
**2006 IEEE INTERNATIONAL CONFERENCE
on ELECTRO/INFORMATION TECHNOLOGY**

**May 7-10, 2006, Kellogg Center, Michigan State University
East Lansing, Michigan, U.S.A.**

<http://www.eit2006.org>

Technical Program

Sunday, May 7, 2006

3:00pm – 6:00PM – Registration (Lincoln Room Lobby)

5:30pm - 7:00pm – Reception (Lincoln Room)

Monday, May 8, 2006

7:00am – 8:00am – Continental Breakfast – (Big Ten Room B)

8:00am - 9:45am – Opening Session (Big Ten Room B)

Opening Remarks – Conference Chairs

Welcoming Remarks – Provost Kim Wilcox, Michigan State University

Keynote Address – “Computation with Information Described in Natural Language – The Concept of Generalized-Constraint-Based Computation”
Lotfi Zadeh, *University of California – Berkeley*

9:45am-10:00am – Coffee Break (Spartan Room)

Monday, 10:00am - 12:00pm

10:00am – 12:00pm – Corniche Room

Workshop I: Enabling Technologies of Hybrid Electric Vehicles

Presenter: Prof. Chris Mi

Session 1A - Wireless Ad Hoc Networks: I - Chair: Prof. Hayder Radha - (Michigamme Room)

10:00am Developing Active Sensor Networks with Micro Mobile Robots
Weihua Sheng and Girma Tewelde, *Kettering University*

10:20am A Fair Capacity Distribution Framework for Wireless Networks with Contention-based Medium Access
Nagendra Singh and Subir Biswas, *Michigan State University*

10:40am Experiment and Analysis on the Comparison of the IEEE 802.11a and IEEE 802.11g Wireless Local Area Networks
Haimwa Al-Khusaibi, Fadiya Al-Wardi, Firas Sawalha and Weidong Xiang, *University of Michigan*

11:00am An Evaluation of High-Speed Handoffs in 802.11-Based Data Networks
Raymond A. Hansen and Anthony H. Smith, *Purdue University*

- 11:20am Using the Global Positioning System (GPS) to add Intelligence to Wireless Handover in WLAN
Xola Kumbuza, Neco Ventura, *University of Cape Town, South Africa*
- 11:40am On a Novel Predictive Closed Loop Power Control for DS-CDMA Systems
Po-Hao Chang, Yi-Cheng Hor and Jun-Ren Chen, *National Dong Hwa University, Taiwan*

Session 1B - Digital Signal Processing – Chair: Prof. Selin Aviyente – (Conference Room 61)

- 10:00am Frequency Analysis of Time-Varying Systems
Nima Bayan and Shervin Erfani, *University of Windsor, Canada*
- 10:20am A Decision-Aided Carrier Recovery Method with the New Low Complexity MMSE Algorithm
Dah-Chung Chang and Wei-Tsen Lin, *National Central University, Taiwan*
- 10:40am Source Separation in the Time-Frequency Domain by Maximizing an Information-Theoretic Criterion
Zeyong Shan and Selin Aviyente, *Michigan State University*
- 11:00am Distributed Modeling of the Solution Selection and Its Cooperative Agents
Cai Zhiming and Guo Xiaoyi, *Macao University of Science and Technology, Macao*
- 11:20am Principles of Operation and Statistical Modeling of Remote Wireless SAW Sensing with Differential Phase Measurement
Yuriy S. Shmaliy, *Guianajuato University, Mexico*
- 11:40am A Direct Path Interference Cancellation Approach to Passive Radar Based on FM Radio Transmitter
Zhu Jiabing, Tao Liang and Hong Yi, *East China Research Institute of Electronic Engineering, China*

Session 1C - Biomedical Computation – Chair: Prof. Rama Mukkamala – (Conference Room 62)

- 10:00am Applications of Fuzzy and Neuro-Fuzzy in Biomedical Health Sciences
Rahul Ranjan, Anuj Awasthi, Neelesh Aggarawal and Jagdeep Gulati, *Wayne State University*
- 10:20am Evaluation of Angular Spectrum Approach for Simulations of Spherically Focused Ultrasound Phased Arrays
Xiaozheng Zeng, James F. Kelly and Robert J. McGough, *Michigan State University*
- 10:40am A Technique to Reduce Information Loss in PPG Pulse Waveform Refining Process
Jianfeng Weng and Zhiqian Ye, *Zhejiang University of Science and Technology, China*
- 11:00am A Comparison of Pressure Calculation Methods That Subtract Nearfield From Analytical Expressions Developed for Triangular Apertures
Duo Chen, Shanker Balasubramaniam and Robert J. McGough, *Michigan State University*
- 11:20am A Recurrent Neural Network Based Automated Seizure Detection System Using Intracranial EEG Recordings
C. Eswaran, V. Srinivasan and N. Sriraam, *Multimedia University, Malaysia*

12:00pm - 1:30pm –Lunch (Big Ten Room C)

Luncheon Address: - “The Promise of Nanotechnology - A Biased View”
Michael E. Mackay, *Michigan State University*

1:30pm – 5:00pm – Corniche Room
Workshop II: Project Management
Presenter: Dr. Tarek Lahdhiri

Monday, 1:30pm - 3:30pm

Session 2A - Power Systems – Prof. Heung-Geun Kim – (Michigamme Room)

- 1:30pm 3-DOF Planar Induction Motor
Peter Dittrich and Daniel Radeck, *University of Applied Sciences - Jena, Germany*
- 1:50pm Fuzzy Logic for Harmonic Distortion Diagnosis in Power Systems
Bryan R. Klingenberg and Paulo F. Ribeiro, *Calvin College*
- 2:10pm Measuring the Capacitance of Electrical Wiring and Humans for Proximity sensing with Existing Electrical Infrastructure
William Buller and Brian Wilson, *Altarum Institute, Michigan*
- 2:30pm Fault Types and Mitigation Techniques of PMAC Machines
John D. Neely and Elias G. Strangas, *Michigan State University*
- 2:50pm On-Chip Compensated Error Amplifier for Fast Transient DC-DC Converters
Hong-Wei Huang, Hsin-Hsin Ho, Chia-Jung Chang, Ke-Horng Chen and Sy-Yen Kuo, *National Chiao Tung University, Taiwan*
- 3:10pm A Step Voltage Response Method for Identification of Induction Motor Parameters at Stand Still
C. Belloc, H. Zhang, Y. Vagapov, and P. Moreno, *North East Wales Institute of Higher Education, United Kingdom*

Session 2B - Reconfigurable and Embedded Systems – Prof. Nihar Mahapatra – (Conference Room 61)

- 1:30pm First Failure Data Capture in Embedded System
Hai Tao Sun, *IBM Corporation*
- 1:50pm Hardware-Software Co-Design of a Fingerprint Matcher on Card
Mariano Fons, Francisco Fons, Enrique Cantó, *Rovira i Virgili University (URV), Spain*
- 2:10pm A New Technique to Exploit Instruction-level Parallelism for Reducing Microprocessor Power Consumption
Ziad Youssfi and Michael Shanblatt, *Michigan State University*
- 2:30pm Reconfigurable Factory-Wide Resource-Based System Integration for Control
H. Wijayah, K. Sukerkar, S. Gala, N. Arora, J. Moyne, D. Tilbury, and J. Luntz, *University of Michigan*
- 2:50pm Importance of Architecture Knowledge and Algorithm Redesign for Efficient DSP Programming
Archana Kalyansundar and Rita Chattopadhyay, *Siemens, India*

Session 2C - Antennas and Propagation I – Chair: Prof. Leo Kempel – (Conference Room 62)

- 1:30pm Radio Frequency Interference Mitigation via Null Steering for the Multipath Limiting Antenna in Local Area Augmentation Systems
Mohammad S. Sharawi and Daniel N. Aloï, *Oakland University*
- 1:50pm Monopulse-Doppler Radar Front-End Concept for Automotive Applications Based on RF MEMS Technology
Koen van Caekenberghe and Kamal Sarabandi, *University of Michigan*

- 2:10pm A Five-Way Phase-Shifting Power Divider for Antenna Beam Steering Application
Myron D. Fanton and Thomas Wong, *Andrew Corporation, Illinois*
- 2:30pm Active Mode Locking: Quantum Oscillator vs Classical Coupled Oscillators
Wei Li, Gen-Xiang Chen, Xun Li and Wei-Ping Huang, *University of Wisconsin*
- 2:50pm Analysis of Three-Dimensional Dielectric Scatterer with Solenoidal Basis Functions and Iterative Solvers
Z. H. Fan, R. S. Chen, D. X. Wang and Edward K. N. Yung, *Naijing University of Science and Technology, China*
- 1:30 pm **Poster Session I - 2D – (Riverside Café)**
- Offshore Outsourcing Fuels Greater Need for Building Innovation Capacity
Anu Gokhale and Mark Comerford, *Illinois State University*
- Disaster Recovery Cost Model for Information Technology
Alex George and Subramaniam Ganesan, *Oakland University*
- Application of Agent-Based Framework for Mass-Customization Oriented Market Modeling
Ryan A. Foster and Zbigniew J. Pasek, *University of Michigan*
- Semantic Interoperability for High Level Information Fusion in Automotive Production Networks
Alexander V. Smirnov, Nikolay Shilov, Tatiana Levashova and Alexey M. Kashevnik, *Russian Academy of Sciences, Russia*
- Adaptive Component Paradigm for Highly Configurable Business Components
Berhane Zewdie and C. R. Carlson, *Illinois Institute of Technology*
- Robust Real-Time Applications in Timber
Per Lindgren, Johan Nordlander and Joakim Eriksson, *Lulea University of Technology*
- IPTV STB Software Update Scheme Based on SNMP
Qing Wang, Qiang Du and Guohui Lin, *IBM China Research Laboratory, China*
- Numerical Study of 16 Element Radiation Units Supplemented by Additional 16 Beam Steering Units for 32 Element Phased-Array Antenna
Chinmoy Das Gupta, *Indian Institute of Technology Kanpur, India*
- FPGA Based Reconfigurable Platform for Complex Image Processing
Manish Kumar Birla, *Siemens Corporate Technology, India*
- Authentication Authorization And Accounting (AAA) Schemes in WiMAX
Sasan Adibi, Bin Lin, Pin Han Ho, G. B. Agnew and Shervin Erfani, *University of Waterloo, Canada*
- Object Recognition for Orange Construction Barrels Using Color Segmentation
Robert T. McKeon, *University of Detroit Mercy*

3:30pm - 3:45pm – Coffee Break (Spartan Room)

Monday, 3:45pm - 5:45pm

Wireless Ad Hoc Networks: II - 3A – Chair: Prof. Subir Biswas – (Michigamme Room)

- 3:30pm Maximizing the Lifetime of Two-Tiered Sensor Networks
Ataul Bari, Arunita Jaekel and Subir Bandyopadhyay, *University of Windsor, Canada*

- 3:50pm IEEE 1451 Standard and Wireless Sensor Networks: An Overview of Fault Tolerant Algorithms
Shubha Kher, Jinran Chen and Arun K. Somani, *Iowa State University*
- 4:10pm RQoS: a Robust Quality of Service Routing Algorithm for Wireless Mobile Ad Hoc Networks
Moussa Ayyash, Donald Ucci, Khaled Alzoubi and Roshan Tandukar, *Illinois Institute of Technology*
- 4:30pm Using Wireless Sensor Networks for Fire Rescue Applications: Requirements and Challenges
Kewei Sha, Weisong Shi and Orlando Watkins, *Wayne State University*
- 4:50pm An Energy-Efficient Node for Wireless Sensor Networks Using Software Radio
Jie Shen, Xiaobing Yuan, Daoyuan Yao, Kui Ma, Zhuo Chen and Haitao Liu, *Chinese Academy of Science, Shanghai*
- 5:10pm Cluster-based Power Efficient Time Synchronization in Wireless Sensor Networks
Shao-Long Dong and Tao Xing, *Chinese Academy of Science, China*

Applications in Software Engineering: I - 3B – Chair: Prof. Narayan Debnath – (Conference Room 61)

- 3:30pm STORM: Software Tool for the Organization of Requirements Modeling
Sergiu Dascalu, Eric Fritzing, Narayan Debnath, Olusegun Akinwale, *University of Nevada*
- 3:50pm Reusing OE-Scheduler in Aperiodic Environments
Haesun K. Lee and Ilhyun Lee, *The University of Texas of The Permian Basin*
- 4:10pm Automated Testing Design and Description for Certain Functions
Narayan C. Debnath and Jesse R. Haakenson, *Winona State University*
- 4:30pm Functional Approach for the Architecture Design of a Payroll System
Wenyong Feng and El Amine Slaoui, *Trent University, Canada*
- 4:50pm A New Project Control Model as underlying Support for the Balanced Scorecard Formalization
N. Debnath, L. Baigorria, G. Montejano, R. Uzal and D. Riesco, *Universidad Nacional de San Luis, Argentina*
- 5:10pm Software Project Leadership: Elements to Redefine Risk Management Scope and Meaning
N. C. Debnath, R. Uzal, G. Montejano and D. Riesco, *Universidad Nacional de san Luis, Argentina*

Electronic Design Automation - 3C – Chair: Prof. Shantanu Chakrabarty – (Conference Room 62)

- 3:30pm Analog Circuit Design with Linearized DC Biasing
Reza Hashemian, *Northern Illinois University*
- 3:50pm Algorithms for Budget Management with Gate-Sizing and Other Low Power Applications
Kevin Banovic and Harb Abdulhamid, *University of Windsor, Canada*
- 4:10pm Latch Based Interconnect Pipelining For High Speed Integrated Circuits
Jingye Xu and Masud H. Chowdhury, *University of Illinois at Chicago*
- 4:30pm A System-level Network-on-Chip Simulation Framework with Analytical Interconnecting Wire Models
Jinwen Xi and Peixin Zhong, *Michigan State University*
- 5:10pm Introducing RapidHDL: A New Library to Design FPGA Hardware in Microsoft .Net and Automatically Generate Verilog Netlists
Jacob N. Allen, Hoda S. Abdel-Aty-Zohdy, Robert L. Ewing, *Oakland University*

6:30pm - 9:00pm – Cocktails and Banquet (Lincoln Room)

Tuesday, May 9, 2006

7:30am – 8:00am – Continental Breakfast – (Big Ten B)

8:00am - 9:30am – Keynote Address (Auditorium)

“An Overview of IT Security in Forensics”

Manu Malek, *Stevens Institute of Technology*

9:30am - 10:00am – Coffee Break (Spartan Room)

10:00am – 5:00pm – Corniche Room

Workshop III: Leadership Skills

Presenter: Don C. Bramlett

Tuesday, 10:00am - 12:00pm

Wireless System Design: I - 4A – Chair: Prof. Tongtong Li – (Michigamme Room)

- 10:00am 11 Mbps CCK - Modulated 802.11b Wi-Fi: Spectral Signature and Interference
Ayham Z. Al-Banna, Tae Ri Lee, Joseph L. LoCicero and Donald R. Ucci, *Illinois Institute of Technology*
- 10:20am A Topology-Aware Routing Protocol for the MANET with Multiple Sinks
Huahui Wang, Zhiwei Cen, Tongtong Li, and Matt Mutka, *Michigan State University*
- 10:40am Analysis and Compensation of Channel Correction in Pilot-Aided OFDM Systems with Symbol Timing Offset
Dah-Chung Chang, *National Central University, Taiwan*
- 11:00am Design of an OFDM System with Long Frame by the Decision-Aided Channel Tracking Technique
Zong-Sian Lin, Tze-Lun Hong and Dah-Chung Chang, *National Central University, Taiwan*
- 11:20am Intercarrier Interference Suppression for OFDM System in Time-Varying and Frequency Selective Fading Channel
Qing-Yi Quan and Jung-Gon Kim, *Beijing University of Posts and Telecommunications, China*

Image Processing - 4B – Chair: Prof. Selin Aviyente – (Conference Room 61)

- 10:00am PDE-Based Smoothing for 3D Mesh Quality Improvement
Ying Zhang and A. Ben Hamza, *Concordia University, Canada*
- 10:20am SAR Image Compression Using an Adaptive Algorithm in the Wavelet Domain
Yixin Chen, Ezzatollah Salari and Jianming Wei, *University of Toledo*
- 10:40am Differential Histogram Equalization Based Image Simplification
Yi-Ta Wu, Frank Y. Shih and Yih-Tyng Wu, *University of Michigan*
- 11:00am A New Method for Iris Recognition Using Gray-Level Concurrence Matrix
A. T. Zaim, M. K. Quweider, J. R. Iglesias, and R. Tang, *University of Texas – Brownsville*
- 11:20am RISE: A Robust Image Search Engine
Debangshu Goswami and Sanjiv K. Bhatia, *University of Missouri - St. Louis*

11:40am Integrating Temporal Streams of Image Classifications Using Evidential Reasoning for Smart Airbag Applications
Michael Farmer

Applications in Software Engineering: II - 4C – Chair: Prof. Peixin Zhong – (Conference Room 62)

- 10:00am Modeling the Reliability of Existing Software Using Static Analysis
Walter W. Schilling, Jr., and Mansoor Alam, *The University of Toledo*
- 10:20am Analysis of Service-Oriented Architectures with Sensitivity Analysis
Xiaobu Yuan, Shangwei Duan, Tony Huang, *University of Windsor, Canada*
- 10:40am Effective Test Driven Development for Embedded Software
Michael J. Karlesky, William I. Bereza and Carl B. Erickson, *Atomic Object LLC, Michigan*
- 11:00am Patterns and Tools for Performance Testing
Nenad Stankovic, *Dedra P/L, Australia*
- 11:20am An Overview of the Current State of Software Engineering in Embedded Automotive Electronics
Bob Gruszczynski, *IAV Automotive Engineering, Inc.*
- 11:40am A Semantic Part Generated Java Statement from a CafeOBJ Specification
C. Doungsa-ard and T. Suwannasart, *Chiangmai University and Chulalongkorn University, Thailand*

12:00pm - 1:30pm – Lunch (Big Ten Room C)

Luncheon Address: - “The Protection and Technology Transfer Management of Electro/Information Intellectual Properties”
Mr. Howard B. Rockman, *Attorney, Intellectual Property and Technology*
. *Sachnoff and Weaver Ltd. Chicago, IL*

Tuesday, 1:30pm - 3:30pm

Biomedical Image Processing - 5A – Chair: Prof. Robert McGough – (Michigamme Room)

- 1:30pm Hippocampus Shape and Texture Analysis for Temporal Lobe Epilepsy
Kourosh Jafari-Khouzani, Hamid Soltanian-Zadeh and Kost Elisevich, *Wayne State University*
- 1:50pm Reconfigurable Technology-Based HIV Testing System
Ali El Kateeb and Peter Law, *University of Michigan*
- 2:10pm Model-Based 3-D Reconstructions for the Structural Biology of Viruses Exhibiting Incompatible Symmetries
Cory J. Prust, Peter C. Doerschuk and John E. Johnson, *Purdue University*
- 2:30pm Automated Motion Compensation for PET/CT Cardiac Registration and Accurate Attenuation Correction
Khawar Khurshid, Robert McGough and Kevin Berger, *Michigan State University*

Hardware System Design - 5B – Chair: Prof. Andrew Mason – (Conference Room 61)

- 1:30pm Performance Evaluation of Flagged Prefix Adders for Constant Addition
Vibhuti Dave, Erdal Oruklu, and Jafar Saniie, *Illinois Institute of Technology*
- 1:50pm Residue-to-Binary Converters for High-Speed Digital Signal Processing
Chin-Long Wey, *National Central University, Taiwan*

- 2:10pm Efficient Implementation of Interpolation Technique for Symbol Timing Recovery in DVB-T Transceiver Design
Muh-Tian Shiue and Chin-Long Wey, *National Central University, Taiwan*
- 2:30pm Hybrid Sample Rate Converter with 110dB SNR and 1/10 Less Logic Gates
Manabu Inoue, Fuminori Kobayashi, and Minoru Watanabe, *Kyushu Institute of Technology, Japan*
- 2:50pm Reversible Design of A Novel Carry Look Ahead BCD Adder And BCD-to-Excess-3 Code Converter
Himanshu Thapliya, *International Institute of Information Technology, India*

Cyber Security I - 5C – Chair: Prof. Li Xiao – (Conference Room 62)

- 1:30pm FPGA Implementation of Tiger Hash Function
Guoping Wang, *Indiana University*
- 1:50pm A Robust High-Capacity Watermarking Algorithm
Yi-Ta Wu, Frank Y. Shih and Yih-Tyng Wu, *University of Michigan*
- 2:10pm Efficient Secure Information Exchange - A Security Quantification Approach
Vilas Rao Perka, Piyush Mishra, *Michigan Technological University*
- 2:30pm Buffer-Overflow Protection: The Theory
Krek Piromsopa and Richard J. Enbody, *Michigan State University*
- 2:50pm The Design of Network Intrusion Detection System Based on Pattern Matching
Chun-yue Zhou, Hong-ke Zhang, and Yun Liu, *Beijing JiaoTong University, China*

Poster Session II - 5D – (Riverside Café)

- 1:30pm- Linear Reoriented Coordinates Method
Eduardo I. Ortiz-Rivera and Fang Z. Peng, *Michigan State University*
- On Performance of Beamforming and Diversity in Precoding MIMO System
Li Yonghua, Yang Bin, Yang Liguang He Zhiqiang, Niu Kai, and Wu Weiling, *Beijing University of Posts and Telecommunications, China*
- The Localization of Wireless Sensor Network Nodes Based on DSSS
Yaoxian Fu, Haitao Liu, Jiang Qin, Tao Xing, *Chinese Academy of Science, Shanghai*
- Multiple Ports Remote Debugger Server
Hai Tao Sun, *IBM Corporation*
- A New Discrete Wavelet Transform Architecture with Minimum Resource Requirements
Alireza Aminlou, Hossein Badakhshannoory, M.R. Hashemi, and Omid Fatemi, *University of Tehran, Iran*
- Position Estimation of Mobile Robots for Localization Using an Improved Computational Algorithm
Joe W. Yeol, *Columbia University*
- Simulation of Wind Heat Generator
M. Katawaluwa, H. Zhang, Y. Vagapov, J. Evans, *North East Wales Institute of Higher Education, United Kingdom*
- Exploiting the Effects of Human Hands on the Radiation Characteristics for the Implementation of Self-Adaptive Feed Circuit of Offset-Fed Slot Antennas in Parallel for the Reception of Digital Terrestrial TV Broadcasting
Muhammad Sajjadur Rahim and Tadahiko Maeda, *Ritsumeikan University, Japan*

A Fast-Acquisition CMOS Phase/Frequency Detector
Roger Yubtzuan Chen, Hong-Yu Huang, Chia-Long Hung, *National Yunlin University of Science and Technology, Taiwan*

Steganography Using the Fourier Transform and Zero-Padding Aliasing Properties
Robert T. McKeon, *University of Detroit Mercy*

Arterial Alterations with Age - A Non Invasive Study of Carotid Artery Using Ultrasound Images
K. B. Jayanthi and R. S. D. Wahida Banu, *K. S. Rangasamy College of Technology, Tiruchengode*

3:30pm - 3:45pm – Coffee Break (Spartan Room)

Tuesday, 3:45pm - 5:45pm

MEMS and Nano Technology - 6A – Chair: Prof. Terence Brown – (Michigamme Room)

- 3:45pm A Portal Concept for the Integration and Fusion of Distributed Knowledge in the Nanotechnology
Alexander Holland and Madjid Fathi, *University of Siegen, Germany*
- 4:05pm A MEMS Sonoluminescent Ultrasonic Sensor
Andrew Tam, Sazzadur Chowdhury, *University of Windsor, Canada*
- 4:25pm Analog Behavioral Modeling of Electrical and Microelectromechanical Systems
Rafik S. Guindi, *Cairo University, Egypt*
- 4:45pm 3-Axis Ultracompact Low Voltage Linear Accelerometer with Analog Outputs, One Multiplexed Output, 3x5x1 mm LGA Package
Francesco Dalena, *STMicroelectronics, Italy*

Multimedia - 6B – Chair: Prof. Pradeep Ramuhalli – (Conference Room 61)

- 3:45pm An Error-Resilient Image Coding and Packetization Scheme for Packet-Switched Networks
Jianming Wei and Ezzatollah Salari, *University of Toledo*
- 4:05pm Embedding Multi-Bit Message in the Joint Time-Frequency Domain
Mahmood Al-khassaweneh and Selin Aviyente, *Michigan State University*
- 4:25pm A Video Content Management System for Contents Download Services
Mei Kodama, *Hiroshima University, Japan*
- 4:45pm Constructing and Application of Adaptive Spline Wavelet Filter Coefficients in Image Edge Detection
Guangyu Zhang, Guangzhen Gong and Weile Shu, *University of Electronic Science and Technology of China*

Antennas and Propagation II - 6C – Chair: Prof. Shanker Balasubramaniam – (Conference Room 62)

- 3:45pm Low Profile Microstrip Yagi Dipole Antenna for Wireless Communications in the 5 GHz Band
Mazen Alsliety and Daniel Aloï, *Oakland University*
- 4:05pm Low-Cost, High Resolution X-Band Laboratory Radar System for Synthetic Aperture Radar Applications
Gregory L. Charvat and Leo C. Kempel, *Michigan State University*
- 4:25pm Fan-Beam Cassegrain Antenna Fed by a 4-Element Binomial Array
Chinmoy Das Gupta, *Northern Malaysia University, Malaysia*

4:45pm A Broad Band Stepped Probe Capacitively Coupled Microstrip Patch for Surveillance Radar Application
T. Balakrishnan, S. Sai Gunaranjan, A. Vengadarajan and Bhaskar Gupta, *Centre for Airborne Systems, Defence Research & Development Organisation, India*

5:05pm Printed Dual Band WLAN Antenna
R. D'Souza and R. K. Gupta, St. Francis Institute of Technology, India

Wednesday, May 10, 2006 – 8:30am – 10:30 am

7:30am – 8:30am – Continental Breakfast – (Spartan Room)

Signal Processing Applications - 7A – Chair: Prof. Hossein Mousavinezhad – (Michigamme Room)

- 8:30am Seal Recognition Using the Shape Selection Algorithm
Yuan-Fei Cheng, *Meiho Institute of Technology, Taiwan*
- 8:50am A Novel Post-Processing Method for Reducing Blocking Artifacts in Block-Coded Images
Yuhong Zhang and Ezzatollah Salari, *University of Toledo*
- 9:10am A Modified FFT Algorithm for Efficient Computation of Narrow Band Spectrum
S. Majumdar, S. Ramakrishnan, N.V. Nair, S. C. Chan, R. Clifford, and S. S. Udpa, *Michigan State University*
- 9:30am Object Detection Using General Landmark Regions
Ali Mustafa and Ishwar K. Sethi, *Oakland University*
- 9:50am LS-SVM Based Software Sensor for Fed-Batch Yeast Fermentation and Comparative Studies
H. Zhang and Y. Vagapov, *North East Wales Institute of Higher Education, United Kingdom*
- 10:10am Real Time Efficient Parallel Thermal and Visual Face Recognition Fusion
Usman Ali, Jahanzeb Ahmad Taj, Talib Hussain and Mazhar Hussain, *COMSATS Institute of Information Technology, Pakistan*

Cyber Security II - 7B – Chair: Prof. Jian Ren – (Conference Room 61)

- 8:30am An Efficient Implementation of SHA-1 Hash Function
Guoping Wang, *Indiana University*
- 8:50am Arbitrary Copy: Bypassing Buffer-Overflow Protections
Kerk Piromsopa and Richard J. Enbody, *Michigan State University*
- 9:10am IRC XDCC - Red Alert for University Administrators
Munjal Patel, *Lake Superior State University*
- 9:30am Secure Remote Electronic Voting
David Foster, Laura Stapleton and Huirong Fu, *Oakland University*
- 9:50am Personal Identification System Using Hand Geometry and Iris Pattern Fusion
Nongluk Covavisaruch and Pipat Prateepamornkul, *Chulalongkorn University, Thailand*

Antennas and Propagation III - 7C – Chair: Prof. Shanker Balasubramaniam – (Conference Room 62)

- 8:30am Effect of Spatial Fading Correlation on the SER Performance of MPSK with MRC for Circular Antenna Array
Jiejun Wang, Chao Huang, and Jie Zhou, *Najing University of Information and Science & Technology, China*
- 8:50am Side Lobe Reduction in Symmetric Dual-Reflector Antennas Using a Small Lens Antenna
S. Karimkashi and J. Rashed-Mohassel, *University of Tehran, Iran*
- 9:10am A New Algorithm for Scattering Calculation of Absorber Coated Objects
A. R. Mallahzadeh, J. Rashed-Mohassel, and M. Soleimani, *Iran University of Science and Technology, Iran*
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9:50am Spectral Ray Tracking: An Alternative Method for Guided Propagation Modeling
Elias Rachid, *Université Saint Joseph, Lebanon*

10:30am - 11:00am – Coffee (Spartan Room)

Wednesday, 11:00am - 1:00pm

Wireless System Design: II - 8A – Prof. Jian Ren – (Michigamme Room)

- 11:00am Prediction of seasonal trends in cellular dropped call probability
Bruce L. Cragin
- 11:20am On the Ranging Connectivity in the Cricket Localization System
Charles P. Gleason, Lance C. Pérez and Steve Goddard, *University of Nebraska – Lincoln*
- 11:40am Secure Routing in MANETs - A Comparative Study
Sasan Adibi, Shervin Erfani and Hani Harbi, *University of Waterloo, Canada*
- 12:00pm A Model of Interference in Frequency Hopping Wireless Multiple Access
Carlos F. Belaustegui Goitia, *SES Sistemas Electronicos S.A., Argentina*
- 12:20pm A New Boundary Location Register Signaling Protocol for Intersystem Roaming
Chiranjeev Kumar and Rajeev Tripathi, *Indian School of Mines, India*

Biomedical Devices - 8B – Chair: Prof. Karim Oweiss – (Conference Room 61)

- 11:00am Sector-Vortex Scanning for Hyperthermia with a Large Square Ultrasound Phased Array Aperture
Liyong Wu, Duo Chen, Xiaozheng Zeng and Robert J. McGough, *Michigan State University*
- 11:20am B-Spline vs. Lifting Architecture for Neuroprosthetic Devices
Kyle E. Thomson, Theo Shlien, Yasir Suhail, Karim G. Oweiss and Andrew Mason, *Michigan State University*
- 11:40am A Robotic System for Hyperthermia Treatments of Chest Wall Recurrence: Preliminary Simulation Results
Ruihua Ding and Robert J. McGough, *Michigan State University*
- 12:00pm An Improved Method of Symmetrically Restraining DC Offset for ON-Chip Neural Recordings
Zihong Liu, Zhihu Wang and Chun Zhang, *Tsinghua University, China*
-