First International Workshop
on
Cognitive Dynamic Systems and Their Applications

(Organizers: Drs. S. Haykin and S. Habibi, McMaster University)

Monday 26th-Wednesday 28th May, 2008
Pillar & Post, Niagara-on-the-Lake, Ontario, Canada

DAY 1 - Monday 26th May - Foundations of Cognitive Systems

8:00-9:00 Arrival - Breakfast

9:00-9:15 The Ontario Automotive Industry and Opening Remarks
Ken Albright, Director, Automotive Strategy Branch,
Ministry of Economic Development and Trade, Ontario

9:15-9:30 Introduction
Dr. Mo Elbestawi, VP Research, McMaster University

9:30-9:45 Coffee Break

9:45-11:00 KEYNOTE 1: Cognitive Dynamic Systems: A Way of the Future for the 21st Century
Simon Haykin, McMaster University

11:00-12:00 Affinity Propagation: New Algorithms, Results and Applications
Brendan Frey, University of Toronto

12:00-1:00 Lunch

Afternoon Session

1:00-2:15 KEYNOTE 2: Differentiation and Disintegration of Conceptual Knowledge with Learned Distributed Representations
Jay McClelland, Stanford University

2:15-3:15 Neuro-computational Models of Perceptual Categorization: From Learning to Automaticity
F. Gregory Ashby, University of California at Santa Barbara

3:15-3:30 Coffee Break

3:30-4:45 KEYNOTE 3: The Cognitive Genome
David Krakauer, Santa Fe Institute

4:45-5:30 Discussions

7 - 9 pm Banquet & Reception
Banquet Guest Speaker: Dr. Mo Elbestawi
Vice President Research, McMaster University

DAY 2 - Tuesday 27th May

Morning Session - Cognitive Systems and Beyond

7:00-9:00 Breakfast

9:00-10:15 KEYNOTE 4: Revisiting WiFi in the Cognitive Radios Era
Victor Bahl, Microsoft Research

10:15-11:15 Vision as Bayesian Inference: Analysis by Synthesis
Allan L. Yuille, UCLA

11:15-11:30 Coffee Break

11:30-12:30 Learning Hierarchical Representations of Natural Images
Michael Lewicki, Carnegie Mellon University

12:30-1:30 Lunch

Afternoon Session

1:30-2:30 Discovering Neural Codes using Temporal Data Mining Methods
K.P. Unnikrishnan, General Motors, R&D Center

2:30-3:30 Variable Structure Systems and Cognition
Saeid Habibi, McMaster University and Jimi Tjong, Ford Motor Company

3:30-3:45 Coffee Break

3:45-4:45 Test and Evaluation of Cognitive and Social Capabilities of Collaborative Unmanned Autonomous Vehicles
Nikita Visnevski,GE Global Research

4:45-5:30 Discussion

DAY 3- Wednesday 28th May

Morning Session - Cognition and Automotive Applications

7:00-9:00	Breakfast
9:00-10:15	KEYNOTE 5: Cognitive Cars, Nomadic Devices and Smart Clouds *K. Venkatesh Prasad, Ford Motor Company*
10:15-11:15	Neuro Mechanical Networks and Design Information Entropy *Peter Krus, Linköping University*
11:15-11:30	Coffee Break
11:30- 12:30	Environment for Cognitive Automobile *Mohamed Shawky, UTC*
12:30-1:30	Lunch