

ISMA'09 Conference Program

Monday, March 23, 2009	
9:00 – 12:00	Tutorial A: Contemporary Wireless Transceiver System Presenter: Lutfi Albasha
12:00 – 13:00	Lunch
13:00 – 16:00	Tutorial B: Wireless Sensor Networks Presenter: Fahed H. Awad
16:15 – 18:15	Tutorial C: Experimental Haptics and Robotics Presenter: Oussama Khatib

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Tuesday, March 24, 2009		
9:00 am – 9:30 am	Opening Ceremonies (Main Hall A) Dr. Peter Heath, Chancellor, American University of Sharjah Mohammad-Amin Jarrah, ISMA General Chair Yousef Bastaki, emal	
9:30 am – 10:30 am	Keynote Address-1 (Main Hall A): Human Centered Robotics Professor Oussama Khatib, Stanford University	
10:30 am – 11:30 am	Coffee Break & Students Poster Competition Session	
11:30 am – 1:10 pm	Technical Session 1-A Session Chair: Mohd Ashraf Ahmad	Technical Session 1-B Session Chair: Hassan Nashash
11:30 am – 11:50 am	A Distributed and Scalable Person Tracking System for Robotic Visual Servoing with 8 DOF in Virtual Reality TV Studio Automation. Suraj Nair, Giorgio Panin, Thorsten Roeder, Thomas Friedlhuber, Alois Knoll	Experimental Study of Human Hand-arm Model Response. Azizan As'arry, Mohd Zarhamdy Md Zain, Mohamed Hussein, Musa Mailah, Mohd Yunus Abdullah
11:50 am – 12:10 pm	Utilization of a Mobile Manipulator for Automating the complete Sample Management in a Biotech Laboratory. A real world application for Service Robotics. Martin Wojtczyk, Alois Knol	Deconvolution for uncertain systems. Abdelhani Boukrouche, Soraya Zenati
12:10 pm – 12:30 pm	Techniques of Vibration and End-point Trajectory Control of Flexible Manipulator. Mohd Ashraf Ahmad, Zaharuddin Mohamed	Improving Face Recognition Using Combination of Global and Local Features Nor'aini Abdul Jalil Raveendran Paramesran
12:30 pm – 12:50 pm	Techniques of Vibration Feedback Control of a Flexible Robot Manipulator. Mohd Ashraf Ahmad, Ahmad Nor Kasruddin Nasir, Najidah Hambali	Development of an Automatic and Mobile X-ray Robot Mathieu Cynober, Yukio Saito, Nicolas Chaillet
12:50 pm – 1:10 pm		Design of an Integrated Wireless Transmitter for Biomedical Implants. Joud Odeh, Lubna Al-Yazji, Yousef Nazzal
1:10 pm – 2:10 pm	Lunch Break	

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14:10 – 16:50	Technical Session 2-A Session Chair: Nabil Aouf	Technical Session 2-B Session Chair: Ra'a Said
14:10 – 14:30	Robicle (Robotic Vehicle) as Mechatronics and Its Applications. Young-Jae Ryoo	K-12 Mechatronics Education In The UAE: Challenges And Promises. Ra'a Said
14:30 – 14:50	Robust Invariant Automatic Image Mosaicing and Super Resolution for UAV Mapping. Abdelkrim Nemra and Nabil Aouf	National and International Collaboration in Industrial Training Programs for Mechatronics Students. A. A. Maqrashi, A. O. Ojaily
14:50 – 15:10	Adaptive Integral Backstepping Controller for an Autonomous Rotorcraft. Younes Al-Younes, M.A Jarrah, and Salah Sukkarieh	Fast Tracking Nonlinear Hinf Control for Uncertain Flexible Joint Robots with Bounded Input Control Mohammad Akbari, Ghasem Alizadeh, Sohrab Khanmohammadi, Iraj Hassanzadeh,
15:10 – 15:30	Dynamic Cooperative Perception and Path Planning for Collision Avoidance. M. A Shah and Nabil Aouf	Control Strategy Based on Hardware-in-the-Loop for 3-phase Induction Motors. Ashraf I. Saleem, Tarek A. Tutunji, Rateb Issa
15:30 – 15:50	Guidance, Control and Trajectory Tracking of Small Fixed Wing Unmanned, Aerial, and Autonomous Vehicles (UAAV's) Amer Al-Radaideh, M.A. Jarrah, R. Dhaouadi	H2 Optimal Model Reduction Using Genetic Algorithms and Particle Swarm Optimization. Reem Salim, Maamar Bettayeb
15:50 – 16:10	Final Position and Trajectory Control of an Object on a Distributed Manipulation System. Ali Elahidoost, Mehdi Keshmiri	Intelligent Control of Overhead Gantry Cranes Aydin Yesildirek
16:10 – 16:30	Design of Augmented Extended Kalman Filter for Real Time Simulation of Mobile Robots Using Simulink Iraj Hassanzadeh, Mehdi Abedinpour Fallah	Realizable H _∞ Filtering for Descriptor Systems Magdi S. Mahmoud and Abdulla Ismail
16:30 -16:50	Determination of Machine Intelligence Quotients (MIQ) Gain of a Mechtronics System by Addition of Visual Guidance Tarik Ozkul	A New Approach for Control of Systems through High Traffic Communication Networks. Behrooz Rahmani, Amir Hosein Davaie-Markazi

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Wednesday, March 25, 2009		
9:00 am – 10:00 am	Keynote Address-2 (Main Hall A): Embedding Ethical Constraint into Robotic Systems Professor Ronald C. Arkin, Georgia Institute of Technology	
10:00 am – 10:30 am	Coffee Break	
10:30 am – 12:30 pm	Technical Session 3-A Session Chair: Mohammed Hassan	Technical Session 3-B Session Chair: Mohammad Younis
10:30 am – 10:50 am	Kinematics, Control and Redundancy Resolution of a 9-DoF Wheelchair-Mounted Robotic Arm System for ADL tasks. Redwan Alqasemi, Rajiv Dubey	Effect of Geometry on the Performance of MEMS Aluminum Nitride Trampoline Resonators in Longitudinal Resonance. Annie Ruimi, Robert M. McMeeking, Yueming Liang
10:50 am – 11:10 am	Scaled Telerobotic Control of a Manipulator in Real Time with Laser Assistance for ADL Tasks. Eduardo Veras, Karan Khokar, Redwan Alqasemi, Rajiv Dubey	Reconfigurable Patch Antenna By RF MEMS Switches AHM Zahirul Alam, Md. Rafiqul Islam
11:10 am – 11:30 am	HexBot: A Modular Self-Reconfigurable Robotic System. Hossein Sadjadi, Omid Mohareri, M. A. Jarrah, and Khaled Assaleh	The Static and Dynamic Behavior of MEMS Arches under Electrostatic Actuation. Mohammad Younis, Hassen Ouakad
11:30 am – 11:50 am	Motion Visualisation and Control of a Driving Simulator Motion Platform. Chiew Yeong Shiong, Mohamad Kasim Abdul Jalil, Mohamed Hussein	Controlling dynamics pull-in escape in electrostatic MEMS. Fadi Al Saleem, Mohammad Younis
11:50 am – 12:10 pm	Detection of Surviving Humans in Destructed Environments Using a Simulated Autonomous Robot Fahed Awad and Rufaida Shamroukh	Nonlinear Oscillation of a Carbon Nanotube Resonator Hawwa Mohammad
12:10 pm – 12:30 pm	Detection of Eye Blinks from EEG Signals for Home Lighting Systems Activation Wahidah Mansor, Mohd Shaifulrizal Abd Ghani	On Prediction of Friction Coefficient Using Artificial Neural Networks Ibrahim Deiab, and Awadh T Al Shammari
12:30 pm – 1:30 pm	Lunch Break	

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1:30 pm – 2:30 pm	Keynote Address-3 (Main Hall A): Compliance in Mechatronic Motion Systems Professor Kevin C. Craig , Marquette University	
2:30 pm – 3:00 pm	Coffee Break	
3:00 pm – 5:00 pm	Technical Session 4-A Session Chair: Mohamed Hussein	Technical Session 4-B Session Chair: Enrico Pagello
3:00 pm – 3:20 pm	Optimized and Iterative Wiener Filter for Image Restoration Abdul Majeed Al-Samarraie	Machine Automation Using RTK GPS Positioning. Ahmed El-Mowafy, Mustafa Al-Musawa
3:20 pm – 3:40 pm	System Identification Of Magneto-Rheological Damper Using Group Method Of Data Handling. Khaled Assaleh. Tamer Shanableh, and Yasmeen Abu-Kheil	Visual Odometry for an Omnidirectional-drive Robot. Alberto Pretto, Emanuele Menegatti, Masaki Takahashi, Takafumi Suzuki, Enrico Pagello
3:40 pm – 4:00 pm	Face Detection Based on Dimension Reduction using Probabilistic Neural Network and Genetic Algorithm Afsaneh Alavi Naini	A Graph-Coloring-Based Navigational Algorithm for Personnel Safety in Nuclear Applications. Mohammed Khasawneh, Mohammad Malkawi
4:00 pm – 4:20 pm	Real-Time Machine Controller Verification and Simulation using Control Signal Emulation Mohamed Hussein, Mohd Zarhamdy Md Zain, Robiah Ahmad, Mohd Yunus Abdullah	Quantitative Comparison between Kalman Filter and Particle Filter for Low Cost INS/GPS Integration. Jacques Georgy, Umar Iqbal, Aboelmagd Noureldin
4:20 pm – 4:40 pm	Dynamic Motion Planning for Autonomous Mobile Robot Using Fuzzy Potential Field Mohammad Jaradat, Eyad Feilat, Moh'd Garibeh	Intelligent System Identification of an Axis of Car Suspension System Using Real Data Dirman Hanafi, Mohd. Fuaad bin Rahmat, Zainal Abidin bin Ahmad
4:40 pm – 5:00 pm	Fast stereo matching using two stage color-based segmentation and dynamic programming Mohammadjavad Abdollahifard, Karim Faez, Mohammadreza Pourfard	Online Velocity Optimization of Robotic Swarm Flocking Using Particle Swarm Optimization (PSO) Method Ramin Vatankhah, Shahram Etemadi, Mohammad Honarvar, Aria Alasty, Mehrdad Boroushaki, G. R. Vossoughi,
7:00 pm	Gala Dinner (Radisson SAS, Corniche Sharjah)	

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Thursday, March 26, 2009		
9:30 – 11:10	Technical Session 5-A Session Chair: Saif Al-Hiddabi	Technical Session 5-B Session Chair: Fahed Awad
9:30 – 9:50	Kinematics and Workspace Analysis of 3 DOF Compliant Micro Parallel Robots Stan Sergiu-Dan, Milos Manic, Radu Balan, Maties Vistrian	Design of an Interactive Intelligent Whiteboard System Using Computer Vision Techniques Hossein Ebrahimpour, Meysam Tekiyehband
9:50 – 10:10	Morphology for Planar Hexagonal Modular Self-Reconfigurable Robotic Systems Hossein Sadjadi, M.A. Jarrah, and Khaled Assaleh	Radial Basis Function Network Based On Multi-Objective Particle Swarm Optimization Sultan Noman
10:10 – 10:30	Quadrotor Control Using Feedback Linearization with Dynamic Extension Saif Al-Hiddabi	Vibration Control of Vehicle Suspension System Using Adaptive Critic-Based Neurofuzzy Controller Ramin Vatankhah, Masoud Rahaeifard, Aria Alasty
10:30 – 10:50	Path Planning for A Mobile Robot Using Fuzzy Logic Controller Tuned By GA Iraj Hassanzadeh, Sevil M. Sadigh,	Implementing Ethernet In Computer Integrated Manufacturing System Hairulazwan Hashim, Herdawatie Abdul Kadir
10:50 – 11:10 am	Design and Simulation of an Artificially Conscious VANET for Solving Traffic Wave Phenomena Ali Ghazi and Tarik Ozkul	On Developing an ANN Based Cutting Force Model A. A. Khattab I.M. Deiab and H. El Kadi
11:10 – 11:30	Signature Verification System using Support Vector Machine Fauziyah Salehuddin	Increasing the Speed of Model-based Detection and Tracking through Wavelet Transform Mohammadreza Pourfard, Karim Faez, Mohammadjavad Abdollahifard
11:30 -11:50	Autonomous SPY©: Intelligent Web Proxy Caching Detection using Neurocomputing and Particle Swarm Optimization Sarina Sulaiman, Siti Mariyam Shamsuddin, Fadni Forkan	Optimization of the Active Contour Snaxels for Human Gait Tracking Mohammadjavad Abdollahifard, Karim Faez, Mohammadreza Pourfard
11:50 – 12:10	Coffee Break & Snacks	
12:10 – 13:30 pm	Panel Discussion & Closing Ceremony (Main Hall A)	
Safari Trip (3:00 pm)		