

Call for papers:
ISEM Special Session on Maintenance Engineering

On behalf of the organizing committee, we would like to announce the special session at the 13th International Symposium on Applied Electromagnetics and Mechanics (ISEM) which will be held at the Michigan State University in East Lansing, MI during September 9-12, 2007. The session will focus on structural safety evaluation practices in the nuclear power industries. It will cover topics such as inspection techniques, maintenance and plant life extension practices, educational programs for training personnel, and examples of international collaboration in this regard. These topics are particularly relevant in the context of the renewed interest in designing and building a new generation of power plants. New designs have to be based on the notion that inspectability/maintainability is important and embraced in design practices of the future. This special session will be scheduled on the second day of the ISEM (11, September 2007). The program will comprise of two keynote lectures, poster presentations, and a panel discussion. Specifically, the session provides a forum for exchanging ideas and discussing recent developments in such areas as:

- 1 The Study of Scientific Maintenance
 - 1.1 Mathematical maintenance
- 2 Maintenance Technology
 - 2.1 New Nondestructive Testing Method
 - 2.2 Maintenance Simulator
 - 2.3 Repair Techniques (including repair-implementing robots)
 - 2.4 Plant and Machine Design Tools
 - 2.5 Training Facilities
- 3 Maintenance Standards and Rules
 - 3.1 Standards for Maintenance Levels of Importance
 - 3.2 Unified Standards for the Maintenance of Equipment
 - 3.3 Risk-based Guidelines
- 4 Maintenance Optimization
 - 4.1 Maintenance Measures for Safety Goals
 - 4.2 Reasonable Judgment and Practice of Repair, Renovation and Replacements
 - 4.3 Training, Qualification Certification
- 5 Monitoring Techniques for Maintenance
 - 5.1 Conditional Based Monitoring

- 5.2 Advanced Instrumentation and Systems Implementation
- 5.3 Computational Method related to On-line Monitoring
- 6 Structural Integrity Related to Maintenance
 - 6.1 Nondestructive Evaluation of Material Degradation
 - 6.2 Nano-Mechanics for Material Systems Used in Plant
 - 6.3 Life Time Prediction Methods for Aged Structures and Components
 - 6.4 Fracture and Fatigue Control in Structures
 - 6.5 Case Studies of Failure and Fatigue in Machines and Structures

This special session is organized by the Department of Electrical and Computer Engineering, Michigan State University and the Japan Society of Maintenology.

Please submit a two page short paper in electronic form by May 1, 2007. Please also refer to the ISEM Web site Paper Submission page for details on format, submission and registration.

For more information on ISEM, please visit the following URL

<http://www.isem2007.org/call/index.html>

For more details, please contact with:

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Selected papers will be published in a special issue of the new forthcoming International Journal for Maintenance Engineering. Detailed information will soon appear on the Web site.