

Diagnostics, Prognostics, and Condition-Based Maintenance Systems

A Practical Course on Designing, Developing, and Implementing Automated Health Management Systems

January 18-20, 2011
St. Petersburg, Florida

OVERVIEW

This unique PHM/CBM training event is an Instructional Course consisting of presentations and discussions that focus on the design, development, implementation, and evaluation of Prognostics and Health Management (PHM) and Condition-Based Maintenance (CBM) technologies.

The Course sessions will describe and demonstrate some of the leading PHM/CBM technologies currently being implemented in various health monitoring systems applications. In addition, the important concepts associated with verifying and validating these technologies using relevant performance metrics specifically tied to failure mode detection, fault isolation, and prediction requirements will also be covered. The application sessions at the end of each day will provide practical insight into how organizations are currently deploying PHM/CBM systems. These experiences may range from newly designed or legacy experiences in aircraft, other mobility applications, and land-based equipment.

WHO SHOULD ATTEND

Both end users and developers of PHM/CBM systems including: Controls/Diagnostic Engineers, Engineering Supervisors, Operator/Maintainers, and Program Managers.

COURSE PARTICIPANTS

All attendees of the Course will receive a certificate documenting their participation in this leading-edge PHM/CBM event. Example implementations and application focused presentations are planned throughout the course in the areas of legacy systems applications, new acquisition platform implementation, and continuing challenge areas for PHM. Participants will gain valuable insight into practical case studies and benefit from specific guidance and suggestions from the course instructors and attendees. Course attendees will also have an opportunity to discuss their specific PHM/CBM application needs and receive valuable feedback. Finally, the PHM/CBM course is an excellent opportunity to meet and network with other PHM/CBM professionals to discuss similar design, development or implementation issues often encountered in projects of all sizes.

COURSE OUTLINE

Format: 4-5 sessions per day
Duration: 8:00 a.m. - 4:30 p.m.

Day 1: Tuesday, January 18, 2011

- Session 1:** Introduction to the PHM/CBM Design Process
- Session 2:** Requirements and Cost Benefit Analysis
- Session 3:** Extending FMECA and PHM Design Modeling
- Session 4:** Dynamic Modeling and Simulation-based PHM
- Session 5:** Fault Detection and Isolation Approaches

**Casual Networking Cocktail Reception 6 - 8 p.m.
open to all participants.*

Day 2: Wednesday, January 19, 2011

- Session 6:** PHM/CBM Reasoning Methods and Examples
- Session 7:** Prognostic Algorithm Approaches and Examples
- Session 8:** Advanced R&D in PHM Algorithms & Automated Contingency Management
- Session 9:** Example Applications/Case Studies

Day 3: Thursday, January 20, 2011

- Session 10:** Electronic Systems Fault Detection, BIT and Diagnostics
- Session 11:** PHM Metrics for Detection, Diagnosis, and Prognosis
- Session 12:** Verification and Validation (V&V) Methods
- Session 13:** Electronics Prognostics
- Session 14:** PHM Lessons Learned

Continental Breakfast and Lunch will be provided each day to all attendees along with a mid-morning and afternoon beverage break.



COST

The cost to attend the course is \$1,195 per participant. Discounts are available to companies that wish to send multiple participants from the same location. All participants receive a complete set of the slide presentations with specific PHM examples and case studies, selected reference lists and resources in electronic format, and a participant certificate.

For questions regarding group discounts please contact Jeannie Holmes at (585) 424-1990 ext. 122. Workshop attire is casual.

INSTRUCTORS

Dr. Michael J. Roemer, Director of Engineering
Impact Technologies, LLC

Carl S. Byington, P. E., Director, Systems Engineering
Impact Technologies, LLC

Dr. George Vachtsevanos, Professor Electrical & Comp.
Engineering, Georgia Institute of Technology/Chief Scientist,
Impact Technologies, LLC

Gregory J. Kacprzyński, Director, Engineering Services
Impact Technologies, LLC

Patrick Kalgren, Manager Electronic Systems PHM
Impact Technologies, LLC

COURSE LOCATION & ACCOMMODATIONS

The Course will be held at the St. Petersburg Hilton Carillon Park in St. Petersburg, Florida. Nestled lake front on beautiful Carillon Nature Preserve, the award-winning hotel is centrally located in the Tampa Bay Area for your convenience. Just five minutes from St. Petersburg/Clearwater International Airport and 15 minutes from Tampa International Airport, the hotel is an ideal destination for business and leisure travel alike.



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Hilton Carillon Park
950 Lake Carillon Drive
St. Petersburg, FL 33716
Reservations:
1-727-540-0050
<http://www.hilton.com>

A limited number of rooms have been reserved for participants at a discounted rate of **\$120 per night**. To guarantee you receive this discounted rate, reservations must be made by **December 17, 2010**. *Discounted rate will be offered, based on availability, to attendees 3 days before and 3 days after course dates.*

Please refer to the **Impact Technologies Group** when booking your reservation. Note: Travel Agents booking rooms that do not refer to the Impact Technologies Group will be charged a higher room rate.

REGISTRATION FORM

Name _____

Title _____

Company _____

Street _____

P.O. Box _____

City _____ State _____ Zip _____

Telephone _____ Fax _____

E-mail _____

Registration Fee: \$1,195*

Payment is in the Mail Please Invoice against P.O. Number: _____

Please charge registration fee to my credit card:

Visa Mastercard American Express Discover

Number: _____ Expiration Date: _____

3 or 4 Digit Security Code (Located on the Back of Credit Card) _____

Name on Card _____

Billing Address on Card (If Different than Above) _____

Authorized Signature: _____

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January 18-20, 2011, St. Petersburg, FL

Return via fax or email to:

Attn: Jeannie Holmes
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For questions regarding group discounts please call.

***Government Employees: Government issued credit cards may be declined due to Impact's Merchant Category (Non-Travel). Additional steps may be required to obtain approval and process payment.**

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