

Diagnostics, Prognostics, and Condition-Based Maintenance Systems

A Practical Course on Designing, Developing, and Implementing Automated Health Management Systems
January 19-21, 2010
Long Beach, California

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/WORKSHOP OUTLINE

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

Day 1: Tuesday, January 19, 2010

- Session 1:** Introduction to the PHM/CBM Design Process
- Session 2:** Requirements, Metrics, and Cost Benefit
- Session 3:** Extending FMECA and PHM/CBM Modeling Process
- Session 4:** Fault Detection and Isolation Approaches

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

Day 2: Wednesday, January 20, 2010

- Session 5:** Advanced R&D in PHM Algorithms
- Session 6:** Dynamic Modeling and Simulation-Based Methods
- Session 7:** PHM/CBM Reasoning Methods and Examples
- Session 8:** Prognostic Algorithm Approaches and Examples
- Session 9:** Invited Application Session

Day 3: Thursday, January 21, 2010

- Session 10:** Electronic/Software Systems PHM
- Session 11:** Electronic Systems Diagnostic/Prognostic Examples
- Session 12:** PHM Metrics and V&V Methods
- Session 13:** Additional Case Studies, Lessons Learned, and Issues

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

This Course is an Impact Technologies sponsored event.



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, Manager, Advanced Systems
Impact Technologies, LLC

COURSE LOCATION & ACCOMMODATIONS

The entire Course will be held at the Renaissance Long Beach in Long Beach, California. The Renaissance Long Beach is ideally located in the heart of the Long Beach entertainment district. The hotel is at the center of the region's many popular attractions. The upscale boutiques and more than 100 eateries of Pine Avenue, The Pike, and The Promenade are just steps from the hotel and the Long Beach Municipal Airport (LGB) is only five miles away. A limited number of rooms have been reserved for participants at a discounted rate of **\$164 per night**. To guarantee you receive this discounted rate, reservations must be made by December 18, 2009.

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.

Renaissance Long Beach
111 East Ocean Boulevard
Long Beach, CA 90802
Reservations:
(562) 437-5900 or
(800) 468-3571
<http://www.marriott.com>



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Additional Hotel Notes:

- Parking is available to any guest staying at the hotel overnight at a discounted rate of \$10 a day.
- The Renaissance Long Beach does not offer an Airport Shuttle Service. Cab fare from Long Beach Municipal Airport to hotel is approximately \$17 one way.

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 (We do not accept American Express or 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: _____

Diagnostics, Prognostics, and Condition-Based Maintenance Systems Course
January 19-21, 2010, Long Beach, CA

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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