

1st International Workshop on Cognitive Radio Interfaces and Signal Processing (CRISP 2010)

co-located with IEEE *International Conference on Communications (ICC 2010)*
23-27 May 2010
Cape Town, South Africa

Date: Thursday, 27 May 2010

Venue: Cape Town's International Conference Centre (CTICC)

Chairs:

Eugene Golovins
Neco Ventura (University of Cape Town, ZA)
Gert-Jan van Rooyen (Stellenbosch University, ZA)

Technical Program Committee:

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Vladimir Kazakov (National Polytechnical Institute of Mexico, MX)
Wai Pan Tam (The Chinese University of Hong Kong, CN)
Wei Wang (Shanghai Jiao Tong University, CN)
Yi Song (University of North Carolina at Charlotte, US)
Yiyang Pei (Nanyang Technological University, SG)
Zhen Zhao (Huazhong University of Science and Technology, CN)

TECHNICAL PROGRAM

09.00 – 09.10

Opening Note

09.10 – 10.30

Session I: Schemes for Cognitive Systems

Dynamic Spectrum Leasing (DSL) in Dynamic Channels (#1569272673)

Georges El-Howayek (University of New Mexico, US); Sudharman K Jayaweera (University of New Mexico, US); Kamrul Hakim (University of New Mexico, US); Gonzalo Vazquez-Vilar (University of Vigo, ES); Carlos Mosquera (Universidad de Vigo, ES)

Embedded Ambient Networking - A New, Lightweight Communication Concept (#1569272003)

Matthias Vodel (Chemnitz University of Technology, DE); Mirko Caspar (Chemnitz University of Technology, DE); Wolfram Hardt (Chemnitz University of Technology, DE)

MIMO Active Interference Alignment for Underlay Cognitive Radio (#1569275047)

Jen-Ming Wu (National Tsing Hua University, TW); Hsin-Jui Chou (National Tsing Hua University, TW)

Random Linear Coding Based Anti-Jamming Coding Techniques for Cognitive Radio Systems (#1569275009)

Swanand Kadhe (Tata Consultancy Services, IN); Girish Chandra (Tata Consultancy Services, IN); Balaji Janakiram (Tata Consultancy Services, IN)

10.30 – 10.50

Coffee Break

10.50 – 12.10

Session II: Cognitive Radio Networks

Applications of Reinforcement Learning to Cognitive Radio Networks (#1569271500)

Kok Lim Yau (Victoria University of Wellington, NZ); Peter Philip Komisarczuk (Victoria University of Wellington, NZ); Paul D Teal (Victoria University of Wellington, NZ)

United Nodes: A Cluster Based Routing Protocol for Mobile Cognitive Radio Networks

(#1569275015)

Ahmet Cagatay Talay (Istanbul Technical University, TR); Deniz Turgay Altılar (Istanbul Technical University, TR)

Performance Evaluation of Cognitive Radio CDMA Network with and without Spectrum Sensing (#1569272089)

Sanjay Dhar Roy (National Institute of Technology, Durgapur, IN); Sumit Kundu (I.I.T Kharagpur, IN); Gianluigi Ferrari (University of Parma, IT); Riccardo Raheli (University of Parma, IT)

Primary Exclusive Region and Throughput of Cognitive Dual-Polarized Networks (#1569270767)

Jean-Michel Dricot (Université Libre de Bruxelles, BE); Gianluigi Ferrari (University of Parma, IT); François Horlin (Université Libre de Bruxelles, BE); Philippe De Doncker (Université Libre de Bruxelles, BE)

12.10 – 14.00

Lunch

14.00 – 15.20

Session III: Cooperative Communication and Cognitive Relays

An Efficient Multiple Relay Selection Scheme For Cognitive Radio System (#1569275095)

Muhammad Naeem (Simon Fraser University, CA); Daniel Lee (Simon Fraser University, CA); Udit Pareek (Simon Fraser University, CA)

Power and Interference Control with Relaying in Cooperative Cognitive Radio Networks

(#1569274973)

Weng-Chon Ao (National Taiwan University, TW); Shin-Ming Cheng (National Taiwan University, TW); Kwang-Cheng Chen (National Taiwan University, TW)

Combined Power Allocation in Cognitive Radio-based Relay-assisted Networks (#1569275011)

Xiaoyu Qiao (Beijing Jiaotong University, CN); Zhen-hui Tan (Beijing Jiaotong University, CN); Shaoyi Xu (Beijing Jiaotong University, CN); Jiajun Li (Beijing Jiaotong University, CN)

Performance Analysis of the Cognitive Cooperative Scheme Based on Cognitive Relays

(#1569275023)

Shengnan Yan (Beijing University of Posts and Telecommunications, CN); Xiaoxiang Wang (Beijing University of Posts and Telecommunications, CN); Hongtao Zhang (Beijing University of Posts and Telecommunications, CN)

15.20 – 15.40

Coffee Break

15.40 – 17.10

Session IV: Spectrum Sensing Techniques

Spectrum Sensing Approach Based on Optimal Stochastic Resonance Technique under Color Noise Background in Cognitive Radio Networks (#1569271553)

Di He (Shanghai Jiao Tong University, CN); Chen He (Shanghai Jiao Tong University, CN); Lingge Jiang (Shanghai Jiao Tong University, CN); Yingpei Lin (Shanghai Jiao Tong University, CN)

A Cyclostationary-Based Spectrum Sensing Method Using Stochastic Resonance in Cognitive Radio (#1569271925)

Yingpei Lin (Shanghai Jiao Tong University, CN); Chen He (Shanghai Jiao Tong University, CN); Lingge Jiang (Shanghai Jiao Tong University, CN); Di He (Shanghai Jiao Tong University, CN)

Cooperative Spectrum Sensing for Multiband under Noise Uncertainty in Cognitive Radio Networks (#1569274847)

Zhaoxia Song (Beijing University of Posts and Telecommunications, CN); Xuan Sun (Beijing University of Posts and Telecommunications, CN); Zhichao Qin (Beijing University of Posts and Telecommunications, CN); Zheng Zhou (Beijing University of Posts and Telecommunications, CN)

A Robust and Efficient Cooperative Spectrum Sensing Scheme in Cognitive Radio Networks

(#1569265991)

Feng Gao (Huazhong University of Science and Technology, CN); Wei Yuan (Huazhong University of Science and Technology, CN); Wei Liu (Huazhong University of Science and Technology, CN); Wenqing Cheng (Huazhong University of Science and Technology, CN); Shu Wang (Huazhong University of Science and Technology, CN)

17.00 – 17.10

Concluding Remarks