



# RAMS<sup>®</sup> 2023 CALL FOR PAPERS & TUTORIALS

Theme: **“The Digital Transformation of R&M”**

**ABSTRACT SUBMISSION DEADLINE — Friday, April 22, 2022**

The 69th Annual Reliability & Maintainability Symposium (RAMS<sup>®</sup>) will be held at The Florida Hotel and Conference Center, Orlando, Florida during the week of January 23–26, 2023. The theme for RAMS<sup>®</sup> 2023 is **“The Digital Transformation of R&M”**. With the advent and emergence of significant data enabled by Artificial Intelligence and machine learning, reliability and maintainability can now be incorporated in the digital engineering design while also improved through the collection and timely analysis of equipment-specific field data and health monitoring systems. Digital transformation in our enterprises is not an end state but a competitive necessity. AI/ML application to our R&M tools, techniques and processes (and products) promises speed and scale. This is essential in a competitive acquisition and engineering environment to be relevant. When program management instantiates advanced techniques into R&M engineering activities, such as digital design and machine learning and other advanced analytics, it enables products to evolve at a much more proactive, effective, and cost-efficient approach. Ultimately it facilitates increased speed to market, adoption of new technology, and especially for repairable systems, products that are more reliable, maintainable, and supportable.

With this in mind, we invite you to share your theoretical or practical findings of your research, engineering case studies, success stories, lessons learned, R&M based analyses and simulations, or R&M discoveries at RAMS<sup>®</sup> 2023 in Orlando. Tell us how you are designing, optimizing, and supporting systems (both hardware and software) through the execution of RAMS<sup>®</sup> disciplines. RAMS<sup>®</sup> is the premier forum for sharing your experience, knowledge, and road maps to success. Make your contribution to the advancement of the RAMS disciplines and enjoy participating in the rich exchange of ideas and solutions. We want you to contribute your unique experience to our synergistic symposium sponsored by eight professional societies. Start planning to submit your paper or tutorial now.

RAMS<sup>®</sup> seeks to provide a mix of presentations, papers and tutorials. Papers are the best medium to document advancements in the state-of-the-art research, and those accepted after being properly peer reviewed will be published. A short technical presentation with discussion period (approximately half an hour) will be given for each paper. It is the policy of RAMS<sup>®</sup> to publish all papers presented at RAMS<sup>®</sup> in IEEE Xplore. Presentations only topics is a new option for those that do not wish to pursue a paper for publishing but will follow similar processes as paper presentations. Tutorials provide exposure to more fundamental topics. Their technical depth ranges from introductory to advanced. Tutorials are presented in two-hour in-depth sessions. Examples of the most recent written papers and tutorials are available in the 2022 Proceedings and the 2022 Tutorial Notes. The process for presenting a paper, presentation or tutorial at RAMS<sup>®</sup> 2023 begins with your submission of an abstract. Your submittal should address topics pertinent to Reliability and Maintainability and that are relevant to our theme. Abstract topics are:

Accelerated Life Testing	Fault Tree Analysis	R&M Applications in Service
Autonomous Systems and AI	Human Reliability	R&M Applications in Supportability
Availability	Knowledge Based Training	R&M and Quality Appl. in
Big Data and IoT Applications in R&M	Life Data Analysis	Communications Design & Mfg.
Business Process Improvement	Maintenance Models and Methodologies	R&M Management
Design Optimization Using R&M Techniques	Physical Reliability Models	Reliability Modeling
Discrete Event Modeling & Simulation	Prognostics and Health Management	Reliability Growth Analysis
Economic Models for R&M Equipment	Quality Appl. in Electronics Design & Mfg.	Repairable Systems
Diagnostics and Prognostics	R&M Applications in Aerospace	Risk Analysis and Management
FMEA	R&M Applications in Health Care	Security and Dependability Analysis
Fault Tolerance and Safety Critical Systems	R&M Applications in Infrastructure Management	Software Reliability and Testing
	R&M Applications in Manufacturing	Software Safety
		System Safety Analysis
		Warranty Data Analysis and Management



## RAMS® 2023 Call for Papers & Tutorials

Theme: “The Digital Transformation of R&M”

Abstract Submission Deadline – Friday, April 22, 2022

---

**If you wish to present a paper, presentation or tutorial at RAMS® 2023**, you must first submit an abstract. Papers must represent your original work and should not be published or presented in any other journals or conferences. Presentations must be based on the conference theme and topic areas above. Tutorials must address broad areas of interest in reliability and maintainability engineering.

**Abstracts must be submitted via [rams.org](https://rams.org) and the abstract submission process will be available from March 1, 2022, until April 22, 2022.**

**To submit an abstract for a paper, presentation only or tutorial, an author must provide the following:**

- A title of no more than 80 characters
- An abstract (all text—no equations, figures, or tables) of no more than 1000 words
- Names and contact information for all authors
- An indication of which author will present (if it is accepted for the Symposium)
- Relevant topic areas for their abstract (from the list on the previous page of this Call for Papers)

**The name(s) of the author(s) should not be included in either the title or in the abstract.**

Authors will also be asked to indicate if any paper authors are full-time students (to assess qualification for the RAMS® student paper award), and to which (if any) of the nine RAMS® sponsoring societies each author belongs. Membership in a RAMS® sponsoring society is not required for acceptance but is strongly encouraged. Each author can submit no more than four paper abstracts and no more than four tutorial abstracts for consideration. Authors cannot be added after the abstract submission deadline.

The abstract submission procedure for papers, presentation only, and tutorials is the same with the following exceptions: they use different links to upload the abstracts, each paper can have no more than four authors, presentations only can have only one author/presenter and each tutorial can have no more than two authors. Upon receipt of your abstract, you will receive a confirmation e-mail from RAMS® that your abstract was received. Therefore, it is critical that all authors provide and maintain a valid e-mail address that can accept e-mails. If an author moves or changes addresses, the author must provide their new contact information to the RAMS® Program Committee.

*Note that all correspondence regarding papers, presentations and tutorials will be sent to the e-mail address of the author who submits the abstract.*

### **Review Procedure for Abstracts and Associated Papers**

In May 2022, the RAMS® Program Committee selects

abstracts that will proceed to develop draft/candidate papers, presentations and tutorials. Selections are based on innovativeness, technical merit, clarity, and relevance to the Symposium theme and topics listed previously. Authors will be notified of abstract approval in June 2022. For papers, authors are required to submit complete drafts of both the paper and presentation slides by the end of July 2022. Draft or candidate papers shall be submitted without author identification on the paper in order to accommodate a blind peer review. The specific requirements for papers and presentation slides will be communicated to authors in a timely fashion. Submitted draft papers will be subjected to review by the Program Committee and RAMS® Editorial Board. The draft papers will also be submitted to IEEE CrossCheck plagiarism detection tool. Authors will be given feedback on their draft papers and presentation slides by the end of August 2022 with follow on additional editorial changes as necessary.

Final paper and presentation slides are due by the end of September 2022. Final papers will be reviewed by both the Program Committee and the RAMS® Proceedings Editor. At this time, authors must also complete a RAMS® Copyright Form, and at least one author of papers must register (at a reduced fee) for the Symposium.

By submitting an abstract for a paper, the author is accepting the condition that a paper may be rejected at any time if the Program Committee determines that the author is failing to comply with RAMS® deadlines or policies, or if the Program Committee determines that the content of the paper is not of sufficient quality to merit publication in the Proceedings. For more information contact the Program Chair at [programs@rams.org](mailto:programs@rams.org). The author is accepting the condition that if their paper is ultimately accepted into the Proceedings, at least one author on the paper will attend the Symposium, and present the paper at the Symposium in reasonably fluent English.

### **Review Procedure for Tutorials**

The review procedure for presentations only will follow similar process, conditions, and deadlines as paper presentations.

The review procedure for tutorials is identical to the review procedure for papers except that they are reviewed by a Tutorial Committee and are not subjected to a blind review. Authors of accepted tutorials receive gratis registration for Symposium. For more information, contact the Tutorials Chair, at [tutorials@rams.org](mailto:tutorials@rams.org).

By submitting an abstract for a tutorial, the author is accepting the condition that if their tutorial is ultimately accepted for the Symposium, the author and/or co-author will attend the Symposium and deliver the tutorial at the Symposium in reasonably fluent English