

# **2009 IEEE Workshop on Evolving and Self-Developing Intelligent Systems**

**(ESDIS)**

**Nashville, TN, USA  
30 March – 2 April 2009**



**IEEE Catalog Number: CFP09ESD-PRT  
ISBN: 978-1-4244-2754-3**

# TABLE OF CONTENTS

## **Session ESDIS-1: Evolving Intelligent Systems**

*Wednesday, April 1, 8:30AM-10:30AM, Room: Edgewood, Chair: Fernando Gomide, University of Campinas, Brazil*

### **Interval-Based Evolving Modeling [#1] ..... 1**

Daniel Leite, Pyramo Costa Jr. and Fernando Gomide

University of Campinas, Brazil; Catholic University of Minas Gerais, Brazil

### **An Evolving Neuro-Fuzzy Recurrent Network [#3] ..... 9**

Jose de Jesus Rubio Avila, Jaime Pacheco Martinez and Andres Ferreyra Ramirez

ESIME Azcapotzalco, Mexico

### **Modelling Evolving User Behaviours [#4] ..... 16**

Jose Antonio Iglesias, Plamen Angelov, Agapito Ledezma and Araceli Sanchis

Carlos III University of Madrid, Spain; Lancaster University, England

### **Evolving on-line prediction model dealing with industrial data sets [#5] ..... 24**

Petr Kadlec and Bogdan Gabrys

Bournemouth University, United Kingdom

### **Incremental Induction of Classification Fuzzy Rules [#10] ..... 32**

Abdelhamid Bouchachia

University of Klagenfurt, Austria

**Session ESDIS-3: Self-Developing Intelligent Systems**

*Wednesday, April 1, 2:00PM-4:00PM, Room: Edgewood, Chair: Mario Gongora, De Montfort University, UK*

**Pattern Recognition of Eye Movements [#2] .....40**

Jose de Jesus Rubio, Carlos Aviles, Raymundo Coello, Jose Francisco Cruz and Hector Rivero  
ESIME Azcapotzalco, Mexico

**Analysis of Organized Asymmetry Development Using Artificial Cellular Differentiation Models [#6] .....43**

Mario Gongora and Maria Rodas  
Centre for Computational Intelligence, De Montfort University, United Kingdom; Warwick Medical School,  
University of Warwick, United Kingdom

**An Evolutionary Algorithm Testbed for Quick Implementation of Algorithms in Hardware - GPeat [#8] ....51**

Tina Smilkstein, Kiran Kumar Tati, Parashar Barve, M. Lutful Hai, Kittisak Sajjapongse and Durgesh K. Sharma  
University of Missouri, Columbia, United States

**Neural Network versus Behavior Based Approach in Simulated Car Racing Game [#9] .....58**

Huajin Tang, Chin Hiong Tan, Kay Chen Tan and Arthur Tay  
Institute for Infocomm Research, Agency for Science Technology and Research, Singapore; National University  
of Singapore, Singapore

**AUTHOR INDEX**