

# **2014 IEEE Symposium on Intelligent Embedded Systems**

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**Wednesday, December 10**

**9:20AM-10:00AM**

**IES'14 Keynote Talk**

*Intelligent Embedded Systems: Artificial Neural Networks for Industrial Applications*  
Eros Pasero

**10:20AM-12:00PM**

**IES'14 Session 1**

Chair: Manuel Roveri

10:20AM *Fuzzy Algorithm for Intelligent Wireless Sensors with Solar Harvesting*..... 1  
Michal Prauzek, Petr Musilek and Asher G. Watts

10:40AM *Location-specific Optimization of Energy Harvesting Environmental Monitoring Systems*..... 8  
Petr Musilek, Pavel Kromer and Michal Prauzek

11:00AM *Directional Enhancements for Emergency Navigation*..... 14  
Andras Kokuti and Erol Gelenbe

11:20AM *WiFi Localization on the International Space Station*..... 21  
Jongwoon Yoo, Taemin Kim, Christopher Provencher and Terrence Fong

**1:30PM-3:10PM**

**IES'14 Session 2**

Chair: Manuel Roveri

1:30PM *Self-aware and Self-expressive Driven Fault Tolerance for Embedded Systems*..... 27  
Tatiana Djaba Nya, Stephan C. Stilkerich and Christian Siemers

1:50PM *Learning Causal Dependencies to Detect and Diagnose Faults in Sensor Networks*..... 34  
Cesare Alippi, Manuel Roveri and Francesco Trovo'

2:10PM *Salted Hashes for Message Authentication - Proof of concept on Tiny Embedded Systems*..... 42  
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2:30PM *Novelty Detection in Images by Sparse Representations*..... 47  
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**3:30PM-5:10PM**

**IES'14 Session 3**

Chair: Manuel Roveri

3:30PM *High precision FPGA implementation of neural network activation functions*..... 55  
Francisco Ortega, Jose Jerez, Gustavo Juarez, Jorge Perez and Leonardo Franco

3:50PM *An Intelligent Embedded System for Real-Time Adaptive Extreme Learning Machine*..... 61  
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4:10PM *A differential flatness theory approach to adaptive fuzzy control of chaotic dynamical systems* ..... 70  
Gerasimos Rigatos

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