# TABLE OF CONTENTS

**Wednesday, September 2**

14:00 - 15:00  
**Tutorial 1**  
*Room:* Sala de Grados A

**A TUTORIAL ON MANIFOLD CLUSTERING USING GENETIC ALGORITHMS**

Héctor D. Menéndez (University College London, United Kingdom)

14:00 - 15:00  
**Session 1, A: Human Interfaces**  
*Room:* Room 5

**THE DESIGN AND IMPLEMENTATION OF A GSM BASED USER-MACHINE INTERACTED REFRIGERATOR**

Hüseyin Gürüler (Mugla Sitki Kocman University, Turkey)

**CONTENT BASED RECOMMENDATION FOR HBB TV BASED ON BAYES CONDITIONAL PROBABILITY FOR MULTIPLE VARIABLES APPROACH**

Alexandra Posoldova (Griffith University, Australia)  
Alan Wee-Chung Liew (Griffith University, Australia)

**TOWARD GAMIFICATION OF KNOWLEDGE BASE CONSTRUCTION**

Boonsita Roengsamut (Ritsumeikan University, Japan)  
Kazuhiro Kuwabara (Ritsumeikan University, Japan)  
Hung-Hsuan Huang (Ritsumeikan University, Japan)

14:00 - 15:00  
**Session 1, B: Robotics**  
*Room:* Room 6

**SIMPLE PROGRAMMING SCHEME FOR INDUSTRIAL ROBOT MANIPULATORS: A CASE STUDY FOR FEASIBILITY PROOF**

Sezgin Secil (Eskisehir Osmangazi University, Turkey)  
Kaya Turgut (Eskisehir Osmangazi University, Turkey)  
Osman Parlaktuna (Eskisehir Osmangazi University, Turkey)  
Metin Ozkan (Eskisehir Osmangazi University, Turkey)
IMPLEMENTATION OF FRONTIER-BASED EXPLORATION ALGORITHM FOR AN AUTONOMOUS ROBOT ......................................................................................................................................... 34
Erkan Uslu (Yildiz Technical University, Turkey)
Furkan Cakmak (Yildiz Technical University, Turkey)
Muhammet Balcilar (Yildiz Technical University, Turkey)
Attila Akin (Yildiz Technical University, Turkey)
M. Fatih Amasyali (Yildiz Technical University, Turkey)
Sirma Yavuz (Yildiz Technical University, Turkey)

DESIGN, FABRICATION AND DYNAMIC MODELING OF A NEW STEP-WALKER ROBOT PLATFORM USING WI-FI BASED CONTROLLER ................................................................................................ 41
Salar Basiri (Marlik Institute of Innovation and Technology, Iran)
Pooyan Piredeir (University of Guilan, Iran)
Armin Kasemi Langroodi (K. N. Toosi University of Technology, Iran)
Aryo Jamshidpey (Institute for Advanced Studies in Basic Sciences, Iran)

14:00 - 15:00
Session 1, C: Networking & Economics
Room: Room 7

A COMPARATIVE STUDY ON MACHINE LEARNING ALGORITHMS FOR INDOOR POSITIONING ................ 47
Sinem Bozkurt (Eskisehir Osmangazi University, Turkey)
Gulin Elibol (Eskisehir Osmangazi University, Turkey)
Serkan Gunal (Anadolu University, Turkey)
Ugur Yayan (Inovasyon Muhendislik Ltd. Sti., Turkey)

A NOVEL MULTI-SENSOR AND MULTI-TOPOLOGICAL DATABASE FOR INDOOR POSITIONING ON FINGERPRINT TECHNIQUES ................................................................................................. 55
Sinem Bozkurt (Eskisehir Osmangazi University, Turkey)
Ahmet Yazici (Eskisehir Osmangazi University, Turkey)
Serkan Gunal (Anadolu University, Turkey)
Ugur Yayan (Inovasyon Muhendislik Ltd. Sti., Turkey)
Fatih Inan (Inovasyon Muhendislik Ltd. Sti., Turkey)

COMPARISON OF CONSUMER PURCHASE INTENTION BETWEEN INTERACTIVE AND AUGMENTED REALITY SHOPPING PLATFORMS THROUGH STATISTICAL ANALYSES .............................................................................................................................................................. 62
Jasmina Stoyanova (University of Porto, Portugal)
Petia Georgieva (University of Aveiro, Portugal)
Pedro Brito (University of Porto, Portugal)
Mariofanna Milanova (University of Arkansas at Little Rock, USA)

15:15 - 16:15
Session 2, A: Image Processing
Room: Room 5

WEIGHTED PRINCIPAL COMPONENT ANALYSIS BASED EDGE LINKING ..................................................... 70
Kemal Ozkan (Eskisehir Osmangazi University, Turkey)
Sahin Isik (Eskisehir Osmangazi University, Turkey)
VIDEO SUPER-RESOLUTION BASED ON BLOCK MOTION ESTIMATION AND GRADIENT MAGNITUDE

Yıldıray Anagün (Eskisehir Osmangazi University, Turkey)
Erol Seke (Eskisehir Osmangazi University, Turkey)
Nihat Adar (Eskisehir Osmangazi University, Turkey)

CONTENT PROTECTION AND HIERARCHICAL ACCESS CONTROL IN IMAGE DATABASES

Roumen Kountichev (Technical University, Bulgaria)
Mariofanna Milanova (University of Arkansas at Little Rock, USA)
Roumiana Kountcheva (T&K Engineering Co, Bulgaria)

15:15 - 16:15
Session 2, B: Energy
Room: Room 6

REDUCTION OF POWER LOSS USING REACTIVE POWER OPTIMIZATION IN A REAL DISTRIBUTION SYSTEM

Hamza Yapıcı (Eregli Vocational School, Turkey)
Nurettin Çetinkaya (Selcuk University, Turkey)

A HYBRID OPTIMIZATION ALGORITHM FOR ENERGY EFFICIENT TRAIN OPERATION

Kemal Keskin (Eskisehir Osmangazi University, Turkey)
Abdurrahman Karamancioglu (Eskisehir Osmangazi University, Turkey)

SUCCESSIVE EVOLUTION OF CHARGING STATION PLACEMENT

Helge Spieker (University of Applied Sciences Bonn-Rhein-Sieg, Germany)
Alexander Hagg (University of Applied Sciences Bonn-Rhein-Sieg, Germany)
Alexander Asteroth (University of Applied Sciences Bonn-Rhein-Sieg, Germany)
Stefanie Meilinger (University of Applied Sciences Bonn-Rhein-Sieg, Germany)
Volker Jacobs (University of Applied Sciences Bonn-Rhein-Sieg, Germany)
Alexander Oslislo (University of Applied Sciences Bonn-Rhein-Sieg, Germany)

15:15 - 16:15
Session 2, C: Economics
Room: Room 7

DEVELOPMENT OF 2D CURVE-FITTING GENETIC/GENE-EXPRESSION PROGRAMMING TECHNIQUE FOR EFFICIENT TIME-SERIES FINANCIAL FORECASTING

Manal Alghieth (De Montfort University, United Kingdom)
Yingjie Yang (De Montfort University, United Kingdom)
Francisco Chiclana (De Montfort University, United Kingdom)

NESTED EVOLUTIONARY ALGORITHMS FOR JOINT STRUCTURE DESIGN AND OPERATION OF MICRO-GRIDS UNDER VARIABLE ELECTRICITY PRICES SCENARIOS

R. Mallol-Poyato (Universidad de Alcalá, Spain)
S. Jiménez-Fernández (Universidad de Alcalá, Spain)
L. Cornejo-Bueno (Universidad de Alcalá, Spain)
P. Díaz-Villar (Universidad de Alcalá, Spain)
S. Salcedo-Sanz (Universidad de Alcalá, Spain)
A SYSTEMATIC CREDIT SCORING MODEL BASED ON HETEROGENEOUS CLASSIFIER ENSEMBLES

Maher Ala'raj (Brunel University London, United Kingdom)
Maysam Abbod (Brunel University London, United Kingdom)

16:30 - 17:10
Session 3, A: Biomedical Engineering
Room: Room 5

A NOVEL HYBRID METHOD FOR DETERMINING THE DEPTH OF ANESTHESIA LEVEL: COMBINING RELIEFF FEATURE SELECTION AND RANDOM FOREST ALGORITHM (RELIEFF+RF)

Musa Peker (Samandira Vocational and Technical Anatolian High School, Turkey)
Aysê Arslan (Yıldırım Beyazıt University, Turkey)
Baha Şen (Yıldırım Beyazıt University, Turkey)
Fatih V. Çelebi (Yıldırım Beyazıt University, Turkey)
Abdulkadir But (Yıldırım Beyazıt University, Turkey)

A COMPARISON OF DIFFERENT CLASSIFICATION ALGORITHMS FOR DETERMINING THE DEPTH OF ANESTHESIA LEVEL ON A NEW SET OF ATTRIBUTES

Aysê Arslan (Yıldırım Beyazıt University, Turkey)
Baha Şen (Yıldırım Beyazıt University, Turkey)
Fatih V. Çelebi (Yıldırım Beyazıt University, Turkey)
Musa Peker (Samandira Vocational and Technical Anatolian High School, Turkey)
Abdulkadir But (Yıldırım Beyazıt University, Turkey)

16:30 - 17:30
Session 3, B: Assisted Living
Room: Room 6

TRAINING PLAN EVOLUTION BASED ON TRAINING MODELS

David Schaefer (University of Applied Sciences, Germany)
Alexander Asteroth (University of Applied Sciences, Germany)
Melanie Ludwig (University of Applied Sciences, Germany)

PEOPLE COUNTING SYSTEM BY USING KINECT SENSOR

Aylin Coskun (Eskisehir Osmangazi University, Turkey)
Anil Kara (Eskisehir Osmangazi University, Turkey)
Mustafa Parlaktuna (Eskisehir Osmangazi University, Turkey)
Metin Ozkan (Eskisehir Osmangazi University, Turkey)
Osman Parlaktuna (Eskisehir Osmangazi University, Turkey)

AN ALERT MECHANISM FOR ORIENTATION SYSTEMS BASED ON SPECULATIVE COMPUTATION

João Ramos (University of Minho, Portugal)
Tiago Oliveira (University of Minho, Portugal)
Paulo Novais (University of Minho, Portugal)
José Neves (University of Minho, Portugal)
Ken Satoh (National Institute of Informatics, Japan)
16:30 - 17:30
Session 3, C: Environmental Monitoring
Room: Room 7

PREDICTION OF WASTEWATER TREATMENT PLANT PERFORMANCE USING MULTILINEAR REGRESSION AND ARTIFICIAL NEURAL NETWORKS .......................................................... 164
   Abdullah Erdal Tümer (University of Necmettin Erbakan, Turkey)
   Serpil Edebali (University of Selcuk, Turkey)

SHORT-TERM WIND SPEED PREDICTION USING SEVERAL ARTIFICIAL NEURAL NETWORK APPROACHES IN ESKISEHIR.......................................................................................................... 169
   Mert Duran (Anadolu University, Turkey)
   Ümmühan Başaran filik (Anadolu University, Turkey)

PREDICTION FOR THE SOLID WASTE COMPOSITION BY USE OF DIFFERENT CURVE FITTING MODELS: A CASE STUDY .................................................................................................................... 173
   Kemal Özkan (Eskisehir Osmangazi University, Turkey)
   Sahin Isik (Eskisehir Osmangazi University, Turkey)
   Aysun Özkan (Anadolu University, Turkey)
   Müfide Banar (Anadolu University, Turkey)
Thursday, September 3

09:00 - 10:00
Session 4, A: Transport
Room: Room 5

VISION BASED CONDITION MONITORING APPROACH USING FUZZY SYSTEM FOR RAIL TRACK CURVES IN RAILWAYS
Kagan Murat (Firat University, Turkey)
Mehmet Karakose (Firat University, Turkey)
Erhan Akin (Firat University, Turkey)

FUZZY LOGIC BASED RAIL COMPONENT DETECTION METHOD USING LINE EXTRACTION FROM CONTINUOUSLY IMAGES
Orhan Yaman (Firat University, Turkey)
Mehmet Karakose (Firat University, Turkey)

RAIL EXTRACTION USING GEODESIC MODEL BASED INTERACTIVE SEGMENTATION METHOD
Ilhan Aydin (Firat University, Turkey)
Mehmet Karakose (Firat University, Turkey)
Erhan Akin (Firat University, Turkey)

09:00 - 10:00
Session 4, B: Robotics
Room: Room 6

AUTONOMOUS MOBILE ROBOT NAVIGATION COUPLING FUZZY LOGIC AND REACTIVE DVZ 3D OBSTACLE AVOIDANCE CONTROL
Emna Baklouti (Université de Sfax, Tunisia)
Mohamed Jallouli (Université de Sfax, Tunisia)
Nader Ben Amor (Université de Sfax, Tunisia)
Sondes Titi (Université de Sfax, Tunisia)
Ahlem Naftti (Université de Sfax, Tunisia)

ARTICULATED DESIGN ARCHITECTURE AND OPEN-LOOP COMMAND AND CONTROL SYSTEM FOR A TELE-OPERATED VERSATILE TERRAIN MOBILITY PLATFORM
Raabid Hussain (National University of Sciences and Technology, Pakistan)
Raafay Ijaz (National University of Sciences and Technology, Pakistan)
Rasheed Mughal (National University of Sciences and Technology, Pakistan)
Asim Qureshi (National University of Sciences and Technology, Pakistan)
Nasir Rashid (National University of Sciences and Technology, Pakistan)
Mohsin Tiwana (National University of Sciences and Technology, Pakistan)
Javaid Iqbal (National University of Sciences and Technology, Pakistan)

DEVELOPMENT OF A LOW-COST ANTHROPOMORPHIC MANIPULATOR FOR COMMERCIAL USAGE
Razeen Hussain (National University of Sciences and Technology, Pakistan)
Mustafa Shahid (National University of Sciences and Technology, Pakistan)
Jibran Khan (National University of Sciences and Technology, Pakistan)
Mohsin Tiwana (National University of Sciences and Technology, Pakistan)
Javaid Iqbal (National University of Sciences and Technology, Pakistan)
Nasir Rashid (National University of Sciences and Technology, Pakistan)
NEW GRADIENT FEATURES FOR OFF-LINE HANDWRITTEN SIGNATURE VERIFICATION ........................................................... 216
Yasmine Serdouk (University of Sciences and Technology Houari Boumediene (USTHB), Algeria)
Hassiba Nemmour (University of Sciences and Technology Houari Boumediene (USTHB), Algeria)
Youcef Chibani (University of Sciences and Technology Houari Boumediene (USTHB), Algeria)

HISTOGRAM OF ORIENTED GRADIENTS FOR WRITER’S GENDER, HANDREDNESS AND AGE PREDICTION ...................................................................................................................................................... 220
Nesrine Bouadjenek (University of Sciences and Technology Houari Boumediene (USTHB), Algeria)
Hassiba Nemmour (University of Sciences and Technology Houari Boumediene (USTHB), Algeria)
Youcef Chibani (University of Sciences and Technology Houari Boumediene (USTHB), Algeria)

OPEN AGAINST CLOSED SYSTEM FOR OFFLINE HANDWRITTEN SIGNATURE IDENTIFICATION ................................................................................................................................................... 225
Bilal Hadjadji (University of Science and Technology Houari Boumediene (USTHB), Algeria)
Youcef Chibani (University of Science and Technology Houari Boumediene (USTHB), Algeria)

14:00 - 15:20
Session 5, A: Biomedical Engineering
Room: Room 5

AN ALTERNATIVE EVALUATION OF POST TRAUMATIC STRESS DISORDER WITH MACHINE LEARNING METHODS .............................................................................................................. 231
Sevinç İlhan Omurca (Kocaeli University, Turkey)
Ekin Ekinci (Kocaeli University, Turkey)

THE USAGE OF CONDITIONED BCG SIGNALS FOR THE DETECTION OF FUNDAMENTAL CARDIAC ARRHYTHMIA DISEASES ................................................................................... 238
Semih Ergin (Eskisehir Osmangazi University, Turkey)
Kemal Keskin (Eskisehir Osmangazi University, Turkey)

PRIORITY RANKING OF CORNEAL TRANSPLANTATION PATIENTS USING A TOURNAMENT BASED CLASSIFICATION STRATEGY ................................................................................... 242
Vahid Behrouz (Dokuz Eylul University, Turkey)
M. Alper Selver (Dokuz Eylul University, Turkey)
Ozlem B. Selver (Ege University, Turkey)
Sait Egrilmez (Ege University, Turkey)
Cuneyt Guzelis (Izmir University of Economics, Turkey)

FEASIBILITY OF AN ONTOLOGY DRIVEN TUMOR-NODE-METASTASIS CLASSIFIER APPLICATION: A STUDY ON COLORECTAL CANCER .............................................................. 247
Fábio França (University Medical Center Freiburg, Germany)
Stefan Schulz (Medical University of Graz, Austria)
Peter Bronsert (University Medical Center Freiburg, Germany)
Paulo Novais (University of Minho, Portugal)
Martin Boeker (University Medical Center Freiburg, Germany)
14:00 - 15:20
Session 5, B: Assisted Living
Room: Room 6

A MULTIMODAL WHEELCHAIR CONTROL SYSTEM BASED ON EEG SIGNALS AND EYE TRACKING FUSION
Fatma Ben Taher (Université de Sfax, Tunisia)
Nader Ben Amor (Université de Sfax, Tunisia)
Mohamed Jallouli (Université de Sfax, Tunisia)

FEATURE EXTRACTION FOR HUMAN ACTIVITY RECOGNITION ON STREAMING DATA
Nawal Yala (USTHB, Algeria)
Belkacem Fergani (USTHB, Algeria)
Anthony Fleury (Mines Douai, France)

A MOBILE HEALTHCARE SYSTEM BASED ON BODY SENSOR NETWORKS
Aydan Rende (Dokuz Eylül University, Turkey)
Gökhan Dalkiliç (Dokuz Eylül University, Turkey)
Murat Ayaz (Dokuz Eylül University, Turkey)
Mehmet Özcanhan (Dokuz Eylül University, Turkey)

AN INTELLIGENT ENVIRONMENT TO ASSESS AUDITORY EMOTIONAL RECOGNITION
Davide Carneiro (University of Minho, Portugal)
Serafim Pinto (University of Minho, Portugal)
Ana Pinheiro (University of Minho, Portugal)
Paulo Novais (University of Minho, Portugal)

14:00 - 15:20
Session 5, C: Computational Intelligence Foundations
Room: Room 7

PROPOSAL FOR A FUNCTION GENERATOR AND EXTRAPOLATION ANALYSIS
Julian Belz (University of Siegen, Germany)
Oliver Nelles (University of Siegen, Germany)

ON THE HERITABILITY OF DANDELION-ENCODED HARMONY SEARCH HEURISTICS FOR TREE OPTIMIZATION PROBLEMS
Cristina Perfecto (University of the Basque Country, Spain)
Miren Nekane Bilbao (University of the Basque Country, Spain)
Javier Del Ser (TECNALIA, Spain)
Armando Ferro (University of the Basque Country, Spain)

A NEW CLASSIFICATION METHOD BY USING LORENTZIAN DISTANCE METRIC
Hasan Bilge (Gazi University Engineering Faculty, Turkey)
Yerzhan Kerimbekov (Yesevi University, Turkey)
Hasan Uğurlu (Gazi University, Turkey)

SIMPLE RECURRENT NETWORK IN REAL TIME ASTROCYTE
Bassam Abed (International Islamic University Malaysia, Malaysia)
Amelia Ritahani Ismail (International Islamic University Malaysia, Malaysia)
Normaziah Abdul Aziz (International Islamic University Malaysia, Malaysia)
15:40 - 17:00
Session 6, A: Biomedical Engineering & Modeling and Identification
Room: Room 5

DETERMINING MUAP ACTIVITY CORRIDOR IN SCANNING EMG RECORDINGS ......................................................... 309
N. Tugrul Artug (Istanbul Arel University, Turkey)
Bülent Bolat (Yildiz Technical University, Turkey)
Onur Osman (Istanbul Arel University, Turkey)
Imran Goker (Istanbul Arel University, Turkey)
M. Baris Baslo (Istanbul University, Turkey)

SYSTEM STATES REDIAGRAMMED .................................................................................................................. 314
Sabah Al-Fedaghi (Kuwait University, Kuwait)

TEMPERATURE SENSOR FAULT DIAGNOSING IN HEAVY DUTY GAS TURBINES USING LAGUERRE NETWORK-BASED HIERARCHICAL FUZZY SYSTEMS .................................................. 321
Ali Chaibakhsh (University of Guilan, Iran)
Saeed Amirkhani (University of Guilan, Iran)
Pooyan Piredeir (University of Guilan, Iran)

INVESTIGATION OF SOME PARAMETERS OF A NEURO-FUZZY APPROACH FOR DYNAMIC SOUND FIELDS VISUALIZATION .............................................................................................. 327
Geogi Shishkov (Bulgarian Academy of Sciences, Bulgaria)
Nevena Popova (Bulgarian Academy of Sciences, Bulgaria)
Kiril Alexiev (Bulgarian Academy of Sciences, Bulgaria)
Petia D. Koprinkova-Hristova (Bulgarian Academy of Sciences, Bulgaria)

15:40 - 17:00
Session 6, B: Control
Room: Room 6

TAKAGI-SUGENO PD+I FUZZY CONTROL OF PROCESSES WITH VARIABLE MOMENT OF INERTIA .......................................................................................................................................... 335
Alexandra-Iulia Stinean (Politehnica University of Timisoara, Romania)
Claudia-Adina Dragos (Politehnica University of Timisoara, Romania)
Radu-Emil Precup (Politehnica University of Timisoara, Romania)
Stefan Preitl (Politehnica University of Timisoara, Romania)
Emil M. Petriu (University of Ottawa, Canada)

AN IMC BASED FUZZY SELF-TUNING MECHANISM FOR FUZZY PID CONTROLLERS .............................................. 343
Akin Ilker Savran (Istanbul Technical University, Turkey)
Aykut Beke (Istanbul Technical University, Turkey)
Tufan Kumbasar (Istanbul Technical University, Turkey)
Engin Yesil (Istanbul Technical University, Turkey)

THE EFFECTS OF DIFFERENT MEMBERSHIP FUNCTIONS ON THE SYSTEM OUTPUT .............................. 350
Umit Ozsandikcioglu (Karadeniz Technical University, Turkey)
Ayten Atasoy (Karadeniz Technical University, Turkey)
Ismail Altas (Karadeniz Technical University, Turkey)

NONLINEAR SYSTEM MODELING AND CONTROL WITH DYNAMIC FUZZY WAVELET NEURAL NETWORK ........................................................................................................................ 354
Sevcan Yilmaz (Anadolu University, Turkey)
Yusuf Oysal (Anadolu University, Turkey)
15:40 - 17:00
Session 6, C: Planning
Room: Room 7

BUILDING BEHAVIOR TREES FROM OBSERVATIONS IN REAL-TIME STRATEGY GAMES .............................................................................................................................................. 361
   Glen Robertson (University of Auckland, New Zealand)
   Ian Watson (University of Auckland, New Zealand)

FUZZY-TEMPORAL APPROACH TO THE HANDLING OF TEMPORAL INTERVAL RELATIONS AND PREFERENCES ................................................................................................... 368
   Krystian Jobczyk (University of Caen, France)
   Antoni Ligęza (AGH University of Science Technology, Poland)
   Jerzy Karczmarczuk (University of Caen, France)

TEMPORAL PLANNING IN TERMS OF A FUZZY INTEGRAL LOGIC (FLI) VERSUS TEMPORAL PLANNING IN PDDL ........................................................................................................................ 376
   Krystian Jobczyk (University of Caen, France)
   Antoni Ligęza (AGH University of Science Technology, Poland)

CONSTRAINT-BASED MODEL DESIGN FOR TIMETABLING PROBLEMS IN SECONDARY SCHOOLS ...................................................................................................................................... 384
   Ana Maria Nogareda (Ecole Hôtelière de Lausanne, Switzerland)
   David Camacho (Universidad Autónoma de Madrid, Spain)
Friday, September 4

09:00 - 11:00
Tutorial 3
Room: Sala de Grados A

HOW TO SUCCESSFULLY APPLY GENETIC ALGORITHMS IN PRACTICE:
REPRESENTATION AND PARAMETRIZATION .......................................................... 390
Alexander Asteroth (University of Applied Sciences Bonn-Rhein-Sieg, Germany)
Alexander Hagg (University of Applied Sciences Bonn-Rhein-Sieg, Germany)

11:30 - 12:30
Session 7, A: Agents & Text and Document Analysis
Room: Room 5

ADVANCED COOPERATIVE DECENTRALIZED DECISION MAKING USING A
COOPERATIVE REWARD SYSTEM ............................................................................ 396
Patrick Pascheka (Volkswagen AG, Germany)
Michael Düring (Volkswagen AG, Germany)

A PERSONAL AGENTS HYBRID ARCHITECTURE FOR QUESTION ANSWERING
FEATURING SOCIAL DIALOG .................................................................................. 403
Miguel Coronado (Universidad Politécnica de Madrid, Spain)
Carlos Iglesias (Universidad Politécnica de Madrid, Spain)
Alberto Mardomingo (Universidad Politécnica de Madrid, Spain)

ON THE SCALABILITY OF TEXT CATEGORIZATION CLASSIFIER BASED ON ARABIC TEXT ............... 411
Ghassan Kanan (Amman Arab University, Jordan)
Riyad Al-Shalabi (Amman Arab University, Jordan)
Attiaa AL Khaleel (Jordan University for Science and Technology, Jordan)
Muneera AL Quraan (Jordan University for Science and Technology, Jordan)
Tarek Kanaan (Virginia Tec. University, USA)
Dua’a bani Salameh (Jordan University for Science and Technology, Jordan)

11:30 - 12:10
Session 7, B: Robotics
Room: Room 6

EXPERIMENTS AND SIMULATIONS OF WALL RUNNING AND TRANSFERRING
OF A CLIMBING ROBOT ....................................................................................... 419
Kiyoshi Ioi (Kinki University, Japan)
Yuta Shimizu (Kinki University, Japan)
Masataka Kimura (Kinki University, Japan)

CENTER OF MASS ESTIMATION BASED ON BARYCENTRIC COORDINATE
FOR OBJECT GRASPING ...................................................................................... 426
Yavuz Selim Bozan (Ataturk University, Turkey)
Gulsah Tumuklu Ozyer (Ataturk University, Turkey)
Bars Ozyer (Ataturk University, Turkey)
11:30 - 12:30
Session 7, C: Image Processing & Optimization
Room: Room 7

CANNYSR: USING SMART ROUTING OF EDGE DRAWING TO CONVERT CANNY BINARY EDGE MAPS TO EDGE SEGMENTS
Cuneyt Akinlar (Anadolu University, Turkey)
Edward Chome (Anadolu University, Turkey)

IMPROVING 3D OBJECT DETECTION AND CLASSIFICATION BASED ON KINECT SENSOR AND HOUGH TRANSFORM
T.J. Mateo Sanguino (University of Huelva, Spain)
F. Ponce Gómez (University of Huelva, Spain)

A HYBRID SWARM INTELLIGENCE ALGORITHM FOR SOLVING MULTI-OBJECTIVE OPTIMIZATION PROBLEMS
Osama Abdel Raouf (Menofia University, Egypt)
Ibrahim Hezam (Ibb University, Egypt)

15:00 - 16:00
Session 8, A: Text and Document Analysis
Room: Room 5

EVALUATION OF CLASSIFICATION MODELS FOR LANGUAGE PROCESSING
Zeynep Hilal Kilimci (Dogus University, Turkey)
Murat Ganiz (Dogus University, Turkey)

A NOVEL CLASSIFIER BASED ON MEANING FOR TEXT CLASSIFICATION
Murat Ganiz (Dogus University, Turkey)
Melike Tutkan (Dogus University, Turkey)
Selim Akyokuş (Dogus University, Turkey)

AUTOMATIC LINKING OF WIKIPEDIA PAGES BY THEIR SEMANTIC SIMILARITY
F. Yesim Ikikat (Beykent University, Turkey)
Behire Gurhan (Yildiz Technical University, Turkey)
Banu Diri (Yildiz Technical University, Turkey)

15:00 - 16:00
Session 8, B: Transport
Room: Room 6

AUTOMATED HIGHWAY LANE CHANGES OF LONG VEHICLE COMBINATIONS: A SPECIFIC COMPARISON BETWEEN DRIVER MODEL BASED CONTROL AND NON-LINEAR MODEL PREDICTIVE CONTROL
Peter Nilsson (Volvo Group Truck Technology, Sweden)
Leo Laine (Volvo Group Truck Technology, Sweden)
Niels van Duijkeren (KU Leuven, Sweden)
Bengt Jacobson (Chalmers University of Technology, Sweden)

COMPARISON OF THREE SEARCH ALGORITHMS FOR MOBILE TRIP PLANNER FOR ESKISEHIR CITY
Ahmet Aydin (Anadolu University, Turkey)
Sedat Telceken (Anadolu University, Turkey)
UBIQUITOUS COMMUNITY DRIVEN TRAFFIC ANALYSIS ................................................................. 485
  Fábio Silva (University of Minho, Portugal)
  Antonio D. Costa (University of Minho, Portugal)
  Paulo Novais (University of Minho, Portugal)
  Cesar Analide (University of Minho, Portugal)

15:00 - 16:00
Session 8, C: Optimization
Room: Room 7

TAG SNP SELECTION USING SIMILARITY ASSOCIATIONS BETWEEN SNPS............................................. 493
  İlhan İlhan (Necmettin Erbakan University, Turkey)
  Gülay Tezel (Necmettin Erbakan University, Turkey)
  Cengiz Özcan (Selçuk University, Turkey)

ENHANCED GENETIC ALGORITHM FOR MC/DC TEST DATA GENERATION ........................................ 501
  Ahmed El-Serafy (Ain Shams University, Egypt)
  Ghada El-Sayed (Ain Shams University, Egypt)
  Cherif Salama (Ain Shams University, Egypt)
  Ayman Wahba (Ain Shams University, Egypt)

ON SOLVING THE MOST STRINGS WITH FEW BAD COLUMNS PROBLEM:
AN ILP MODEL AND HEURISTICS ................................................................................................................. 509
  Evelia Lizárraga (Technical Univ. of Catalonia, Spain)
  Maria J. Blesa (Technical Univ. of Catalonia, Spain)
  Christian Blum (Univ. of the Basque Country UPV/EHU, Spain)
  Günther Raidl (Inst. of Computer Graphics and Algorithms, Austria)

AUTHOR INDEX ................................................................................................................................................... 517