Marc@asqrd.org

Education & Arrangements Chair
Trevor Craney
tacraney@yahoo.com

Regional Councilors Coordinator
Dan Burrows
dan@asqrd.org

RAMS:

RAMS Board of Directors
Trevor Craney
tacraney@yahoo.com

RAMS Best Paper Award Chair
Julio Pulido
julio.e.pulido@gmail.com

ASQRDD New Conference:

General Chair
Trevor Craney
tacraney@yahoo.com

Program Co-Chairs
TBD

Treasurer
TBD

QE Best Paper Award Chair
Rong Pan
rong.pan@asu.edu

CRE Liaison
Marc Banghart
Marc@asqrd.org

Appointed Positions (outreach)

Newsletter Editors:
Jim Breneman
weibullman@gmail.com

Mohammad Pourgol-Mohammad
mpourgol@gmail.com

Social Media Moderator
Tim Gaens
tim.gaens@gmail.com

ASQRD.ORG:

Project Manager
(Vacant)

Webmaster Backup
Marc Banghart
Marc@asqrd.org

IT lead
(Vacant)

Marketing—Constant Contact
Angleat Shelikoff
adshelikoff@gmail.com

Webinar Outreach:
(separately on page 13 of this newsletter)