phmsociety

CALL FOR PAPERS

Special Issue of the
International Journal of Prognostics and Health Management
PHM for Human Health and Performance - II

SPECIAL ISSUE EDITOR
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The International Journal of Prognostics and Health Management (IJPHM) is the premier *online open access journal* related to multidisciplinary research on Prognostics, Diagnostics, and System Health Management. This special issue is focused on the development, implementation, and evolution of standards, guidelines, and best practices relevant to condition monitoring, diagnostic, and prognostic technologies across a range of operational domains.

Having its origin in aerospace, predictive health management (PHM) most recently has broken ground in the fields of wearable smart sensors, sensor-data-fusion, machine learning and data mining, prediction and diagnosis, and electronic health records and databases - all in the context of prognostics and health management for human health and performance on Earth and in Space. PHM's current and envisioned applications are within general healthcare, sports/athletes, theatre, space, and other extreme environments along with how the needs, data stream, and supporting PHM tools, can be better designed, developed, implemented, integrated, verified, and validated to impact smart healthcare. More specifically, biofeedback-controlled devices are looming on the horizon of smart healthcare. These devices integrate wearable sensors, bi-directional data exchange, cloud-based data analysis, health and disease status modeling and prediction, and prescribed intervention/treatment onto human smart service platforms. From an end-user perspective, usability, wearability, and appearance are key design factors. From a technology point of view, high data accuracy and fidelity (i.e., medical-grade data), real-time bi-directional healthcare data streaming, real-time data analysis and understanding, and health status prediction (i.e., PHM) are critical components to create successful biofeedback-based products. Biofeedback-controlled human smart service systems have the potential to improve health and treatment outcome, with a significant savings potential in healthcare costs to patients, health insurers, and economies at large.

The Call for Papers solicits articles on the following, but not limited to:

Topics of Interest:

- Survey papers highlighting existing PHM approaches in human health and performance
- Evidence of PHM tool/approach deployments and lessons learned in human health and performance
- Financial impact and burden of deploying PHM in healthcare
- PHM tools developed for monitoring, diagnostic, and/or prognostic techniques in human health and performance
- Strategies to increase PHM involvement by stakeholders
- Evidence of PHM tool/approach deployments to result in or impact healthcare-related costs
- Proliferation of PHM tools/approaches throughout healthcare organizations and their respective areas of focus
- Workforce challenges faced during PHM adoption
- Reconciling PHM tool needs and wants of disparate stakeholder groups in human health and performance
- PHM Standards vs. PHM guidelines vs. PHM best practices

Submission Types (papers can range from 4-8 pages in length):

Technical Briefs: Technical briefs describe an instance of a PHM application in human health and performance fields, the resultant impacts, and lessons learned with an emphasis on the successes and challenges of the development process and how it influenced the area/field. IJPHM Technical brief template should be used.

Full Length Papers: Full Length Papers provide descriptive accounts of the use of PHM within healthcare environments or actual products. Techniques and apparatus used, results obtained, and lessons learned can be included to share experience with the community. Depending on level of details presented, IJPHM Full paper or Technical Brief template may be used.

Survey Papers: Survey papers are of a tutorial or review nature covering PHM tools and approaches or describe the best current practice, detailed characteristics and performance. These papers cover areas of general interest.

Special Issue Editor: Dr. Thurmon Lockhart, **thurmon.Lockhart@asu.edu**

Submission Instructions: Please submit your manuscripts directly by going to the society webpage and follow instructions for journal submissions. There you will find an option to select the standards special issue.

Invitation to Present: Accepted papers are eligible for presentation at a future Annual Conference of the PHM Society

Deadlines: *Abstract/NOI Due:* **November 30, 2019**   *Final Full Papers Due:* **March 20, 2020**