

NOTE: in the Program, 4 New Plenary Lectures will be added after April 15



**JOINT CONFERENCE PROGRAM**  
**MATH 2004, IMCCAS 2004, ISA 2004 and SOSM 2004**

<http://www.wseas.org>

**Miami, Florida, April 21-23, 2004**

**5th WSEAS Int. Conf. on APPLIED MATHEMATICS (MATH 2004)**

CHAIR: Prof. Ralph W. Oberste-Vorth,  
Head of the Division of Mathematics & Applied Science  
Marshall University, One John Marshall Drive, Huntington WV 25755, USA

**4th WSEAS Int. Conf. on INSTRUMENTATION, MEASUREMENT, CONTROL,  
CIRCUITS and SYSTEMS (IMCCAS 2004)**

CHAIR FOR CIRCUITS and SYSTEMS: Prof. George Antoniou  
Montclair State University, Computer Science Department, New Jersey, USA.

CHAIR FOR INSTRUMENTATION, MEASUREMENT and CONTROL: Prof. Kang Yen  
Professor & Chairperson, Department of Electrical & Computer Engineering  
Florida International University, 10555 W. Flagler St., (EAS-3984), Miami FL 33174, USA.

**4th WSEAS Int. Conf. on INFORMATION SCIENCE, COMMUNICATIONS AND  
APPLICATIONS (ISA 2004)**

CHAIR: Prof. Amaury C. Caballero, Ph.D., P.E., Florida International University, College of  
Engineering, Miami, Florida, USA

**4th WSEAS Int. Conf. on SOFT COMPUTING, OPTIMIZATION, SIMULATION &  
MANUFACTURING SYSTEMS (SOSM 2004)**

CHAIR: Prof. Lotfi A. Zadeh, Professor in the Graduate School, Computer Science Division  
Department of Electrical Engineering and Computer Sciences, University of California,  
Berkeley, CA 94720 -1776, Director, Berkeley Initiative in Soft Computing (BISC), USA

## SCIENTIFIC COMMITTEE of the 4 CONFERENCES (REVIEWERS)

C.Coutras (USA)  
V.Kodogiannis (UK)  
A.Varonides (USA)  
C.Manikopoulos (USA)  
D.Kazakos (USA)  
S.Ziavras (USA)  
J.A.B.Vieira (Portugal)  
V Tarabusi (Italy)  
M.Assal (Tunissia)  
M.Karkoub (Kuwait)  
N.Reyhani (Iran)  
G.Chen (China)  
V.Savchenko (Japan)  
M.Gupta (Canada)  
C.Looney (USA)  
B.Mehta (USA)  
A.Zehe (Mexico)  
M.McGuire (USA)  
W.Scherer (USA)  
S.Ferrari (USA)  
M.Abderazzak (Marocco)  
J.Ricks (USA)  
S.Moha (Marocco)  
A.La Neve (Brazil)  
N.Minh Le (Japan)  
M.El Houmaidi (USA)  
M.Nelson (Australia)  
H.Moradi (Iran)  
Q.Yutao (Singapore)  
I. Ali Taqi (kuwait)  
M. Eslami (Iran)  
A.F.de Carvalho (Brazil)  
N.Kovalevskaya (Russia)  
S.Javadi (Iran)  
Y.K.Seng (Singapore)  
E.Nesvijski (USA)  
A.B.Alonso Conde (Spain)  
V.Shokalo (Ukraine)  
Y.Shmaliy (Mexico)  
D.Hickey (Canada)  
J. Hlava (Czech Republic)  
A. Grebennikov (Mexico)  
G.Alewine (USA)  
I. Zhao (USA)  
S.N.Sinha (India)  
X.Jing (China)  
J. Li (USA)  
C.N.Silva (Mexico)  
C.Soras (Greece)  
H.Lardy (USA)  
M.Kresz (Hungary)  
F.Cerny (Prague)  
S.Zeadally (USA)  
P.Smith (USA)  
T.Lane (USA)  
H.Bruneel (Belgium)  
M.Tabae (Canada)  
Y.Goldman (USA)  
F.Silva Reis (Brazil)  
R.Bose (India)  
F.Coelho (Brazil)  
R.R.Hardy (USA)

M.Menard (France)  
I. M.Bautista (Spain)  
A.Mokhtar (Egypt)  
N. Masoumi (Tehran)  
M.Salem (Egypt)  
L.T.Walson (USA)  
L.S. Felker (USA)  
J.Otlewski (Poland)  
L.Maldonado (Argentina)  
M.Saeb (Egypt)  
V.Radojicic (Serbia and Montenegro)  
I.M.de Ilarduya Abarquero (Spain)  
E.Ozguner (Turkey)  
E.Swiezewska (Poland)  
I. Pultarova (Czech Republic)  
A.Getman (USA)  
E.Monier (Egypt)  
J.A.Salvado (Portugal)  
G.Anastasopoulos (Greece)  
J.A.Tavares (Portugal)  
M.Bjelica (Serbia and Montenegro)  
A.J.Garrido (Spain)  
G.Oltean (Romania)  
V.Roje (Croatia)  
B.Orencik (Turkey)  
J. Avila (Spain)  
P.Constantinou (Greece)  
D.Oseli (Slovenia)  
R.Urrutia (USA)  
Z.Nadir (Oman)  
F.Baerlocher (Canada)  
A.Samir (Tunisia)  
B.Cohen (USA)  
Y.Yamashita (Brazil)  
G.Pelaez Lourido (Spain)  
R.Kannan (Malaysia)  
S.Bloch (Franch)  
H.Chen (Taiwan)  
A.Cuyt (Belgium)  
D.Saletic (Serbia and Modenegro)  
Z.Domazet (Croatia)  
K.Thoma (Patras)  
V.Zanchi (Croatia)  
P.Jahankhani (UK)  
K.Alban (UK)  
F.Scofano (Brazil)  
G.M.Mohsen (Tunisia)  
M.Habli (Oman)  
P.Dalianis (Greece)  
R.Hopler (Germany)  
T.Newe (Ireland)  
F.Topalis (Greece)  
G.Acciani (Italy)  
M.Erol (Turkey)  
E.Aggelou (Greece)  
N.Dimitrova (Bulgaria)  
P.Georgilakis (Greece)  
A.Buchkovska

(Macedonia)  
D.Zagar (Croatia)  
D.Meziat (Spain)  
C.Gonzalez-Concepcion (Tenerife)  
D.Vidal (Spain)  
F.Choubani (Tunisia)  
A.Casavola (Italy)  
C.Fathy (Egypt)  
G.Kokai (Germany)  
L.Dimitrova (Bularia)  
Z.Yang (Denmark)  
C.Gabino (Spain)  
F.Ruiz Conzalez (Spain)  
V.Pletser (Netherlands)  
M.Last (Israel)  
A.Sing (India)  
T.M.Benson (UK)  
D.Picovici (Ireland)  
L.Smidl (Czech Republic)  
R.Viertl (Austria)  
M.Elloumi (Tunisia)  
N.Ratier (France)  
M.Grdisa (Croatia)  
D.Vouyioukas (Greece)  
S.Boussakta (UK)  
V.Tomasevic (Serbia and Modenegro)  
S. L.Arroyo (Spain)  
M. Ehrhardt (Germany)  
I. Lazic (Yugoslavia)  
T. Kovacikova (Slovakia)  
A. Bir (Turkey)  
O.Lezoray (France)  
P.de Vos (Netherlands)  
A. Ehrhardt (Germany)  
M.Jalili-Kharaajoo (Iran)  
A.Concilio (Italia)  
F. Farbiz (Iran)  
N.Suehiro (Japan)  
A.Elofsson (Sweden)  
K. A.Nagaty (Egypt)  
L.Antovski (FYRO Macedonia)  
C. Guaragnella (Italy)  
A.Kanatas (Greece)  
B. Fong (New Zealand)  
I.-G.Lee (Korea)  
T. Akita (Japan)  
E. Kozlova (Russia)  
J. Otlewski (Poland)  
I. Pultarova (Czech Republic)  
J. M.Malard (USA)  
J. Florek (Poland)  
S. S Mantha (India)  
P. Konstantopoulos (Greece)  
M. R.Molai (Iran)  
M. A.Moghaddam (Iran)  
V. Batos (Croatia)  
E. Iancu (Rumania)  
V. Zorkadis (Greece)  
G. Pajares (Spain)

A.Zharov (Russia)  
M. Murofushi (Japan)  
C. Treesataypun (Thailand)  
A. Akan (Turkey)  
T. Popescu (Romania)  
A. Economides (Greece)  
I.O.Vardiambasis (Greece)  
S. Gupta (USA)  
M.Bin Lbne Reaz  
J. Roning (Finland)  
M.Bayram (Turkey)  
S. Kumar (India)  
B.Tafaghodina (Iran)  
A.Rahmati (Iran)  
M.E.Tischler (USA)  
A.Djordjevic (Hong Kong)  
N.Chantasut (Thailand)  
N.Premchaiswadi (Thailand)  
V.Ngoc Phat (Vietnam)  
J.Harrisson (Australia)  
Genicman (Korea)  
J. Rau (Taiwan)  
T.Itoh (Japan)  
E.Mangina (Ireland)  
Yu-Fai Fung (Hong Kong)  
S.S.W.Lee (Taiwan)  
C.P.Lim (Malaysia)  
S. Alam (Bangladesh)  
N.S.Sapre (India)  
R.Barnard (Australia)  
Y.Yonezawa (Japan)  
J.Cao (China)  
G.Zouridakis (USA)  
V.Savchenko (Japan)  
C.Glezer (Israel)  
A.M.Sodagar (Iran)  
O.Unold (Poland)  
G.Bressan (Brazil)  
S.Khotiantsev (Mexico)  
V.H.Casco (Argentina)  
J.A.Cortez (Brazil)  
C.Kyrtsou (Greece)  
H.James (New Zealand)  
A.Kwembe (USA)  
A.Poznyak (Mexico)  
J.C.Rolon (USA)  
J.H.Doorn (Argentina)  
Rohan de Silva (Australia)  
A.Zemliak (Mexico)  
J.Lee (Taiwan)  
E.Joelianto (Indonesia)  
K.Akihiko (Japan)  
Men-Shen Tsai (Taiwan)  
M.Golkar (Malaysia)  
Ching (China)  
T.Tze Huang (Taiwan)  
D.Andina (Spain)  
S.Lopez (Brazil)  
J.A.Apolinario (Brazil)

I.Garcia-Planas (Spain)  
 C.Therrien (USA)  
 G.Sirakoulis (Greece)  
 V.Visvesvara (India)  
 G.Mohammad (Iran)  
 A.Liotta (UK)  
 I.Brosso (Brazil)  
 L.Sanchez Ruiz (Spain)  
 L.Mokhnache (Algeria)  
 J.lagunez (Mexico)  
 M.Koudil (Algeria)  
 P.Arambel (USA)  
 M.Berz (USA)  
 G.Vozikis (USA)  
 S.Milanovic (Italy)  
 V.Faria (Brazil)  
 P.Bouvry (Luxembourg)  
 P.Oosthuizen (Canada)  
 I.Ponzoni (Argentina)  
 E.Kotsakis (Greece)  
 J.Kaleka (India)  
 F.Sandoval-ibarra (Mexico)  
 J.M.Seixas (Brazil)  
 L.Beasley (USA)  
 B.Grabot (France)  
 I.Abnozova (UK)  
 I.Egwaihide (Germany)  
 T.Sobh (USA)  
 I.Saraiva Silva (Brazil)  
 Luiza de Macedo Mourelle (Brazil)  
 L.Acho Zupa (USA)  
 G.Devedzic (Serbia and Montenegro)  
 G.Adam (Greece)  
 H.Goraine (UK)  
 G.Martinovic (Croatia)  
 E.Tlelo Cuautle (Mexico)  
 A.Riyuiti Hirakawa (Brazil)  
 G.Clifford Carter (USA)  
 L.Cheng (USA)  
 M.-A. Sicilia (Spain)  
 H.A.Lepikson (Brazil)  
 R.Gompa (USA)  
 C.dell'Aquila (Italy)  
 R.Goncalves (Portugal)  
 H.Jin (China)  
 O.Pop (Romania)  
 P.Bamidis (Greece)  
 E.Stella (Italy)  
 V.Mladenov (Bulgaria)  
 T.Laengle (Germany)  
 F.Farinha (Portugal)  
 J.R.C.Piqueira (Brazil)  
 K.H.Tan (England)  
 S.Shrivastava (UK)  
 A.Borboni (Italy)  
 Z.Bojkovic (Serbia)  
 Y.Lin (China)  
 A.Akan (Turkey)  
 J.Sebestyenova (Slovakia)  
 M.Singh (India)  
 M.L.Moralesb (Mexico)  
 M.J.Zemerly (UAE)  
 V.Kluev (Japan)  
 K.Kabitzsch (Germany)  
 S.Dan (Romania)

M.Craus (Romania)  
 N.Reyhani (Iran)  
 K.Meghriche (France)  
 R.Chalal (Algerie)  
 M.Court (UK)  
 M.Resta (Italy)  
 M.M.Moghadam (Iran)  
 A.Iodkin (Russia)  
 L.A.Zinchenko (Russia)  
 S.Milanovic (ITALY)  
 W.Dosch (Germany)  
 E.Caferov (Turkey)  
 P.Isaias (Portugal)  
 V.Pletser (Netherlands)  
 M.-L.Wu (Taiwan)  
 J.Porras (Finland)  
 K.Edelmoser (Austria)  
 W.Guo (Australia)  
 R.Ando (Japan)  
 V.Skorpil (Czech Republic)  
 L.Carnimeo (Italy)  
 S.-C.Lo (Taiwan)  
 A.B.Perry (USA)  
 M.Sarfraz (Saudi Arabia).  
 G.L.Mariscal (USA)  
 W.Hendrickson (USA)  
 S.Nurcan (France)  
 M.Szewczyk (Poland)  
 P.Stounov (Bulgaria)  
 G.Silva Paiva (Brazil)  
 L.K.Yong (Singapore)  
 A.Singh (India)  
 D.H.Leong (Malaysia)  
 W.Taylor (USA)  
 M.Amirfakhrian (Iran)  
 T. Fossen (Norway)  
 J.M.Fonseca (Portugal)  
 S.M.R.Mosavi (Iran)  
 M.Nikolaou (USA)  
 D.Pal Sharma (India)  
 Z.-J. Lee (Taiwan)  
 K.Rahouma (Egypt)  
 A.-B. Salem (Egypt)  
 D.Boughaci (Algeria)  
 H.Rahman (Canada)  
 V.Juliet (India)  
 M.Hassan (Jordan)  
 R.Lashkaripour (Iran)  
 Z.Tomsic (Croatia)  
 M.Alrefaei (Jordan)  
 A.Harb (Jordan)  
 S.Ahmed (UAE)  
 G.Chen (USA)  
 J.X.Jun (China)  
 M.Saleem (Pakistan)  
 T.Helle (Germany)  
 S.A.-S.Hegazy (Egypt)  
 H.Bakhash (Canada)  
 M.E.Torres (Argentina)  
 A.Alekseev (Russia)  
 E.M.Khazen (USA)  
 A.Kostenko (Ukraine)  
 P.Ghosh (Cyprus)  
 A.F.Norcio (USA)  
 M.D.Horton (Israel)  
 G. Burde (Israel)  
 L.Verdegay (Spain)  
 Y.Shmaliy (Mexico)  
 V.Shokalo (Ukraine)

R.Granot (Israel)  
 J.Maria de Frutos Baraja (Spain)  
 I.Pultarova (Czech Republic)  
 J.Otlewski (Poland)  
 P.Rajkovic (Serbia and Montenegro)  
 M.Alfonseca (Spain)  
 M.Bozyigit (Turkey)  
 A.M.M.Nadhim (China)  
 A.Kumar (India)  
 F.Gutierrez (Spain)  
 J.Frederique (France)  
 E. Valtonen (Finland)  
 R.Daskalov (Bulgaria)  
 A.Ksendzuk (Ukraine)  
 F.Kovacevic (Serbia&Montenegro)  
 R.Din (Malaysia)  
 P.Bess Clarke (USA)  
 S.Bansal (UK)  
 D.Cruz Martins (Brazil)  
 T.A.Sshreehah (Jordan)  
 I. Vasytsov (Ukraine)  
 V.Buzuloiu (Romania)  
 H.Abderrahmane (Algeria)  
 L.Tronchin (Italy)  
 I.Richardson (Ireland)  
 M.Ponini (Indonesia)  
 M.Marciniak (Poland)  
 Q.Pu (China)  
 W.Cichocki (Australia)  
 P.Bertolino (France)  
 S.B.Singh (India)  
 G.M.Khanduri (India)  
 P.Dasgupta (India)  
 G.Sanchez-Diaz (Mexico)  
 A.C.Bywater (New Zealand)  
 J.Obenour (USA)  
 L.A.Sanchez (Spain)  
 S.Flint (New Zealand)  
 W.Pedrycz (Canada)  
 S.G.Sliger (USA)  
 M.L.Morales (Mexico)  
 F.Ferreira (Argentina)  
 N.Fisheries (USA)  
 K.Prem (USA)  
 J.Kenigsberg (Montreal)\_  
 M.Bolla (Budapest)  
 Y.Bregman (Israel)  
 M.Faundes-Zanuy (Spain)  
 T.Waters (USA)  
 J.M.Kinser (USA)  
 F.YuanJing (China)  
 B. Boashash (Australia)  
 K.Balaji (Singapore)  
 T.Mengko (Indonesia)  
 L.Karam (USA)  
 A.de Carvalho (Brazil)  
 S.Rama (USA)  
 V.Marakhovsky (Japan)  
 G.Chailos (Cyprus)  
 O. Olaniyi (South Africa)  
 M.Elashvili (Georgia)  
 I.Sciriha (Malta)  
 W.Wiesbeck (Germany)

M.Jalili-Kharaajoo (Iran)  
 C.Anderson (UK)  
 A.Dinischiotu (Romania)  
 A.Bogliolo (Italy)  
 T.Barbu (Romania)  
 A.Liotta (UK)  
 V.Zanchi (Croatia)  
 C.Juan (Spain)  
 S.Ghenescu (France)  
 H.J. A. da Silva (Portugal)  
 M.Cherkaoui Malki (France)  
 T.Ramos-Domínguez (Spain)  
 M.F.Redondo (Spain)  
 D.Dimovski (FYRO Macedonia)  
 A.Ionita (Romania)  
 F. Alkoot (Kuwait)  
 A.Moad (Malaysia)  
 O. Shiba (Malaysia)  
 P.Rajkovic (Yugoslavia)  
 M.T.Darvishi (Iran)  
 M.Lopez Moralesb (Mexico)  
 M.Alfonseca (Spain)  
 H.Mir Hosseini (Singapore)  
 C.E.D' Attelis (Argentina)  
 D.Biolek (Czech Republic)  
 G.Bognar (Hungary)  
 P.Y. Ekel (Brazil)  
 M.Joo Er (Singapore)  
 M.I.Garcia-Planas (Spain)  
 D.Koruga (Yugoslavia)  
 A.Zemliak(Mexico)  
 L.J.Wang (USA)  
 N.J.Thome (Spain)  
 J.C.Quadrado (Portugal)  
 P.Brault (France)  
 J.Glasa (Slovak Republic)  
 W.Germanovix (Brazil)  
 R.S.Gautam (India)  
 S.Jankovic (Yugoslavia)  
 H.Elsadek (Egypt)  
 M.Zouak (Morocco)  
 P.Kulkarni (India)  
 J.Hlava (Czech Republic)  
 M.H.Le (Australia)  
 Y.Li (Taiwan)  
 M.Sarfaz (Saudi Arabia)  
 L.Kee Yong (Singapore)  
 M.Rohmanuddin (Malaysia)  
 M.E.Valcher (Italy)  
 V.Markovic (Serbia & Montenegro)  
 R.B.Patel (India)  
 M.Bisiacco (Italy)  
 E.Kalantzis (Greece)  
 D.Warsaw (Poland)  
 N.Sriraam (Malaysia)  
 P.Todorova (Germany)  
 R.Tsoi (Hong Kong)  
 A.Zhang (USA)  
 Y.-H.Pao (USA)  
 A.D.Sindwani (India)  
 Y.N.Zayko (Russia)

M.Bank (Israel)  
 K.Allali (Marocco)  
 S.Holmberg (USA)  
 M.Yoshida (Japan)  
 R.Pedraza (Spain)  
 D.I.Cruz Báez (Spain)  
 V.Gountsidou (Greece)  
 K.Kral (Czech Republic)  
 P.I. Dallas (Greece)

M.Grdisa (Croatia)  
 N.Chantasut (Thailand)  
 E.J. Taylor (USA)  
 A.Vernescu (Romania)  
 Telbany (Egypt)  
 M.B.Hassan (Sudan)  
 S.M. Arafat (Egypt)  
 A.B.A.Conde (Spain)  
 L.Bálint (Hungary)

M.Assal (Tunisia)  
 F.Huettmann (USA)  
 M.Goudarzi (Iran)  
 N.Akasaka (Japan)  
 R.Satnoianu (UK)  
 M.Margaris (USA)  
 S.Dadunashvili (Georgia)  
 D.Lefebvre (France)  
 I.Gonos (Greece)

K.Poustourli (Greece)  
 C.Tetelin (France)  
 I. Stathopoulos (Greece)  
 K. Mehra (USA)  
 M.Juras (USA)  
 D.Simian (Romania)

**APRIL 21, 2004**

ROOM A: 08:00: OPENING  
 Introductory Speeches

-----

CONFERENCE: **WSEAS ISA 2004**

SPECIAL SYMPOSIUM:  
Computer Applications in Biomedicine, Health Care & Medicine

ROOM A', 08:30- 14:00  
 (coffee-break 10:00-10:30).

Organizer-Chair: A. Lazakidou, G. Anastassopoulos

Signal Processing and Knowledge Acquisition in Objective Blood Pressure Measurement with Conventional Clinical Sphygmomanometry	<i>D. Ventzas, A. Angelopoulos</i>	484-414
A Dynamic Simulation Model and Testing Techniques for Security Protocol Verification	<i>Shahabuddin Muhammad, Ratan Guha, Zeeshan Furqan</i>	484-230
FANS Simulation of Optical Burst Switching for NSFNET	<i>M. El Houmaidi, O. Kachirski, R. Guha</i>	484-244
A new SCP-ECG module for telemedicine services	<i>G. Mandellos, M. Koukias, G. Anastassopoulos, D. Lympelopoulou</i>	484-276

Three Dimensional Imaging of the Nasal Cavity and Paranasal Sinuses	<i>S. Bisdas, M. Verink, M. Stieve, A. Lazakidou, I. Evangelou, H. Becker</i>	484-415
WCL-Viewer: An Integrated System for Medical Image Administration and Processing	<i>P. Galanopoulos, G. Mandellos, G. Anastassopoulos, D. Lymperopoulos</i>	484-413
Assisting Hybridized Microscopic Imaging	<i>Aleksandar Jovanovic, Miroslav Maric, Maja Jovanovic, Nenad Andonovski</i>	484-412
Microbial-Pathogenesis.org, an Experimental System for Simultaneous Genomics Research and Data Sharing: Preliminary Report	<i>William Ray, Robert Munson Jr.</i>	484-411
Information management in the clinical laboratory	<i>D. Calva Mendez, A. Landa Quezada, M. Lehman</i>	484-189
Lung sound/noise separation for anesthesia respiratory monitoring	<i>Hong Wang, Le Yi Wang, Han Zheng, Razmig Haladjian, Meghan Wallo</i>	484-321
Quantitative Performance Analysis of Biometrics Identification for Authentication Systems Design	<i>Takuji Maeda, Masahito Matsushita, and Koichi Sasakawa</i>	484-330
A Technique for Automated Localization of Epileptic Foci Using SPECT Image Subtraction	<i>Mark Rossman, Malek Adjouadi, Melvin Ayala, Ilker Jaylali, Prasanna Jayakar</i>	484-196
Complexity of Polysomnogram Signals	<i>W.Klonowski, E.Olejarczyk, R.Stepien, W.Szelenberger</i>	484-175
Jitter Reduction in Eye Gaze Tracking System and Conception of a Metric for Performance Evaluation	<i>Anaelis Sesin, Melvin Ayala, Mercedes Cabrerizo, and Malek Adjouadi</i>	484-197
An Ancient Cultivation Practice Falun Gong Improves Neutrophil Functions and Causes System-level Gene Regulation	<i>Quan-Zhen Li, Gabriela E. Garcia, Ping Li, Richard J. Johnson, Tongwen Wang and Lili Feng</i>	484-268

**CONFERENCE: WSEAS ISA 2004**

**SESSIONS: Communication Systems and Multimedia**

**ROOM A', 15:00- 20:00**

**(coffee-break 17:00-17:30).**

**Chair: Hala Elsadek, Zoran Bojkovic**

Multilevel LDPC Codes for Bandwidth Efficiency Communication Systems	<i>Jia Hou and Moon Ho Lee</i>	484-331
Smartcard-based multi user security concept for mobile devices	<i>Steffen Oldenburg, Clemens H. Cap</i>	484-332
Interactive services in digital television infrastructure	<i>Zoran Bojkovic, Dragorad Milovanovic</i>	484-343
An adaptive protocol for wireless asynchronous transfer mode	<i>Mustafa M.Abd Elnaby, M.Nofal, S. Khamis and N. Al-Shaer</i>	484-229
Performance Analysis of Error Detection System for Distributed Multimedia Environment	<i>Eung-Nam Ko</i>	484-246
A Mechanism of Reducing CSFQ Complexity in	<i>Seung-ok Lim, Kwang-mo Jung</i>	484-304

High Speed Networks		
Intersystem End-to-End QoS Provision in 4G Heterogeneous Networks	<i>Nino Kubinidze, Mairtin O'Droma, Ivan Ganchev</i>	484-392
A Multi-window Fractional Evolutionary Spectral Analysis	<i>Yalcin Cekic, Lutfi Ihsan Yazici, Aydin Akan</i>	484-111
Research on Portable Meteorological Data Receiver	<i>Hui Zhuang and Zhe-Min Tan</i>	484-114
A Virtual Test Bed for Distributed Processing of Archives	<i>Binh Nguyen</i>	484-115
CLIP Antenna for Wireless Bluetooth Applications	<i>Hala Elsadek</i>	484-162
Implementation and Analysis of a Testbed for IP-Based Heterogeneous Wireless Networks	<i>Jyh-cheng Chen, Ching-yang Huang, Shun-chao Huang, Ming-chia Jiang, Chia-feng Kang, Hong-wei Lin, Lian-dong Liu, Yi-wen Liu, Jui-hung Yeh</i>	484-417
Improving the Collision Avoidance of the CSMA/CA Medium Access Control Protocol	<i>Amara Yacine, and Beghdad Rachid</i>	484-394
Boundary Artifact Minimization on Best Matching Blocks in Wavelet-Based Video Compression	<i>Weiting Cai and Malek Adjouadi</i>	484-124
UMTS spectrum allocation Technical aspects and suggestions for mobile operators	<i>Ioannis Kostopoulos, Constantinos Giannaris</i>	484-376
Integrated optical Bragg grating with electrically controllable spectral transfer function	<i>A.V. Chamrai, A.S. Kozlov, I.V. Ilichev, M.P. Petrov</i>	484-139
A New Distributed Defense to Distributed Denial of Service attacks	<i>Paolo Di Francesco, Giuseppe Bianchi, Giuseppe Fabio, Nicola Oriti</i>	484-420

**CONFERENCE: WSEAS SOSM 2004**

**SPECIAL SESSION: Fuzzy Systems**

ROOM B', 08:00- 10:00  
(coffee-break 11:00-11:30)

Chair: G. Antoniou

Notes on Extending Terminological Software Frameworks with Fuzziness through Aspect Oriented Design	<i>Miguel-Angel Sicilia, Elena García</i>	484-342
Fuzzy Modeling with Emphasis on Analog Hardware Implementation – Part II: Synthesis and Implementation	<i>Shakti Kumar, Savita Wadhawan and Neetika Ohri</i>	484-421
A Fuzzy-Rule Based Algorithm for Contrast	<i>Aboul Ella Hassanien, Jafar M. H. Ali</i>	484-158

Enhancement of Mammograms Breast Masses		
Describing an IMS by a FNRTPN definition: A VHDL approach	<i>C. A. Graciós Marín, E. Vargas Soto, A. Díaz Sánchez</i>	484-262
An efficient algorithm of polygonal fuzzy neural network	<i>Puyin Liu</i>	484-299
Fuzzy Modeling with Emphasis on Analog Hardware Implementation – Part I: Design	<i>Shakti Kumar, K.K. Aggarwal, Arun Khosla</i>	484-407
A Multiple Agent Framework Utilizing Fuzzy Reasoning for Fault Diagnosis in Manufacturing Systems	<i>Terrence P. Fries</i>	484-232
Soft computing Approach to Noise Modeling	<i>Abdul Wahab, Chai Quek, Tan Eng Chong</i>	484-354

CONFERENCE: **WSEAS SOSM 2004**

PLENARY LECTURE: Lotfi Zadeh

ROOM B', 10:30- 11:30  
(coffee-break 10:00-10:30)

CONFERENCE: **WSEAS SOSM 2004**

SPECIAL SESSION: Evolutionary Computing

ROOM B', 11:30- 14:00  
(coffee-break 11:00-11:30)

Chair: Gregor Papa

GESOS : a genetic based tool to aid project managers	<i>C Baron, S Rochet, DEsteve</i>	484-292
Genetic Algorithm Application to Clustering Problems	<i>Mouin Hourani, Mufit Ozden, Frank Moore, Pedrito Maynard-Zhang</i>	484-256
An evolutionary technique for scheduling and allocation concurrency	<i>Gregor Papa</i>	484-313
Computer aided scheduling with use of genetic algorithms and a visual discrete event simulation model	<i>Miroljub Kljajiæ, Uroš Breskvar, Blaž Rodiè</i>	484-314
Genetic Algorithms and Simulated Annealing applied to Identification of Hysteresis Models	<i>Luca Liberti, Francesco Riganti Fulginei, Riccardo Russo, Alessandro Salvini</i>	484-311

CONFERENCE: **WSEAS SOSM 2004**

SPECIAL SESSION: Intelligent Systems and Applications

ROOM B', 15:00- 17:00  
(coffee-break 17:00-17:30)

Chair: Mohammad Reza Asharif, Khaled E. A. Negm,

A Novel Loss Estimation Technique for Power Converters	<i>K.Lavanya, B.Umamaheswari, S.K.Patnaik</i>	484-128
An Integrated Line Tracking Using Interactive Vectorization	<i>Sanjeev Dhawan, K. S. Handa, Rakesh Kumar</i>	484-198
A Mathematical Characterization of the Performance in a CONWIP line as a function	<i>G. Perez-Lechuga, M.Alvarez-Suarez, L.M. Pla-Aragones, M. Munoz-Oran</i>	484-267
Parallel Implementation of Ant Colony Optimization for Traveling Salesman Problem	<i>Laurentiu Rudeanu and Mitica Craus</i>	484-143
Homomorphic filtering approach using hsv color space in automatic image shadow segmentation	<i>Hamideh Etemadnia, Mohammad Reza Asharif</i>	484-217
Analysis of wave motion in layered half-space modeled by FEM and using rectangular transparent boundaries	<i>Igor Špacapan, Miroslav Premrov</i>	484-176
Secure Mobile Code Computing Framework	<i>Khaled E. A. Negm, Wael Adi, Fathey Abd Al-wahab</i>	484-271

CONFERENCE: **WSEAS ISA 2004**

SESSION: Signal Processing

ROOM C', 08:00- 10:00  
(coffee-break 10:00-10:30)

Chair: J. Zelek

Distributed Signal Processing with Randomized Data Selection Based on the Generalized	<i>Vyacheslav Tuzlukov, Won-Sik Yoon, Yong Deak Kim</i>	484-252
---	---	---------



Approach in Wireless Sensor Networks		
Evaluating neural tissue regeneration by ANN based classification of MNG signals	<i>M. Giacomini, F. Raffo, X. Smit, B.S. de Kool, J.W. Neck, S.E.R. Hovius, C. Ruggiero</i>	484-364
Bayesian and Monte Carlo change-point detection	<i>Roman Cmejla, Pavel Sovka, Miroslav Strupl, Jan Uhlir</i>	484-361
Hybrid Speech Recognition Framework for Robust In-vehicle Telematic System Environment.	<i>Mashkuri Yaacob, Dalbir Singh</i>	484-312
Hands-off Use of Computer towards Universal Access through Voice Control Human-Computer Interface	<i>Dalila Landestoy, Melvin Ayala, Malek Adjouadi, and Walter Tischer</i>	484-121
Highly Adaptive Lookup Systems for P2P Computing	<i>Ewa Kusmierek, David H.C. Du, James C. Beyer</i>	484-377
Automatic Model Initialization for 3-D Monocular Visual Tracking of Human Limbs in Unconstrained Environments	<i>David Bullock and John Zelek</i>	484-270

**CONFERENCE: WSEAS MATH 2004**

**SPECIAL SESSION: Computational and Applied Mathematics in Science and Engineering**

ROOM C', 10:30-12:30  
(coffee-break 10:00-10:30)

Organizer and Chair: *Shih-Ching Lo*

Quantum Mechanical Simulation for Ultra-thin High-k Gate Dielectrics Metal Oxide Semiconductor Field Effect Transistors	<i>Shih-Ching Lo, Yiming Li, and Jyun-Hwei Tsai</i>	484-216
Application and Numerical Investigation of Wavelet Transform for Traffic Data Denoising	<i>Shih-Ching Lo and Chih-Ku Fan</i>	484-209
Transient Analysis of Two-Dimensional Cylindrical Fin with Various Surface Heat Effects	<i>Kuang Yuan Kung and Shih-Ching Lo</i>	484-207
Measuring the Risk-Adjusted Efficiency of Taiwan Motor Transport Company Before and After Privatization	<i>Hsun-Jung Cho and Chih-Ku Fan</i>	484-202
The Joint Determination of Efficiency in Multi-Mode Bus Transit	<i>Ming-Miin Yu and Chih-Ku Fan</i>	484-210
Derivation of the Lattice Vehicular Model from the Boltzmann Transport Equation	<i>Shih-Ching Lo</i>	484-201

CONFERENCE: **WSEAS MATH 2004**

SYMPOSIUM: Probability, Statistics and Operational Research

ROOM C', 12:30-14:30  
(coffee-break 11:00-11:30).

Chair: Martín López Morales

On Solvability for Higher Order Parabolic Equations	<i>Martín López Morales</i>	484-284
Multi-Server Queues Subject to Server Interruptions	<i>Bart Vinck, Herwig Bruneel</i>	484-356
Time series analysis and forecasting techniques	<i>Raquel Voget, Alicia Tinnirello</i>	484-265
Modeling and simulating complexity for discrete graphic Markov models: an experimental study	<i>Elva Díaz, Eunice Ponce de León</i>	484-133
Bayesian Segmentation and Motion Estimation in Video Sequences using a Markov-Potts Model	<i>Patrice Brault, Ali Mohammad-Djafari</i>	484-345
An Alternative Analysis of the Open Hashing Algorithm	<i>Ningping Sun, Ryoza Nakamura</i>	484-130
Watermarking Oriented Video Modeling in the Wavelet Domain	<i>Mihai Mitrea, Francoise Preteux, Adriana Vlad</i>	484-398

CONFERENCE: **WSEAS SOSM 2004**

SESSION: Modeling and Simulation

ROOM C', 14:30-17:00  
(coffee-break 17:00-17:30)

Chair: *Shih-Ching Lo*

A combination of clustering algorithms with Ant Colony Optimization for large clustered Euclidean Travelling Salesman Problem	<i>Trung hoang Dinh, Abdullah al Mamun</i>	484-352
Examining Real-Time Scheduling Exceptions in Complex Planning Domains Using Decision Support Systems	<i>Raymond R. Hill, Sriram Mahadevan, S. Narayanan</i>	484-290

Empirical Results on Modelling Early Requirements	<i>P. Loucopoulos</i>	484-278
Study of semiconductor devices exposed to spatial radiation	<i>G. Domingo Yagüez, D. Villaraza, M. Cappelletti, E. Peltzer y Bancá</i>	484-366
A two layer hybrid algorithm for achieving mutual exclusion in distributed systems	<i>Quazi Mamun, Mortuza Ali, Salahuddin Masum, Mohammad Mustafa</i>	484-228
Comparative analysis of methods of statistics and artificial intelligence for forecasting	<i>Vitaliy Solodovnikov</i>	484-104
FIRE Ant with Activity Structures:a Biologically Motivated Approach to Fault-Tolerant Routing in Gloabl Networks	<i>Tavaris Thomas, Ladislav J. Kohout</i>	484-243
Inverse scheduling with controllable job parameters	<i>Christos Koulamas</i>	484-249
Productivity assessment from advanced integration of canned cycles to CAD/CAM software	<i>Jean-francois Chatelain, Yan Boutin, Françoise, Marchand, Antoine Tahan</i>	484-221
Simulation of industrial MRMI system with un-uniformity magnetic field	<i>Toshihiro Akita, Takakazu Yonezawa, Norio Tayama, Hironori Kato, Masahiro Daibo</i>	484-385

**CONFERENCE: WSEAS ISA 2004**

**SESSION: Software Engineering**

ROOM C', 17:30-20:00  
(coffee-break 17:00-17:30)

Chair: G. Vachtsevanos

Organizational knowledge creation through improved data mining overcoming organizational and technical obstacles for quality performance	<i>Ioannis Kostopoulos, Constantinos Giannaris</i>	484-375
Parsing Tree Adjoining Grammars With A Preprocessor	<i>Pradip Peter Dey, Thomas M. Gattón, Mohammad N. Amin</i>	484-378
Software Reliability Assessment of High Volume Web Systems	<i>Rupal Chachra, Surendra Babu , Rajeshwari G</i>	484-350
Visualizing and Monitoring Business Activity	<i>Enrique Espinosa &amp; Bedrich Benes</i>	484-134
Design Patterns for Deadlock-Free Concurrent Object-Oriented Systems	<i>David Cloutier, Colin Neill, Phillip Laplante</i>	484-306
Performance Analysis of Java Space in a Mobile Environment	<i>Marco Ballette and Antonio Liotta</i>	484-359
Estimating Requirements Change Propagation from Software Architecture	<i>Bo Yu, Ali Mili</i>	484-382
Towards a configurable tool for developing web-based courseware	<i>Hock Keong Teo, Sai Peck Lee, Kay Sin Tan</i>	484-236
Implementation of a Lightweight Logging Service	<i>Markus Aleksy, Jan Kästle, Martin Schader</i>	484-107

A Note on Four-Dimensional Finite Automata	<i>Makoto Sakamoto, Hidenobu Okabe, Shigehisa Nogami, Shinya Taniguchi, Tadayuki Makino, Youichirou Nakama, Makoto Saito, Michio Kono, Katsushi Inoue</i>	484-333
--	---	---------

**APRIL 22, 2004**

CONFERENCE: **WSEAS ISA 2004**

SPECIAL SESSION: Advanced Information and Wireless communication systems

ORGANIZER-CHAIR: Hesham Eldeeb, Hala Elsadek

ROOM A', 08:00-14:00

(coffee-break 10:00-10:30)

Securing of Two and Three Dimensional Information Based on In-line Digital Holography	<i>Hesham Eldeeb</i>	484-167
Implementing X-cast for context transfers and seamless fact handoffs in MIPv6	<i>Chandra Bhusan Pandey and Nikos Mastorakis</i>	484-165
Scheduling Real Time Parallel Structure on Cluster Computing with Possible Processor failures	<i>Alaa Amin, Reda Ammar, Ayman El Dessouly</i>	484-166
Modeling and Analysis of A Multi-Level Caching in Distributed Database Systems	<i>Doaa S. El Zanfaly, Reda A. Ammar, A. Sharaf Eldin</i>	484-169
Efficient Resource Allocation for Parallel and Distributed Systems	<i>Ahmed M. Mohamed, Reda Ammar and Lester Lipsky</i>	484-164
Beam Space-Time of a MIMO OFDM-based Wireless LAN System for 2-D Spreading Channels	<i>Shing Tenqchen, Ying-Haw Shu, Ming-Chang Sun, Wu-Shiung Feng</i>	484-346
Analysis and Calculation of Software Residual Time for Scheduling Applications	<i>Sarah Tasneem, Reda Ammar And Howard Sholl</i>	484-185
POD Convergence Criterion for Numerically Solved Periodic Fluid Flows	<i>Mohamed h. Ahmed and Thomas J. Barber</i>	484-297
Restructuring Of Distributed Object Oriented Software	<i>A. Abdel-raouf, Tahany A. Fergany, R. Ammar</i>	484-170
Scattering at the self-affin interface between two mediums	<i>D. Calva Mendez, M. Lehman</i>	484-188
A Novel Secure Image CIPHERING Technique Based On Chaos	<i>A. Ammar, A. S. S. El-Kabbany, M. I. Youssef and A. Emam</i>	484-168
PC cluster as a platform for parallel applications	<i>Amany Abd Elsamea, Hesham Eldeeb, Salwa Nassar</i>	484-163

CONFERENCE: **WSEAS ISA 2004**

SPECIAL SESSION: Information Security

ROOM A', 15:00-17:00  
(coffee-break 17:00-17:30)

Chair: Ulf Mattsson

A Real-time Intrusion Prevention System for Commercial Enterprise Databases	<i>Ulf Mattsson</i>	484-153
Applying conditional linear cryptanalysis to ciphers with key-dependant operations	<i>Reiner Dojen &amp; Tom Coffey</i>	484-266
Wireless Lack of Security: A Case Study Surveying the Access Point Misconfiguration Problem at São Paulo City	<i>Adriano Mauro Cansian, André Ricardo Abed Grégio, Aleck Zander Tomé De Sousa, Antonio Montes Filho</i>	484-242
An Enterprise Security Model AAPN (Authenticator AccessPoint VPN) for WLAN using Intel- IXP1200 Network Processor	<i>K.RathiAnand, Dr.C.Chellappan</i>	484-240
Towards Using a Within-Class Dissimilarity Method For Intrusion Detection in Computer Networks	<i>Rachid Beghdad</i>	484-393
Dynamic analysis of malicious code: a windows operational system approach	<i>Adriano Cansian, Thiago Siqueira, César Atílio</i>	484-241
A New Message Digest Function for Message Authentication	<i>Sk. Rahman, Salahuddin Masum, Mohammad Khan, Mohammad Alam, Md. Hasan</i>	484-269
RedAlert: Approach for Firewall Policies Update Mechanism	<i>Badrul Anuar, Mashkuri Yaakob and Yamani Idna</i>	484-109

CONFERENCE: **WSEAS ISA 2004**

SPECIAL SESSION: Computer Networks

CHAIR: C. Manikopoulos

ROOM A', 17:30-20:00  
(coffee-break 17:00-17:30)

End-to-End Quality of Service Coordination Models for Mobile Networks	<i>Teodora Guenkova-Luy, Andreas Kassler</i>	484-335
---	--	---------

Real-Time Path Quality Comparison for QoS-Aware Roaming Between Heterogeneous Radio Networks	<i>Eric can den Berg, Sunil Madhani, Tao Zhang</i>	484-323
IP Home Network Multimedia Application over IEEE 1394	<i>Tin- Yu Wu, Kun-Chang Chen, Han-Chieh Chao and Tak-Goa Tsuei</i>	484-155
An Application Based on Grid Computing	<i>Jose Torres-Jimenez, Carlos De Alfonso, Vicente Hernandez</i>	484-401
Information spreading on third generation Mobile Communication System	<i>Ioannis Kostopoulos, Constantinos Giannaris</i>	484-373
Verification of TCP Dynamics of CBR, VBR, and Instantaneous Bit Rates with Network Simulator	<i>Omar Hamad &amp; Jongwon Kim</i>	484-146
Building a strategic m-commerce services platform	<i>Stanislav Milanovic, Nikos E. Mastorakis</i>	484-159
A Flexible Channel Allocation With Resource Prediction For Mobile Multimedia Networks	<i>G.Sivaradje and P.Dananjayan</i>	484-358

**CONFERENCE: WSEAS IMCCAS 2004**

**SPECIAL SESSION: Systems Theory and Automatic Control**

ROOM B', 08:00-14:00  
(coffee-break 10:00-10:30)

Chair: Alexander Zemliak, Ralph W. Oberste-Vorth

On Effect Of Dynamical Behaviour of a CAM-Follower System Damaged On Contact Surface	<i>Vincenzo Niola , Giuseppe Quaremba, Marco Ceccarelli</i>	484-430
On Dynamical Response of a CAM-Follower System	<i>Vincenzo Niola , Giuseppe Quaremba</i>	484-425
The industry faculty connection using a failure analysis process	<i>Ondina Popescu, Hector Marin, Cezar Popescu, Javier Quezada, Joao Ofenboeck, Juan Cortes</i>	484-117
On the leakage flow measurement in gibson method	<i>Edson da Costa Bortoni, Afonso Santos</i>	484-147
Target Selection in UAV Cooperative Control under Uncertain Environment: Genetic Algorithm Approach	<i>Jose B. Cruz, jr, Genshe Chen, Dongxu Li, Denis Garagic</i>	484-125
VHDL Modeling of an Artificial Neural Network for Classification of Power Quality Disturbance	<i>Florence Choong, Faisal Yasin, Shahiman Sulaiman, Mamun Reaz</i>	484-181
Field Measurements of Wind Loads on Flat Roofs Under Hurricane Conditions	<i>Amaury A. Caballero, Kang K. Yen, Ernesto Inoa</i>	484-177
Sequential State Estimates Subject to Equality Constraints	<i>Allen R. Stubberud Peter A. Stubberud</i>	484-324
Level 2 Fusion: Formation Association Metric With Uncertainty	<i>Stephen C. Stubberud, Kathleen A. Kramer</i>	484-144

Fuzzy template matching for printing character inspection	<i>Bin Chen, Lei He</i>	484-141
A Simulation based Approach to Failsafe Systems in Automotive Design	<i>Aldo Sorniotti, Gianfrancesco Maria Repici</i>	484-273
Generalized Formulation of the Analog Circuit Design Process	<i>Alexander Zemliak</i>	484-293
Exploring the world of knowledge management: agreements & disagreements in the research community	<i>Kostas Metaxiotis, Kostas Ergazakis, John Psarras</i>	484-279
Co-learning Multi-agent Congestion Control for High-Speed Networks	<i>Ming-Chang Hsiao, Shun-Wen Tan, Kao-Shing Hwang, and Cheng-Shong Wu</i>	484-309
Conserved Quantities for Dynamic Systems	<i>Robert W. Finkel</i>	484-347
Interval Frazer-Duncan criterion for stability analysis of linear systems with dependent coefficients in the characteristic polynomial	<i>Lubomir Kolev, Simona Petrakieva</i>	484-336
An ATPG enhancement for reducing scan-based test application time	<i>Th. Haniotakis, S. Tragoudas, G. Pani</i>	484-325
Super wide viewing for tele-operation	<i>Hajime Nagahara, Yasushi Yagi, Masahiko Yachida</i>	484-329
A new procedure for a special kind of multivariable systems decoupling. Application to the primary mirror of a large scale telescope	<i>Marta Sigut, Leopoldo Acosta, Nicolas Marichal</i>	484-316
Bandwidth selection for kernel density estimation	<i>Zeljko Djurovic, Branko Kovacevic</i>	484-337

## CONFERENCE: **WSEAS IMCCAS 2004**

### SPECIAL SESSION: Systems Theory and Intelligent Control

ROOM B', 15:00-20:00  
(coffee-break 17:00-17:30)

Chair: S. Tragoudas, Th. Haniotakis,

Free and Fixed End-Point Optimal Control Problems for Linear Systems	<i>Corneliu Botan, Florin Ostafi, Alexandru Onea</i>	484-223
Extension Case Reasoning for Intelligent Conceptual Design	<i>Yanwei Zhao, Zhengchu Wang, Jiandi Huang, Jieyu Wu, S.Y. Chen</i>	484-355
Reducing the training speed of Support Vector Machines By Barycentric Correction Procedure	<i>Ariel Lucien Garcia, Neil Hernandez Gress</i>	484-389
Attractor of local search space in the traveling salesman problem	<i>Weiqi Li</i>	484-283
Low-Level Monitoring and High-Level Tuning of UPC on CC-NUMA Architectures	<i>Ahmed Sameh Mohamed</i>	484-277
An object-oriented knowledge-based approach to the optimization of automatic testing system	<i>Warren Davis, Ladislav J. Kohout, Ernest McDuffie</i>	484-367

selection		
An optimal model for construction time-resource tradeoff problem	<i>Xianjia Wang, Zhongping Wan</i>	484-251
Software testing process management by applying six sigma	<i>Ljubomir Laziaè, Dušan Velaševiaè, Nikos Mastorakis,</i>	484-315
Hardware in the lop simulation of infrared ranging system	<i>Goran Dikic, Branko Kovacevic, Milorad Milovanovic</i>	484-418
Classification Improvement by an Extended Depth LSA Machine	<i>Andreas Albrecht, Georgios Lappas</i>	484-406
A multiple reference GLR state estimator for hybrid systems	<i>Dany Dionne and Hannah Michalska</i>	484-360
Guaranteed cost control of a discrete-time system on the basis of a linear bound	<i>N. Takahashi, M. Kono, A. Sato, M. Ishitobi</i>	484-339
Real-Time Road Signs Recognition on a SIMD Architecture	<i>Salvatore Vitabile, Antonio Gentile, and Filippo Sorbello</i>	484-368
Design of Robust SISO Controllers for Stable Plants Using FIR Q Parameters	<i>Yingxuan Duan, Benoit Boulet, Hannah Michalska</i>	484-387
A New Learning Algorithm to Control an Autonomous Biped Robot	<i>João Paulo Ferreira, Tito G. Amaral, V. Fernão Pires, Manuel Crisóstomo, A. Paulo Coimbra</i>	484-369
Learning Helicopter Model Through “Examples”	<i>Tito G. Amaral, Manuel Crisóstomo V. Fernão Pires,</i>	484-370
Dynamic RC Paradigm for Computationally Intensive Applications	<i>Hassan Diab</i>	484-404

**CONFERENCE: WSEAS MATH 2004**

**SYMPOSIUM: Differential Equations: Theory and Applications**

**CHAIR: S. Belbas, J. Gregor**

**ROOM C', 08:00-14:00  
(coffee-break 10:00-10:30)**

Dynamically stable solitons in optical fibers	<i>Anjan Biswas</i>	484-289
Dynamic modeling of a vibratory bowl feeder	<i>Diana Ioana Popescu</i>	484-300
Integrating nonlinear heat conduction equation with source term	<i>Iryna Dmytruk</i>	484-211
Investigation of delay system with piece-wise right side arising in radiotherapy	<i>Vasiliy Marzeniuk, Alexander Nakonechny</i>	484-274
Range bounding with taylor models - some case studies	<i>Kyoko Makino, Martin Berz and Youn-Kyung Kim</i>	484-396
Transient Analysis of Two-Dimensional Rectangular Fin With Various Surface Heat	<i>Kuang Yuan Kung</i>	484-213



Effects		
Optimal control of Goursat systems in irregular domains	<i>S. A. Belbas</i>	484-327
On the Approximation of the Auto Solid Angle for Solving Integral Equations	<i>Diana Rubio and Maria Ines Troparevsky</i>	484-122
Generalized Output Regulation for a Class of Nonlinear Systems via the Robust Control	<i>L. E. Ramos-velasco, S. Celikovsky, V. Lopez-morales and V. Kucera</i>	484-156
Constructive State-Affine Transformation of a Class of Nonlinear Systems	<i>V. Lopez-Morales, A. Glumineau, and L.E. Ramos-Velasco</i>	484-157
Lineal Spline Approximation Algorithms for Solution of the Coefficient Inverse Problem for Nonlinear System of Ordinary Differential Equations and Applications in Neuroscience	<i>A. Grebennikov, J. F. Leyva</i>	484-372
Effects of Surface Roughness on Dynamic Squeeze Behavior of Partial Journal Bearings with Finite Width	<i>K. Y. Kung , C. H. Hsu , P. C. Chen , J.R. Lin</i>	484-214
Partial difference equations and the maximum principle	<i>Jiri Gregor</i>	484-287
Robust stability and robust $H^\infty$ control of 2-D discrete systems with polytopic uncertainty	<i>Lixin Gao</i>	484-186
On the Solvability for Parabolic Equations with one space Variable	<i>Martín López Morales</i>	484-101
Periodic oscillators in genetic networks with negative feedback loops	<i>Ruiqi Wang, Zhujun Jing, Luonan Chen</i>	484-173

CONFERENCE: **WSEAS SOSM 2004**

SPECIAL SESSION: Neural Networks

ROOM C', 15:00-17:00  
(coffee-break 17:00-17:30)

Chair: Andreas Albrecht, Georgios Lappas

Cerebellum Based Car Auto-Pilot System	<i>B.Hsieh, C.Quek, A.Wahab</i>	484-357
On the Evaluation of Dividing Samples for	<i>Andreas Albrecht, Georgios Lappas</i>	484-405

Training an Extended Depth LSA Machine		
Quickprop Neural Network Ensemble	<i>Ramasubramanian P and Kannan A</i>	484-298
Learning sensory-motor mappings for dynamical control of hand-arm systems using general regression neural network	<i>Marteau Pierre-François, Gibet Sylvie</i>	484-379
Pattern Recognition to Distinguish Magnetizing Inrush from Internal Faults in Power Transformers	<i>Denis V. Coury , Ênio C. Segatto</i>	484-286
Optimum scaling for Sigmoid output functions	<i>Alan Parkinson</i>	484-235

**CONFERENCE: WSEAS MATH 2004**

**SPECIAL SESSION: Optimization Algorithms and Applications**

ROOM C', 17:30-20:00  
(coffee-break 17:00-17:30)

Chair: Ralph Oberste-Vorth, Amaury C. Caballero

New optimization approach in the design of e-shaped patch antenna	<i>Abbas Ali Lotfi Neyestanak, Farrokh Hojjat Kashani, Masood Khosroshahy</i>	484-184
On a new extension of Wilcox's Method	<i>Irina Gladkova, Dmitry Chebanov</i>	484-381
The structure of local search diversity	<i>Alexandre Linhares</i>	484-171
Autonomous agent learning by a creativity optimization	<i>Chi-kin Chow, Hung-tat Tsui</i>	484-388
A Network View of Capital Market Integration and Disintegration- An Example of VAR Model	<i>Hsiao-tang Hsu</i>	484-127
Optimum forming of plates by application of boundary forces	<i>Abdolreza Joghataie and Amin Heidarpour</i>	484-187
Normal Forms and Fatou-Bieberbach Domains	<i>Ralph Oberste-Vorth</i>	484-380
Using Wavelets Based on B-splines for Calculation of the Hankel Transform	<i>Eugene Postnikov</i>	484-272
A Novel Method for Parameter Optimization in Two-Dimensional Dynamical Models	<i>Guanyu Wang</i>	484-264
A Heuristic Dynamic Programming Algorithm for 2D Unconstrained Guillotine Cutting	<i>Xiang Song, Chengbin Chu, Yiyong Nie</i>	484-108

**BANQUET: 21:00**

**APRIL 23, 2004**

**CONFERENCE: WSEAS ISA 2004**

**SPECIAL SESSION: Information Systems**

**ROOM A', 08:30-12:00**  
**(coffee-break 10:00-10:30)**

**Chair: Amaury C. Caballero, Kang Yen**

Malaysian usage of Open Source in Local Residential College Network Management	<i>Nor Badrul Anuar, Lai Siew Cheng</i>	484-110
Tuning Function Point Analysis Model by Using Fuzzy Neural Network	<i>Ho-Leung Tsoi</i>	484-248
The Analysis and Approximation Algorithm of Efficient Monitoring Method for the Network Flow	<i>Liu Xianghui, Yin Jianping<sup>1</sup>, Lu Xicheng, Cai Zhiping and Zhao Jianmin</i>	484-208
Business Process Documentation for ERP-Supported Organisations	<i>Nikolaos Panayiotou, Stavros Ponis, Sotiris Gayialis, Theodoros Panayiotou</i>	484-423
Towards a New Digitalized Knowledge Paradigm	<i>Juan Chamero</i>	484-226
A Framework for Agile Development in Outsourced Environments	<i>Raghvinder Sangwan, Colin Neill, Phil Laplante, Daniel Paulish, Wolfgang Kuhn</i>	484-307
Characterization of Specific Applications using Statistical Methods in Distributed Systems	<i>Jaime Yeckle and Wilson Rivera</i>	484-182
Investigation of the main Design Parameters Affecting the Performance of a PCCC Turbo Code	<i>Emmanouil I. Kalantzis, Panagiotis I. Dallas, Bayan S. Sharif</i>	484-338
Meta-heuristic Techniques for Dynamic Channel Allocation (DCA) in Mobile Cellular Networks	<i>Swarup Mandal, Debashis Saha</i>	484-328
Automatic generation of user web access profiles	<i>Haider Ramadhan, Abdullah Al-Hamadnai, Zuhoor Al-Khanjari, and Swami Kutti</i>	484-310
SSTP: An Approach to Solve SAT Instances Through Partition	<i>Jose Torres-Jimenez, Luis Vega-Garcia, Cesar A. Coutino-Gomez, Francisco J. Cartujano-Escobar</i>	484-403
Modelling a network security systems using Multi-Agents Systems Engineering	<i>Gustavo A. Santana Torrellas, David Velazquez Cruz</i>	484-285

GNU as port for a Micro Signal Architecture Processor	<i>Dil Muhammad Akbar Hussain, Syed Faisal Akber</i>	484-219
---	--	---------

CONFERENCE: **WSEAS ISA 2004**

SPECIAL SESSION: Intelligent Systems

ROOM A', 15:00-20:00  
(coffee-break 17:00-17:30)

Chair: Constantine Manikopoulos, George Antoniou

Comparative Evaluation of Classification Algorithms in Anomaly Intrusion Detection	<i>Zheng Zhang, Constantine Manikopoulos</i>	484-391
A framework for an intelligent problem solver	<i>Magdy Aboul-Ela</i>	484-410
A Novel Hopfield Neural Network Approach to Job-Shop Scheduling Problems	<i>Wan-Liang Wang, Xin-Li Xu, S. Y. Chen, Qi-Di Wu</i>	484-399
An Adaptive Fuzzy Logic Based Optimal Handoff Algorithm in Cellular Systems	<i>S. Koyalkar, K. Yen, J. Chuang, A. Caballero</i>	484-308
Artificial Neural Network Based Modeling of Injection Pressure in Diesel Engines	<i>M.Ali Akcayol, Can Cinar, H.Ibrahim Bulbul, Ali Kilicarslan</i>	484-222
Computerized Adaptive Student Help: Experiments in Low-Cost Artificially Intelligent Automation of Student-Tutor Interaction	<i>Huey Ling Toh, R.C. Lacher</i>	484-224
Planning aspects of WCDMA mobile radio network deployment	<i>Yufei Wu, Samuel Pierre</i>	484-363
Fuzzy rough sets with GA-based attribute division	<i>Hugang Han, Yoshio Morioka</i>	484-280
Designing Business Logistics Networks Using Model-Based Reasoning and Heuristic-Based Searching	<i>Robbie T. Nakatsu</i>	484-351
A random neural network for the dynamic multicast problem	<i>Giovanni Aiello, Salvatore Gaglio, Giuseppe Lo Re, Alfonso Urso</i>	484-353
Factorial Methods and Discriminant Analysis for the Classification of Regions of Poverty in Mexico	<i>Miriam M. Alvarez</i>	484-154

CONFERENCE: **WSEAS IMCCAS 2004**

SPECIAL SESSION: Signal Processing and Pattern Recognition

ROOM B', 08:30-12:00  
(coffee-break 10:00-10:30)

Chair: Kang Yen, I. Gonos

Pipe Identification by Optimized eddy current Sensor	<i>Adel Zitouni, Larbi Beheim, Fabien Belloir</i>	484-225
Mammography segmentation on viscous flooding simulation	<i>Mohamed ali Hamdi - Hamid Amiri</i>	484-218
Physiologic Instrumentation for Real-time Monitoring of Affective State of Computer Users	<i>Armando B. Barreto and Jing Zhai</i>	484-220
An Accurate Registration Method for Large Object Surface Reconstruction from Range Image	<i>Xiaokun Li, Feng Gao, Chia Y. Han, B. Everding, Xun Wang, William G. Wee</i>	484-120
HW/SW implementation of an industrial control system based on public wireless network	<i>Wei Du, Haoran Feng, Chundi Mu</i>	484-422
Real-Time Image Generation with Simultaneous Video Memory Read/Write Access and Fast Physical Addressing	<i>Mountassar Maamoun, Boualem Laichi, Abdelhalim Benbelkacem, Daoud Berkani</i>	484-371
An enhanced web-service for scientific data visualization	<i>Ashraf S. Hussein, Mohammed S. Abdelwahab, Mohammed F. Tolba</i>	484-302
Dynamic Agents Self-Deployment for Tracking Moving Targets Based on Target Motion Models	<i>Tamir Hegazy and George Vachtsevanos</i>	484-408
Real-Time Systems Modeling and Scheduling with Hyperperiodic Tasks	<i>Chakib Chraibi</i>	484-322
A New Recognition System for Buried Metallic tags	<i>Adel Zitouni, Larbi Beheim, Fabien Belloir</i>	484-419
0.18um cmos 2ghz error-correcting encoder	<i>Masahiro Sasaki, Mai Nozawa, Takashi Matsumoto</i>	484-402
On-Chip Fixed-Pattern-Noise Canceling with Non-Destructive Intermediate Readout Circuitry for CMOS Active-Pixel Image Sensors	<i>Ryo Kagaya, Masayuki Ikebe, Tetsuya Asai, Yoshihito Amemiya</i>	484-344
A Sonar-Based Omni Directional Obstacle Detection System Designed for Blind Navigation	<i>Armando Barreto and Maroof Choudhury</i>	484-112

CONFERENCE: **WSEAS IMCCAS 2004**

SPECIAL SESSION: Circuits and Electronics

Chair: George Antoniou

ROOM B', 15:00-17:00  
(coffee-break 17:00-17:30)

Measuring the equivalent resistance of electrode filaments of tubular fluorescent lamps, during dimming operation	<i>Fabio T. Wakabayashi, Fausto D. Dantas, Flavio A. S. Gonçalves, Joao O. P. Pinto and Carlos A. Canesin</i>	484-341
Effect of Impact Ionization on Subthreshold Current in Submicron n-MOSFET.	<i>B. Jharia, S. Sarkar and R. P. Agarwal</i>	484-180
Design of Reliable and Low-Cost Capacitance - to - Voltage Converters	<i>Mashhour M. Bani Amer</i>	484-259
PV Water Pumping System Using a Current-Fed Parallel Resonant Push-Pull Inverter For Rural Areas Applications	<i>Denizar Cruz Martins</i>	484-281
A new small signal rf mosfet model	<i>Kwoming Chang, Hanpang Wang</i>	484-282
A Simplified Circuit to Model RC Interconnec	<i>Patricia Renault, Pirouz Bazargan-Sabet</i>	484-320
collaborative and distributed laboratories for remote measurement: concepts and technical challenges	<i>Alberto Roversi, Andrea Conti, Davide Dardari and Oreste Andrisano.</i>	484-397
An Alternative Approach for Real Time Digital Controller Implementation	<i>Nitish Patel and Sing Kiong Nguang</i>	484-374
A high performance automatic gain control circuit for communication applications	<i>Hwang-cherng Chow and I-hsin Wang</i>	484-383

CONFERENCE: **WSEAS IMCCAS 2004**

SPECIAL SESSION: VLSI, CAD/CAM systems

Chair: George Antoniou

ROOM B', 17:30-19:30  
(coffee-break 17:00-17:30)

An Efficient Multi-Scan-Chain Optimization Using Physical Layout Information	<i>Jiann-Chyi Rau, Ching-Hsiu Lin, Jun-Yi Chang</i>	484-138
The optimal testrail architecture for core-based soc testing	<i>Jiann-chyi Rau, Wang-tiao Huang, and Chih-lung Chien</i>	484-137
Built-In Reseeding With Modifying Technique For Bist	<i>Jiann-Chyi Rau, Ta-Wei Yang, Ying-Fu Ho</i>	484-135
VLSI based implementation of low complexity wavelet filter structure on fpga	<i>Dr .P.Vanaja Ranjan, K.Thirupura Sundari.</i>	484-237
A Novel VLSI chip of lifting based 2-d dwt	<i>leibo liu, hongying meng, li zhang</i>	484-234

**CONFERENCE: WSEAS MATH 2004**SYMPOSIUM: Algebra

ROOM C', 09:00- 14:00

(coffee-break 11:00-11:30).

Chair: Toshiaki Itoh, Concepción González-Concepción

Quadratic Forms, Pythagorean Triples, and a Certain Diophantine Equation	<i>Cordelia Aitkin, Thomas Colthurst, Kathryn Kollett, Steven Levandosky, Andrew Perry, Eugene Stern</i>	484-126
DKA method for single variable holomorphic functions	<i>Toshiaki Itoh</i>	484-303
Linear Systems and Half-Line Integral Representations	<i>Irwin W. Sandberg</i>	484-295
Comparing Newton with ANN for load flow	<i>Javier Bilbao Eugenio Bravo</i>	484-317
A Generalization of the Remainder in Multivariate Polynomial Interpolation	<i>Dana Simian</i>	484-334
Higher order multivariate automatic differentiation and validated computation of remainder bounds	<i>Martin Berz and Kyoko Makino</i>	484-395
Space objective functions for systolic arrays	<i>Dragan M. Randjelovic</i>	484-257
Mathematical tools of mixed number algebra	<i>Md. Shah Alam, M.H. Ahsan, Mushfiq Ahmad</i>	484-253
Lanczos Methods in Economic Models. Visual Representation and Computing	<i>Concepción González-Concepción &amp; Peter Graves-Morris</i>	484-238

**CONFERENCE: WSEAS MATH 2004**SYMPOSIUM: Algorithms and Numerical Analysis

ROOM C', 15:00- 20:00

(coffee-break 17:00-17:30).

Chair: Toshiaki Itoh, Concepción González-Concepción

Interval-valued Fuzzy Numbers and Concordance Analysis Approach	<i>Ming-Miin Yu and Jing-Shing Yao</i>	484-288
Dominating Sets for Outerplanar Graphs	<i>Val Pinciu</i>	484-172
Modeling Error in the Two-Node Timoshenko Beam Finite Element	<i>João Elias Abdalla Filho, Michele Schunemann Pereira</i>	484-400
Towards the formalization of knowledge representation	<i>Omar López-Ortega, Joel Suárez-Cansino, Virgilio López-Morales</i>	484-160
Some new properties for capacitated lot sizing problem with bounded inventory and stockouts	<i>Xiao Liu, Feng Chu, Chengbin Chuchengen Wang</i>	484-129

An Analysis of Average Search Cost of the External Hashing with Separate Chain	<i>Ningping Sun, Ryoza Nakamura, Hongbing Zhu, Akio Tada, Wenling Sun</i>	484-131
Iterative learning control with input parameterization of a fedbatch lactic acid fermentation process	<i>Cherif Ben-Youssef, Julio Waissman, Gabriela Vázquez</i>	484-190
Time distributed update of the NLMS algorithm coefficients for acoustic echo cancellers	<i>Fotis Andritsopoulos, Yannis Mitsos, Christos Charopoulos, Gregory Doumenis, Constantin Papaodysseus</i>	484-291

**APRIL 24, 2004**

**Full Day Tour (to be announced soon)**