

**Attention: Sessions are subject to change.****Last change: June 08, 2008****Sessions 1 & 2: Invited session - Humanoid robotics (Organizer: Prahlad Vadakkepat)**

Jin Yongying, Dip Goswami and Prahlad Vadakkepat.  
WALKING GAIT GENERATION FOR HUMANOID ROBOT BRAIL 1.0

Burra Pavan Kumar, Dip Goswami, Prahlad Vadakkepat.  
JUMPING AND HOPPING ROBOT: DEVELOPMENT AND EXPERIMENTATION

Prem Kumar P., Naman R. Patel and Laxmidhar Behera.  
VISUAL SERVOING OF REDUNDANT MANIPULATOR WITH JACOBIAN MATRIX ESTIMATION USING SELF-ORGANIZING MAP

Ruixiang Zhang.  
DESIGN OF A CLIMBING ROBOT: CAPUCHIN

JeongKi Yoo, Bum-Joo Lee and Jong-Hwan Kim.  
VISION SIMULATOR OF HSR-VII FOR OBSTACLERUN IN HUROCUP

Jonathan Bagot, John Anderson and Jacky Baltes.  
VISION-BASED MULTI-AGENT SLAM FOR HUMANOID ROBOTS

Kuo-Yang Tu and Mi-Shin Liu.  
A STUDY ON THE MOTION ENERGY OF A BIPEDAL ROBOT MANIPULATED BY DIFFERENT DEGREE OF FREEDOMS

Ching-Chang Wong, Chi-Tai Cheng and Hsiang-Min Chan.  
TWNHR-IV: HUMANOID SOCCER ROBOT DESIGN BY TKU

**Session 3: Map building and self-localization**

Janne Haverinen and Anssi Kemppainen.  
SELF-LOCALIZATION BY UTILIZING THE AMBIENT MAGNETIC FIELD

Marija Seder, Srećko Jurić-Kavelj and Ivan Petrovic.  
AUTOMATIC CREATION OF HIERARCHICAL MAPS OF INDOOR ENVIRONMENTS

Dario Lodi Rizzini and Stefano Caselli.  
MAP ESTIMATION WITH LASER SCANS BASED ON INCREMENTAL TREE NETWORK OPTIMIZER

Safaa Amin, Andry Tanoto, Ulf Witkowski, Ulrich Rückert and Said Abdel Wahab.  
EFFECT OF GLOBAL POSITION INFORMATION IN UNKNOWN WORLD EXPLORATION –CASE STUDY USING THE TELEWORKBENCH

Hala Ebied, Ulf Witkowski, Ulrich Rückert and Mohamed Saied Abdel-Wahab.  
VISUAL LANDMARKS BASED ON SELF-LOCALIZATION OF MOBILE ROBOTS USING AN ALTERNATIVE GEOMETRIC TRIANGULATION ALGORITHM

**Session 4: Invited session - Mechatronics (Organizer: Kurt Schlacher)**

Rafael Ludwig, Johannes Gerstmayr, Christian Augdopler and Christoph Mittermayer.  
REALISTIC ROBOT SIMULATION WITH FLEXIBLE COMPONENTS

Andreas Siuka and Markus Schöberl.  
APPLICATIONS OF ENERGY BASED CONTROL METHODS FOR THE INVERTED PENDULUM ON A CART

Hubert Gattringer, Andreas Rohrhofer and Wolfgang Höbarth.  
MODELLING AND CONTROL OF A MINI SEGWAY

Ronald Naderer and Paolo Ferrara.  
PNEUMATICALLY DRIVEN ROBOTS

Christian Mayrhofer, Bernhard Ramsebner and Karl Rieger.  
ENERGY BASED CONTROL OF A HYDROMECHANICAL SYSTEM

### Session 5: Practical robotics

Thomas Glotzbach, Fabian Müller, Andreas Wenzel, Achim Gehr and Jürgen Wernstedt.  
CONTROL CONCEPT FOR THE SIMULATION OF A NONHOLONOMIC MOBILE ROBOT WITH TWO STEERABLE AXES USING MATLAB®

Axel Böttcher, Felix Nüßlein and Alexander Ukas.  
AUTOMATED DETECTION OF THE PINBALL ON A PLAYFIELD

Nikolaos Zikos, Athanasios Kalpakas and Stefanos Zaharos.  
A COMPARATIVE ANALYSIS ON MOTION PLANNING MODELS FOR PARKING AUTONOMOUS CAR-LIKE MOBILE ROBOTS

### Session 6: High-level control)

Joseph Baxter, Edmund Burke, Jonathan M Garibaldi and Mark Norman.  
REAL-WORLD EVALUATION OF A NOVEL POTENTIAL FIELD SHARING METHOD

Takahiro Yamanoi, Hisashi Toyoshima, Toshimasa Yamazaki and Michio Sugeno.  
MICRO ROBOT CONTROL BY EEG ON MENTAL TRANSLATION WITH DIRECTIONAL SYMBOLS

Dir saber, Habert olivier and Pruski alain.  
FUZZY LOGIC TO DYNAMICALLY SETTING AN ELECTRIC WHEELCHAIR

### Session 7: Tracking

Srećko Jurić-Kavelj, Marija Seder and Ivan Petrovic.  
TRACKING MULTIPLE MOVING OBJECTS USING ADAPTIVE SAMPLE-BASED JOINT PROBABILISTIC DATA ASSOCIATION FILTER

Dapeng Zhang, Bernhard Nebel and Armin Hornung.  
SWITCHING ATTENTION LEARNING – A PARADIGM FOR INTROSPECTION AND INCREMENTAL LEARNING

De Silva Liyanage, Nigel Perera and Amal Punchihewa.  
MULTI CAMERA TRACKING FOR SURVEILLANCE APPLICATIONS

### Session 8: Mobile robotics & soccer robotics

Ulf Witkowski, Stefan Herbrechtsmeier, Mohamed El-Habbal and Ulrich Rückert.  
POWERFUL MINIATURE ROBOT FOR RESEARCH AND EDUCATION

Robert Grepl, Jakub Hrabec and František Šolc.  
CONTROL OF SOCCER ROBOT USING EXACT LINEARIZATION

Jiri Kotzian, Zdenek Machacek, Vilem Srovnal and Petr Wagner.  
CONTROL AND STRATEGY SYSTEM OF GROUP OF ROBOTS

### Session 9: Invited session - Robot soccer (Organizer, session chair: Peter Kopacek)

Peter Kopacek.  
ROBOTSOCCER: PAST – PRESENT – FUTURE

Peter Kopacek, A . Dermaku, K. Dragusha, E. Hajrizi and A. Murati.  
ROBOTSOCER – A TOOL FOR MECHATRONICS EDUCATION: CASE STUDY - UB T

Gerhard Höfer.  
AN AGENT-BASED SOFTWARE CONCEPT FOR MIROSOT ROBOT SOCCER

Ahmad Byagowi.  
MAN'S VISION BASED SLAM BY USING VISUAL ODOMETRY AND PERSPECTIVE IMAGES  
FOR NAVIGATION OF TWO-WHEEL DIFFERENTIAL ROBOTS

### **Session 10: Actuator design; Design optimization; Low-level control**

M. Sreekumar, T. Nagarajan and M. Singaperumal.  
LARGE DEFLECTION MODELING AND FEM SIMULATION OF A SPATIAL COMPLIANT  
MANIPULATOR SUITABLE FOR MEDICAL APPLICATIONS: PRELIMINARY DESIGN

Prashant Jamwal.  
DESIGN OPTIMIZATION OF A PARALLEL ANKLE REHABILITATION ROBOT USING  
MODIFIED GENETIC ALGORITHMS

Christoph Hackl, Christian Endisch and Dierk Schröder.  
SPECIALLY DESIGNED FUNNEL-CONTROL IN MECHATRONICS

Christoph Hackl, Christian Endisch and Dierk Schröder.  
APPLICABILITY OF FUNNEL-CONTROL IN ROBOTICS