

Table of Contents

Introduction	1
---------------------------	----------

Papers

Embedded Diagnostics and Prognostics for Future Vehicles (870397), Furno, V. E., and Resnick, H. L.	11
Integrated Vehicle Health Management for Aerospace Systems—A Need for Robust and Smart Fluid Components (942167), Gormley, T. J., Vesperman, C., and Engle, J.	19
Distributed Health Management Systems Technology for Future Propulsion Control Systems (912167), Wald, J., Schoess, J., and Hadden, G.	31

Engines

Monitoring the Progression of Micro-Pitting in Spur Geared Transmission Systems Using Online Health Monitoring Techniques (2011-01-2700), Onsy, A., Shaw, B. A., and Zhang, J.	43
Very High Frequency Monitoring System for Engine Gearbox and Generator Health Management (2007-01-3878), Watson, M. J., Byington, C. S., and Behbahani, A.	59
Refinements to Mechanical Health Monitoring Algorithms (2012-01-2096), Hickenbottom, C., Kim, K., and Uluyol, O.	69
Certification of Engine Health Management Systems: Guidelines for Selecting Software Assurance Levels (2011-01-2704), Rajamani, R., and Waters, N.	77

Airframes

Structural Health Management: Systems Design Approach (2009-01-3230), Ihn, J-B, Davis, C., and Haugse, E.	89
A Validation Methodology for Structural Health Monitoring (2011-01-2608), Azzam, H., and McFeat, J.	95
Ground Based Vehicle Health Monitoring for Lifecycle Cost Reduction (2003-01-2981), Schaefer, L.	113
Smart Monitoring System for Aircraft Structures (2011-01-2714), Rouet, V., and Foucher, B.	121

Electrical Power Systems

- A Framework for Developing an EPS Health Management System (2010-01-1725), Hernandez, L., Mullins, M., Morris, C., and Keller, K. 129
- Aircraft Electrical Power Systems Prognostics and Health Management (AEPHM) (2004-01-3162), Keller, K., Amo, A. D., and Jordan, B. 137
- Integrating Electrical Prognostics and Monitoring into an Electronic Power Distribution System (2009-01-3190), Ballas, M., and Potter, F. 149
- A Model-Based Development Approach for a Diagnostic System for a Multifunctional Fuel Cell System (2011-01-2702), Modest, C., Schories, K., Lüdders, H. P., and Thielecke, F. 157

Supporting Systems

- Battery Diagnostic and Prognostics for Aviation Batteries Via a Passive Diagnostic Device (2012-01-2239), James, J. E. 167
- Electrochemical Testing at SAFT to Support Health Prognostication Management for Aviation (2009-01-3191), Rickman, S., Guseynov, T., Nechev, K., Kumbar, N., and Hurley, M. 173
- An Overview of Electrically Powered Control Actuation Health Management (2010-01-1746), Schroeder, J. B., and Chen, R. 179
- Health Assessment of Liquid Cooling System in Aircrafts: Data Visualization, Reduction, Clustering and Classification (2012-01-2106), Najjar, N., Sankavaram, C., Hare, J., Gupta, S., Pattipati, K., Walthall, R., and D'Orlando, P. 189

Architecture

- Sensory Prognostics and Management System (SPMS) (2012-01-2095), Keller, K. J., Maggiore, J., Safa-Bakhsh, R., Rhoden, W., and Walz, M. 199
- Creating a System Architecture for a Vehicle Condition-based Maintenance System (2012-01-2097), Shao, G., Goldstein, D., Kim, K., Nwadiogbu, E., Proenza, R., Tran, M., and Williams, D. 213
- A Hierarchical Reasoning Structure to Support Aerospace IVHM (2011-01-2665), Roemer, M. 223

About the Editor.....231