Annual Conference of the Prognostics and Health Management Society 2014

September 29 – October 02

Fort Worth, Texas, USA

Two-day Short Course: PHM Fundamentals

October 03 – 04, 2014

Course Administrator: Dr. Jeff Bird

The PHM Society will offer a two-day intensive short course on PHM fundamentals, tools/methods, case studies and applications on October 3-4, 2014 in conjunction with the PHM 2014 conference in Fort Worth, TX. The course will be taught by recognized experts in the PHM field and will cover the current state of the art in PHM technologies, sensors and sensing strategies, data mining tools, CBM+ technologies, novel diagnostic and prognostic algorithms as well as an array of application examples/case studies. It is addressed to engineers, scientists, operations managers, educators, small business principals and system designers interested to learn how these emerging technologies can impact their work environment. Please register as early as possible since space is limited.

If you are interested in attending the short course, please register at:
https://www.phmsociety.org/events/conference/phm/14/registration-and-hotel.

The Potential Customer Base:

- The Operations Manager/Field Commander- What is my confidence that I can deploy a particular asset for a specific mission/task?
- The Operators/Maintainers/Maintenance Technology Developers- Methods/tools for maintenance, repair and overhaul of critical systems
- The System Designer- How do I take advantage of CBM/PHM technologies to design high-confidence or fault-tolerant systems?
- The Educator- new course directions in emerging PHM technologies
- Small High-Tech Company Principals- getting a share in the CBM/PHM market

What they will learn from this course?

- Basic understanding of state of the art of CBM/PHM technologies
- Sensors & Sensing Strategies- design, placement, operation and requirements
- Algorithm Development for Data Processing, Fault Diagnosis & Failure Prognosis
- Data Miming- methods to reduce raw censor data to usable information
- PHM Technologies demonstrated via actual case studies

Course Outline:

1. Introduction- State of PHM Technologies (Andrew J. Hess, The Hess PHM Group - President, PHM Society President, Dr. Jeff Bird, Consultant, TECnos)
2. The PHM Paradigm- From monitoring/sensing to fault diagnosis and failure prognosis (Dr. George Vachtsevanos, Professor Emeritus, The Georgia Institute of Technology)
3. CBM+ Technologies (Dr. George Vachtsevanos, Professor Emeritus, The Georgia Institute of Technology, Dr. Karl Reichard, Research Associate, The Pennsylvania State University Applied Research Laboratory)
4. Sensors and Sensing Strategies (Dr. Karl Reichard, Research Associate, The Pennsylvania State University Applied Research Laboratory)
5. Data Mining- Feature selection and extraction (Dr. Neil Eklund, General Electric)
6. Fault Diagnosis (Dr. José R. Celaya, Research Scientist / SGT Inc., NASA Ames Research Center)
7. Failure Prognosis (Dr. Marcos Orchard, Associate Professor, University of Chile)
8. Analytical Foundations and Numerical Solutions for PHM (Mark A. Powell, Consultant, Adjunct Professor, Stevens Institute of Technology
9. Performance Metrics (Dr. Abhinav Saxena, Research Scientist / SGT Inc., NASA Ames Research Center)
10. PHM Case Studies (all)
11. PHM Lessons Learned/Where do we go from here (Andrew J. Hess, The Hess PHM Group - President, PHM Society President / Dr. George Vachtsevanos, Professor Emeritus, The Georgia Institute of Technology)

Charge: $700 for conference non-participants and $350 for conference participants. **A discount of $150 is offered to the first 20 students registering for the course.**