CONTENTS

VOLUME VI

COMPUTER, COMMUNICATION AND CONTROL TECHNOLOGIES: III

Applications of CCCT in Other Areas

Zeide, Boris (USA): "Biological Knowledge and Growth Equations: Computational Isomorphism"

Architectures and Re-Usable IP for Protocol and Physical Layer Processing - Invited Session
Organizer: Dionysis Reisis (Greece)

Andritsopoulos, F.; Mitsos, Y.; Charoupolous, C.; Doumenis, G.; Reisis, D. (Greece): "A Low-cost Classification Method for High-speed Network Processors"

Angelopoulos, J. *; Caenegem, T. V. **; Leligou, N. *; Linardakis, Ch. *; Ringoot, E. **; Stavdas, A. *; Zontos, S. * (* Greece, ** Belgium): "A GPON MAC controller adapting to varying number of active users, traffic volume and QoS"

Charopoulos, C.; Leligou, N.; Stassinopoulos, G.; Kornaros, G.; Orphanoudakis, Th. (Greece): "Programmable peak-rate Gigabit shaper supporting ATM and packet-oriented traffic"

Manolopoulos, Konstantinos E.; Nakos, Konstantinos G.; Reisis, Dionysios I.; Vlassopoulos, Nikolaos G. (Greece): "Reconfigurable Fast Fourier Transform Architecture for Orthogonal Frequency Division Multiplexing Systems"


Communication Systems

Alkhatib, Mazen (USA): "A New Enhanced 16 QAM Transceiver"

Chen, Chongyang; Chen, David Z. (USA): "Numerical simulations for dispersion-managed fiber on next generation transmission lines"
Computers: Teaching and Learning - Invited Session
Organizer: Elizabeth Hansen (USA)

Collins, Correy; Clark, Russell J. (USA): "Image Identification and Analysis of Dice Rolls"

Hansen, Elizabeth; Hansen, John; Rubin, Stuart H; Richardson, Carole (USA): "Modeling Cyber Attacks"


James, Scott; Hansen, John; Bidgoli, Moe; Richardson, Carole (USA): "Why We Have Trouble Deciding What to Teach in a Web Programming Class"


Computing Technologies

Hall, John M.; Frincke, Deborah A. (USA): "An Architecture for Instrucion Detection Modeled After the Human Immune System"


Computing, Communication and Control

Schmorrow, Dylan; Kelsey, Linda J. (USA): "WARCON: Operations Analysis Linked to M&S to Support the Warfighter and Acquisition Decision Maker"

Control Systems, Technologies and Applications

Azuma, Yohsuke; Kase, Wataru (Japan): "Robust Exact Model Matching Control for a Continuous-Time Plant"

Cázares-Rangel, Víctor M.; Macías-García, Manuel E. (Mexico): "A Development Tool for Microcontroller-Based Power Electronic Applications"
Juangjandee, Pipat; Wiriyasuttiwong, Watcharachai (Thailand): "An Expert System for Turbine Cycle Losses Reduction" 103


Oya, Hidetoshi; Hagino, Kojiro (Japan): "Robust Control with Adaptive Compensation Input for Linear Systems with Structured Uncertainties" 113

Park, Juchirl; Famouri, Parviz; Huang, Yue; Turton, Richard; Boyle, Edward J. (USA): "Bed Height Calculation and Solid Circulation Rate Estimate in Standpipe of CFB" 119

Rust, Carsten; Stappert, Friedhelm; Künneheimer, Rainer (Germany): "From Timed Petri Nets to Interrupt-Driven Embedded Control Software" 124

Developing of Seamless Technology for Worldwide Wireless Communication - Invited Session
Organizer: Nguyen Tran (Australia) 130

Evolution to Next Generation Networks - Architecture, Technologies and Applications - Invited Session
Organizer: Dong Sun (USA) 133

Kim, Bong Ho *; Houck, David J. *; Kim, Jae-Hyun **; Lee, Insup * (* USA, ** Korea (South)): "Performance Analysis of AAL2 switching/multiplexing in the Iub interface in UMTS Network"

Li, Yang; Man, Hong (USA): "A Class-Based Multipath Routing Scheme for Mobile Ad Hoc Networks"

Sun, Dong; Mukhopadhyay, Amit; Magee, Francis R. (USA): "All-IP Architectures in Next Generation Mobile Networks"

Sun, Dong; Mukhopadhyay, Amit; Magee, Francis R.; Zhao, Zhengxue (USA): "A Cost-Effective Architecture for 3G Wireless Network Evolution"
Human Interaction with Information Systems

Bordogna, Roberto (Italy): "Technology Based Diffused Knowledge Acquisition & Sharing. Constraints and Possibilities"

Das, Asesh; Belles, Robert; Rae, Michael (USA): "An Enquiry Into Ubiquitous Computing Architecture from Human Functioning Space"

Hybrid Applications

Cyran, Krzysztof A. (Poland): "PLD-based rough classifier of Fraunhofer diffraction patterns"

Seriu, Masafumi (Japan): "Comparing shapes-the spectral scheme and its application to cosmology."

Hybrid Systems, Dual Technologies, Cross-Fertilizing Research and Analogical

Hafskjold, Brita H. (Norway): "Optimal Control of Playoutbuffers"

Lee, Yang Weon (Korea (South)): "Application of Sequence Comparison Methods to Target Identification"

Ryou, Myung Seon; Kwon, Wook Hyun (Korea (South)): "A distributed Data Structure for Reflective Memory Networks"

Wang, Hao; Ito, Mabo R. (Canada): "Dynamics of Load-Sensitive Adaptive Routing for Computer Networks"

Xie, Guangming; Wang, Long (China): "Stabilization Of Switched Linear Systems via Constructing Switching Laws"

Image, Speech and Signal Computing

Kamal Omar, Mohamed; Hasegawa-Johnson, Mark (USA): "Non-Linear Independent Component Analysis for Speech Recognition"

Information Systems

Flores, Juan J.; González, Federico; Flores, Beatriz (Mexico): "Greedy Determination of Investment Options"
Ibatoulline, Emir A. (Russian Federation): "Solution of One-Dimensional Signal and Interference Classes by Iterative Method of Maximum Likelihood"  

Kang, Changjun; Chen, Chunhong (Canada): "A High-Level Optimization Scheme for Low Power Clock Design"  

Zhou, Kaiyu; Yeung, Kwan L.; Li, Victor O. K. (Hong Kong): "Nonlinear RED: A Simple Yet Efficient AQM Scheme"  

Information Systems and Education

Alaghehbandian, Ali; Zhu, Ping; Abe, Masato; Kiyono, Junji (Japan): "Developing an Internet Oriented Platform for Earthquake Engineering Application and Web-based Virtual Reality Simulation System for Seismic hazards: Towards Disaster Mitigation in Metropolises"  

Computers: Teaching and Learning - Invited Session  
Organizer: Elizabeth Hansen (USA)

Rubin, Stuart H.; Lee, Gordon K. (USA): "5th Generation Programming"  

Mobile / Wireless Communications


Jorgenson, Joel; Kakumanu, Divyata; Simetkosky, Tristan; Thurow, Brad; Morlock, Brian; Mamun, Abdulllah; Glower, Jacob; Thomas, Conrad; Schnitz, Mike (USA): "Development of a Sensor System with Adaptable Communication Schemes"  

Nait-Abdesselam, Farid; Bouhafs, Fayçal (France): "MPEG-4 Video Transmission over IEEE 802.11 Wireless Networks"  

Models and Algorithms

Bogunovic, Nikola; Grudenic, Igor; Pek, Edgar (Croatia): "A Synthesized Framework for Formal Verification of Computing Systems"  

Chung, Yi-nung; Chen, Hsin-ta; Chou, Pao-hua; Chuo, Feng-pin (Taiwan): "Maneuvering Signal Detection and Estimation Algorithm"  

Hsu, Chao-Hsing; Shyr, Wen-Jye; Kuo, Kun-Huang (Taiwan): "Interference Cancellation Design of Adaptive Linear Array Antenna by Phase-Amplitude Perturbations Using Memetic Algorithms"
Liang, Yi; Meng, Dan; Fan, Jianping (China): "RB-FIFT: An Improved FirstFit scheduling Algorithm for cluster job management"  

**Network Control**


Johnson, M. Edwin (USA): "Web Services for Federated Systems"

**Network Management and Control**

Alcuri, Luigi; Saitta, Francesco (Italy): "Telephony Over IP: A QoS Measurement-Based End to End Control Algorithm"

Hu, Fei; Ziobro, Jim; Tillett, Jason; Sharma, Neeraj K. (USA): "Secure Wireless Sensor Networks: Problems and Solutions"

**Network Technologies**

De Marco, Giuseppe; Longo, Maurizio; Postiglione, Fabio; Loreto, Salvatore; Senatore, Andrea (Italy): "On some Open Issues in Load Sharing in SCTP"

**Nonlinear Thinking in Modern Science: the Soliton Paradigm - Invited Session**

Organizer: Vladimir Serkin (Mexico)

Belyaeva, T. L. *; Serkin, V. N. *; Schmidt, E. M. ** (* Mexico, ** Germany): "Maxwellian Solitons"

Potasek, Mary J. (USA): "Optical Switching for Novel High Bandwidth Optical Networks (Invited Paper)"

Serkin, V. N. *; Hasegawa, Akira **; Belyaeva, T. L. * (* Mexico, ** Japan): "Exactly Integrable Models for Soliton Management: moving focuses concept analogy"

**Process and Product Control**

Song, Y. D.; Liao, X. H.; Castelli, V. (USA): "Nonlinear Tracking Control Via Dynamic Neural Networks"
The New Generation of Network Computation - Invited Session
Organizer: Chang-Jun Jiang (China)

Dai, Qingzhu; Zheng, Yingping (China): "R-RED: A Promotion of RED Algorithm"

Han, Yaojun; Jiang, Changjun; Luo, Xuemei (China): "The Resource Scheduling Algorithms with QoS for Grid Computing Based on EHLTCPN"

Sun, Jun; Zheng, Yingping (China): "The Application of Controller Area Network to Anti-lock Braking System"

Zheng, Fangying; He, Guoping (China): "Parallel SSLE Algorithm with Parallel Variable Distribution for Constrained Optimization"

Towards Trusted Wireless Grids - Invited Session
Organizer: McKnight Lee (USA)

Mcknight, Lee W.; Howison, James (USA): "Towards a Sharing Protocol for Wireless Grids"

Computing Technologies

Shen, Jinhong; Miyazaki, Seiya; Aoki, Terumasa; Yasuda, Hiroshi (Japan): "A Prototype of Cinematic Rule-based Reasoning and its Application"

Author Index