



Call for Participation

15th Annual Conference of the PHM Society

PHM 2023

October 28 – November 2, 2023
Salt Lake City, UT

Key Dates

Paper Submissions

Abstract Submission

- Friday Feb 24, 2023

Full Paper Submission

- Friday May 26, 2023

Doctoral Symposium

Applications Due

- Wed. May 17, 2023

Conference Management

Conference Chairs

Scott Clements

Lockheed-Martin

Abhinav Saxena

GE Research

Conference Advisors

Karl Reichard

Penn. State University

Dave Larsen

Collins Aerospace

Brian Weiss

University of Maryland

Call for...

- Papers
- Tutorials
- Data Challenge
- Panel Sessions
- Special Technical Sessions
- Doctoral Symposium Applications
- Technology Demos / Product Showcases

This conference is organized under the banner of the PHM Society and delivers the quality engagement you are accustomed to. We bring together the global community of PHM experts from industry, academia, and government in diverse application areas, such as, but not limited to, *energy, aerospace, transportation, automotive, human health & performance, smart manufacturing, industrial data science, and AI.*

In addition to technical paper sessions, the conference features workshops, technical demonstrations, expert panel sessions on a plurality of critical issues and applications, a doctoral symposium, keynote and luminary speakers, and tutorials free to all registrants.

A PHM data analysis competition is organized in parallel and the results will be presented during the conference. Leading companies and research institutions exhibit their products and demonstrate their technologies during the event. Several social events round out the program by providing opportunities for participants to connect and network with colleagues, including a high-quality career fair and diversity outreach & networking event. The PHM Society will also offer separate, dedicated short courses focused on fundamental PHM concepts and techniques, as well as data analytics before the start of the main conference.

Local Chair

Derek DeVries

Northrop Grumman

Sponsorship

TBD

Keynotes/Luminaries

Andy Hess

Hess PHM Group

TPC Chairs

Chetan Kulkarni

KBR Inc., NASA Ames

Indranil Roychoudhury

SLB

Panel Sessions

Ravi Rajamani

DRR2 Consulting

Sarah Lukens

LMI

Liang Tang

GE Research

PHM Data Challenge

Yongzhi Qu

Univ. of Minnesota Duluth

Doctoral Symposium

Jamie Coble

University of Tennessee

Chris Teubert

NASA

Tutorials

Kai Goebel

PARC

Short Course

Jeff Bird

TECnos

Neil Eklund

PARC

A major differentiator for the PHM Society is its unique approach toward intellectual property rights: Authors retain copyright in their work while allowing the PHM Society to distribute their work through a Creative Commons License. As a result, all articles published by the PHM Society are available to the global PHM community via the internet for free, without any restrictions before the conference starts.

CALL FOR PAPERS

Prospective authors are invited to contribute full length, original, high-quality papers through the [conference submissions portal](#). The topics suggested by the conference can be categorized as analysis methods, asset-specific algorithms, prototype implementations, fielded systems, and business case analysis. Both research and industry contributions are welcome under two tracks – **Technical Research Papers** and **Industry Experience Papers**. In addition to research advancements, industry experience papers describing applications, needs, requirements, metrics and assessments, and desired program goals and status are sought. Submitted papers will be reviewed by experts in the two tracks based on the criteria of content, significance, technical validity, innovation, writing style, accuracy, clarity, simplicity, and readability.

Topics of Interest:

- Advanced Sensing & Embedded Devices
- Adaptive Control & Fault Accommodation
- Automotive Systems
- Autonomous / Robotic / Unmanned Systems
- PHM in Aviation (Commercial and Defense) Systems
- CBM Return on Investment & Business Case Analysis
- Cloud Analytics
- Corrosion
- Cybersecurity PHM
- Data Driven Approaches
- Decision Support Systems
- Detection, Diagnostics, and Prognostics Methods
- Digital Twin and Digital Thread
- Electronic Transaction and Blockchain
- Energy (e.g., Nuclear, Smart Grid, and Wind)
- Enterprise-wide PHM Applications
- Human-centric PHM
- PHM for Human Health and Performance
- Marine, Mining, and Railway Applications
- PHM for Precision Agriculture
- Oil & Gas
- Physics of Failure & Model Based Prediction
- Predictive Analytics
- Smart Grid
- Smart Manufacturing
- Smart Cities

Technology Demos/ Product Showcases

TBD

Poster Session

Jamie Coble

University of Tennessee

Chris Teubert

NASA

Conference Career Fair

TBD

Education & Professional Dev

Jeff Bird

TECnos

Karl Reichard

Penn. State University

Diversity Outreach

Kathryn Elliott

Rolls Royce

Jamie Coble

University of Tennessee

University Outreach

TBD

Student Activities

TBD

SAE Liaison

Rhonda Walthall

Collins Aerospace

Conference Materials

Scott Clements

Lockheed Martin

Conference Finances

Karl Reichard

Penn. State University

Website Development

- Space Technologies and Systems
- Standards, Metrics, and Verification & Validation

CALL FOR SPECIAL TECHNICAL SESSIONS

Proposals are sought for special sessions. These sessions are generally dedicated to a particular topic of interest. Session organizers will have the flexibility to solicit papers, organize panels, invited talks, or workshops on the topics of interest. Support with a review management system will be available for peer review activities and publishing.

For more information, please visit the website or contact the Technical Committee Chairs at tpc@phmconference.org.

CALL FOR TUTORIAL SPEAKERS

The PHM 2023 Conference is planning to offer a set of tutorials that are providing coverage of topics of interest to the PHM audience. The tutorials are meant to provide a learning experience to the audience by giving a comprehensive introduction to the particular topic. Proposed tutorials need to address the interests of a varied audience: beginners, developers, designers, researchers, practitioners, and decision makers who wish to learn a given aspect of prognostic health management. For more information or to volunteer as a speaker, please contact Kai Goebel at tutorials@phmconference.org.

Tutorial Topics of Interest include (but are not limited to):

- Asset Health Management
- CBM Policies
- Cost-Benefit Analysis
- Diagnosis and Prognosis
- Life Cycle and Risk Management Methodologies
- PHM System Design and Engineering
- Standards and Methodologies
- Deep Learning

and other advanced topics.

For reference check out [tutorials from PHM 2022](#).

CALL FOR TECH. DEMOS & PRODUCT SHOWCASE

The PHM Society invites sponsors to show off their monitoring, diagnostic, and/or prognostic engineering approaches through Technology Demonstrations and Product Showcase presentations.

The concept of the Technology Demonstrations is to offer a true "hands-on" learning experience to conference attendees. Multiple demonstrations will be given as brief tutorials to small groups, scheduled over a two-day period. Each demo

Indranil Roychoudhury
SLB

Publicity

Neil Eklund
PARC

Scott Clements
Lockheed Martin

Kai Goebel
PARC

will last for 30 – 60 minutes, where attendees will be encouraged to actively participate.

The Product Showcase presentations offer the opportunity for companies to advertise their products and/or services to conference attendees. Showcase presenters are provided a 10-minute timeslot to give marketing presentations via computer/table, projector, and microphone. Showcase presentations are not intended to be interactive, and participants are encouraged to network with audience members after their showcase.

Tech Demo & Product Showcase Topics of Interest:

- Certification and Validation Techniques for Health Management Applications
- Fielded Prognostic or Advanced Diagnostic Systems
- Innovative System Maintenance Approaches
- Monitoring, Diagnostic, and/or Prognostic Hardware/Software Technologies
- Rapid Aging Testing and Analysis Techniques
- Sensors and Sensor Integration for PHM
- System Identification Processes to Support PHM Goals

For more information on either the Technology Demonstrations or the Product Showcase Presentations, please contact the chairs at techdemos@phmconference.org.

Please Note: Demonstration/presentation hardware, software, concepts, material, data, etc., must be cleared for public release prior to the conference.

CALL FOR PANELS

Panel discussions provide an opportunity to hear and interact with recognized industry leaders in relevant areas for our PHM work. These 90-minute panel sessions will consist of presentations and open discussion by 4-6 panelists directly engaging with the conference audience on the different topics. Panel topic ideas are solicited.

These sessions add an enriching dimension to the conference experience and a welcome networking alternative to traditional paper presentations. Balancing the conference time in this manner provides participants with a much more engaging experience and an opportunity to gain unique knowledge.

To propose panel ideas or get more information please contact the panel chairs at panels@phmconference.org.

For reference check out [panel sessions from PHM 2022](#).

CALL FOR DOCTORAL SYMPOSIUM APPLICATIONS

The PHM Society Doctoral Symposium will be held as a workshop at the beginning of the conference. Full-time students are invited to submit their thesis ideas to the Doctoral Symposium. It provides an opportunity for graduate students to present their interests and plans at a formative stage in their research. The students will receive structured guidance from a panel of distinguished researchers as well as comments from conference participants and fellow students in a collegial setting.

For more information, please contact the chairs at ds@phmconference.org.

CALL FOR DATA CHALLENGE

Challenge ideas and datasets are solicited for this year's PHM data challenge. Proposed problem must be PHM related, such as detection, diagnostics, or prognostics, and proposers should be able to specify clear goals and metrics to establish winning criteria. Participating teams will be scored on these metrics and final winners will be decided based on scores as well as their technical approaches to be presented at the conference. Apart from awards winners are also invited to publish papers in the society's premier journal IJPHM. Please contact data challenge chair at dc@phmconference.org.

For reference check out [PHM2022 challenge](#).

Sincerely,

Scott Clements and Abhinav Saxena

General Chairs
Annual Conference of the PHM Society 2023

chairs@phmconference.org



