

MMAR 2017 Lecture Schedule - Compact Form

Monday, 15:10 - 16:10

Casino A1L-A , page 18
Control-Oriented Modelling and Observer-Based Control of Distributed Parameter Systems Aschemann

Monday, 16:30 - 17:50

Casino A3L-A , page 23	Kalman A3L-B , page 25	Lehar A3L-C , page 27	Strauss A3L-D , page 28
Reduction of Wave Linear Repetitive Processes to Singular Roesser Model Form Galkowski, Boudelloua, Rogers	Triangulation Positioning System Based on a Static IR Beacon-Receiver System Ciezkowski	Adaptive Optimal Control Algorithm for Vibrational Systems Under Nonlinear Friction Wasilewski, Pisarski	Mobile Agents and Their Use in a Group of Cooperating Autonomous Robots Obdržálek
Extension of Cayley-Hamilton Theorem and a Procedure for Computation of the Drazin Inverse Matrices Kaczorek	Data Fusion of GPS Sensors Using Particle Kalman Filter for Ship Dynamic Positioning System Jaroś, Witkowska, Śmierchalski	Adaptive and Robust Motion Control in Presence of LuGre-Type Friction Jastrzębski, Kabziński, Mosiołek	Implementation and Evaluation of a Bilateral Teleoperation with Use of Wave Variables in the ReMeDi System for Remote Medical Examination Kurnicki, Cholewiński, Stańczyk, Arent
The Analysis of Permissible Quality Indices of the System with Affine Uncertainty of Characteristic Polynomial Coefficients Gayvoronskiy, Ezangina, Khozhaev	Evaluating the Ellipsoidal Collision Avoidance Region for the Future DAA Systems Spychała, Osypiuk	Direct Fuzzy Adaptive Control and Nonparametric Identification of Robot Manipulator with Elastic Joints Sąsiadek, Ulrich, Krzyżak	Rapid Navigation Function Control for Omnidirectional Mobile Platform Kowalczyk, Przybyła, Kozłowski
Finding a Set of (A,B,C,D) Realizations for Single-Input Multiple-Output Dynamic System: First Approach Using Digraph-Based Method for Solutions with Intersection Vertex Markowski, Hryniów	Design of Ship Course-Keeping System via Robust Adaptive Approach Zwierzewicz	Nonlinear Inverse Modeling with Signal Prediction in Bilateral Teleoperation with Force-Feedback Saków, Parus, Pajor, Miądlicki	

Tuesday, 09:00 - 10:00

Casino B1L-A, page 32
Quo Vadis Model Predictive Control? from Stabilizing to Distributed Economic MPC Allgower

Tuesday, 10:00 - 11:00

Casino B2L-A, page 32	Kalman B2L-B, page 33	Lehar B2L-C, page 35	Strauss B2L-D, page 36
Existence and Continuous Dependence of Solutions on Controls for Linear Control Systems with Different Fractional Orders Kamocki	Damping of Resonance Peaks Using Adaptive Notch Filters in Gearless Servo Drives Aldag, Horn	Tracking Control for a Long Pneumatic Transmission Line Kern, Gehring	Object Identification by Tactile Sensors with Improved Sensor Resolution Thormann, Winkler
Novelty Fractional-Order Backward Difference and its Applications in a Control System Analysis Ostalczyk	Estimation Problems of Pneumatic Transport System for Electromagnetic Grinding Ogonowski, Ogonowski	Optimal Multivariable Flux Control of Heat Transfer in a Metal Bar Kostin, Rauh, Aschemann, Saurin	Mobile Robot with Non-Slip Castor Wheel Beniak, Pyka
A Comparative Analysis of Two Methods for Model Predictive Control of Fractional-Order Systems Stanisławski, Rydel, Latawiec, Łukaniszyn, Gałek	Development of Microprocessor, Time Optimized Stepper Motor Driving Algorithm Przeniosło, Hołub	Boundary Control of Heat Transfer Processes in a Cylindrical Body Gavrikov, Kostin	A Simulation Evaluation of gCBHD Formula for Driftless Nonholonomic Systems Duleba, Mielczarek

Tuesday, 11:20 - 13:00

Casino B4L-A, page 43	Kalman B4L-B, page 45	Lehar B4L-C, page 47	Strauss B4L-D, page 50
New Interesting Facts About Minimum-Energy Perfect Control for LTI Nonsquare State-Space Systems Hunek	Dynamical Aspects of Multi-Input Single-Output Control for Heat Distribution Processes: Case Study Fratczak, Nowak, Laszczyk	An Addendum to Continuous-Time Dynamic System Identification with Multisine Random Excitations - from Frequency Response to Transfer Function Figwer	An Approach to Automated Tacit-Knowledge Acquisition and Transformation in Manufacturing Companies Patalas-Maliszewska, Krebs, Dudek
A Method for the Order Reduction of Linear Switching Systems Blanchini, Casagrande, Krajewski, Viaro	Oscillation Attenuation for Crane Payloads by Controlling the Rope Length Using Extended Linearization Techniques Rauh, Prabel, Aschemann	Robust Identification of Quadcopter Model for Control Purposes Arminski, Zubowicz	Position Estimation at Zero Speed for PMSM Using the Principal Component Analysis Urbanski, Nowopolski
Controllability of Delayed Systems Klamka	Experimental Validation of a Sensitivity-Based Learning-Type Controller for a Linear Time-Varying Model of a Flexible High-Speed Rack Feeder Rauh, Cont, Aschemann	Multistage Identification of an N-L-N Hammerstein-Wiener System Mzyk, Biegański, Kozdraś	Dynamical Behavior of the Hybrid Exothermic Chemical Reactor with Imperfect Mixing Skupin, Metzger, Laszczyk, Niedzwiedz
String Stability of a Leader Following Formation Control with Dynamic Weights Peters	A Discrete-Time Norm-Optimal Approach to Iterative Learning Control of a Bridge Crane Aschemann, Wache, Kraegenbring	Accelerating the Rate of Convergence for LMS-Like on-Line Identification and Adaptation Algorithms. Part 1: Basic Ideas Figwer, Michalczyk, Główka	Parametrization of Robotic Deburring Process with Motor Skills from Motion Primitives of Human Skill Model Parvizi, Ugurlu, Acikgoz, Konukseven
Decentralized Fixed Mode Radius of LTI System with Multiple Input and Output Delays Sahoo, Ghosh, Dworak	Friction Hysteresis Compensation Using Phase Correction of Periodic Trajectories Haus, Mercorelli, Werner	Smart Beam System: Identification and Minimal Realization Using Digraphs Theory Markowski, Muresan	Model of ADRC Speed Control System for Complex Mechanical Object with Backlash Wicher, Nowopolski

Tuesday, 15:00 - 16:20

Casino B5L-A , page 52	Kalman B5L-B , page 54	Lehar B5L-C , page 56	Strauss B5L-D , page 58
Emergency Control of a Space 3R Manipulator in Case of One Joint Failure Domski, Mazur	Backstepping-Based Sliding Mode Control of an Electro-Pneumatic Clutch Actuator Prabel, Aschemann	Accelerating PSO Based Feedrate Optimization for NURBS Toolpaths Using Parallel Computation with OpenMP Szczepanski, Erwinski, Paprocki	Energy-Aware Scheduling of Jobs Performed Sequentially Różycki, Waligóra
Application of Hamiltonian Mechanics to Control Design for Industrial Robotic Manipulators Záda, Belda	Reaching Law Based Discrete Time Switching Quasi-Sliding Mode Controller Latosiński	A Nonparametric Estimation Method for Stochastic Differential Equation with Sub-Fractional Brownian Motion Bochnacka, Filatova	Big Valley in Scheduling Problems Landscape – Metaheuristics with Reduced Searching Area Bożejko, Smutnicki, Uchroński, Wodecki
Granular Jamming Manipulator Filled with New Organic Materials Sayyadan, Gharib, Garakan	Simulation of Hybrid Systems with Sliding Modes Suski, Pytlak	Concept of Iterative Optimization of Minimally Invasive Surgery Benkmann, Smolinski, Jeinsch, Westerhoff, Cappius, Wustrack, Hommel	Minimizing Cycle Time in Manufacturing Systems with Additional Technological Constraints Smutnicki
Regularization of the Differential Inverse Orientation Problem of Generic Serial Revolute Joint Manipulators Drexler	Inventory Management Strategies with Higher Relative Degree Sliding Variables Latosiński, Bartoszewicz	Extremal Problems for Distributed Parabolic Systems with Boundary Conditions Involving Time-Varying Lags Kowalewski	Metaheuristics for Some Discrete-Continuous Project Scheduling Problems to Maximize the Net Present Value Waligóra

Tuesday, 16:40 - 18:00

Casino B7L-A , page 65	Kalman B7L-B , page 67	Lehar B7L-C , page 68	Strauss B7L-D , page 70
Inverse-Based Methods to Minimum-Energy MV Control for Nonsquare State-Space Systems Hunek, Korniak	Theoretical and Experimental Background for Artificial Neural Network Modeling of Alpha Type Stirling Engine Chmielewski, Możaryn, Krzemiński	An Iterative Solution Approach to Eigenvalue Problems for Linear Hamiltonian Systems and its Application to a Hybrid System Control Problem Gavrikov	Comparison of Different Filter Approaches for the Online Frequency Analysis of Speech Signals Rauh, Tiede, Klenke
Extended LMI Characterization of Some Control Problems for Linear Repetitive Processes Paszke, Boski, Rogers	Recursive Neural Network as Speed Controller for Two-Sided Electrical Drive with Complex Mechanical Structure Nowopolski, Wicher, Łuczak, Siwek	Online Parameter Identification for Continuous Fluidized Bed Spray Granulation with External Sieve-Mill Cycle Palis, Kienle	Polish Whispery Speech Recognition – Minimum Sampling Frequency Koziński, Sadalla, Drgas, Dąbrowski, Giernacki
Stability of Positive Nonlinear Systems Kaczorek, Borawski	Fuzzy Arithmetical Controller Design for Active Road Vehicle Suspension in the Presence of Uncertainties Hofmann, Hanss	Control-Based Damping of Elastic Gantry Crane Vibrations Golovin, Palis	The Impact of Vocabulary Size and Language Model Order on the Polish Whispery Speech Recognition Koziński, Sadalla, Drgas, Dąbrowski, Zietkiewicz

Wednesday, 09:00 - 10:00

Casino C1L-A, page 74
Control of Complex Robotic Systems: Challenges, Design and Experiments Chemori

Wednesday, 10:00 - 11:00

Casino C2L-A, page 74	Kalman C2L-B, page 76	Lehar C2L-C, page 77	Strauss C2L-D, page 79
Electrochemical Impedance Spectroscopy Applied for Assessment of Electrodes Used in EEG Examination Makiewicz, Górecka	Tracking Performance of Angular Velocity in a Servo System with Fractional-Order PI Controller and Anti-Windup Compensation Sadalla, Horla, Giernacki, Koziński	Stiffness Variations in Granular Jamming Robots, an Experimental Method Sayyadan, Moniri, Gharib	The Distributed Model Predictive Controller for the Nuclear Power Plant Turbo-Generator Set Sokólski, Rutkowski, Duzinkiewicz
An Expert System for Pre-Diagnostics Screening Using Neurofeedback Signals Zołubak, Pelc, Kawala-Janik, Stanisławski	Analogue Electronic Active Filter Implementation of an Approximate State Space Realisation of a Fractional-Order System Tutaj, Baranowski	Localization and Efficient Grasping of Objects by a Manipulator Using RFID Technique Thormann, Winkler	Predictive Control for Offset-Free Motion of Industrial Articulated Robots Belda, Záda
Trial Measurement of Movement-Related Cortical Dynamics Using Electroencephalography and Diffuse Correlation Spectroscopy Haddix, Bahrani, Kawala-Janik, Besio, Yu, Sunderam	Robust Fractional Order Controller for a Linear Active Magnetic Bearing System Nartowicz, Pawluszewicz, Mystkowski	Exploiting the Natural Dynamics of Compliant Joint Robots for Cyclic Motions Kashiri, Spyrakos-Papastavridis, Caldwell, Tsagarakis	Online Tuned Model Predictive Control for Robotic Systems with Bounded Noise Belda, Pavelková

Wednesday, 11:20 - 13:00

Casino C4L-A, page 86	Kalman C4L-B, page 88	Lehar C4L-C, page 90	Strauss C4L-D, page 93
An Indirect Backstepping Robust Control for Flyback Type DC to DC Converter Ozkaya, Zergeroglu, Seker	The Active Vibration Control of the Plate Structure by Using LQG Controller and Piezo-Stripes Koszewnik	Exponentially Weighted Aggregation of Models for Wiener-Hammerstein System Modelling Wachel, Hasiewicz	On the Efficiency of a Fast Technique of Impulsive Noise Removal in Color Digital Images Malinski, Smolka, Jama
Semi-Symbolic Operational Computation for Robust Control System Design Gil, Radetzki	High Performance PID Control of a Cascade Tanks System as an Example for Control Teaching Bieda, Blachuta, Grygiel	Implementation of Hierarchical Control of Drinking Water Supply System: Didactic Project – Computer Controlled System Tarnawski, Rutkowski, Ciminski	Novel Method for Joining Missing Line Fragments for Medical Image Analysis Najgebauer, Rutkowski, Scherer
Robust Backstepping Stabilization of Nonlinear Systems with Time-Varying Parameters Kabziński, Mosiołek	Velocity Estimation for Slow Motion Devices Equipped with Encoder Kolek, Rosół	Application of the Waveform Relaxation Technique to the Co-Simulation of Power Converter Controller and Electrical Circuit Models Maciejewski, Cortes Garcia, Schöps, Auchmann, Bortot, Prioli, Verweij	A 2D, Stochastic Model of a Phase-Detection Autofocus Gałęziowski
Interval Methods for the Implementation and Verification of Robust Gain Scheduling Controllers Kersten, Rauh, Aschemann	Application of a Modified Error Governor to Electronic Throttle Control Schöley, Drewelow, Jeinsch, Weinhold	Modelling Dynamics of Strongly Coupled Air Paths in Pneumatic Transport System for Milling Product Krauze, Pawelczyk	Estimation of DC Motor Parameters Using a Simple CMOS Camera Kowalczyk, Merta
Improvement of Accuracy of the Membrane Shape Mapping of the Artificial Ventricle by Eliminating Optical Distortion Sulej, Murawski, Pustelny	Preliminary Studies on Modelling the Drying Process in Product Classification and Separation Path in an Electromagnetic Mill Installation Wegehaupt, Buchczik, Krauze	A Smooth Local Polynomial Model of Vignetting Kordecki, Bal, Palus	

Thursday, 09:00 - 10:00

Casino D1L-A, page 98
Towards Safe Human-Robot Collaboration Finkemeyer

Thursday, 10:00 - 11:00

Casino D2L-A, page 98	Kalman D2L-B, page 100	Lehar D2L-C, page 101	Strauss D2L-D, page 102
Multi-Frequency Conditioning System of the Inductive Loop Sensor - Simulation Investigations Marszalek, Sroka, Zeglen	Using a Nonlinear Mechanical Control Coupling Metric for Biped Robot Control and Design Chen, Ni, Schmiedeler, Goodwine	Characteristic Equations for Descriptor Linear Electrical Circuits Borawski	Combined Estimation of Actuator and Sensor Faults for Non-Linear Dynamic Systems Pazera, Witczak, Korbicz
Mechatronic Sound Intensity 2D Probe Mickiewicz, Raczyński	General Lagrangian Jacobian Motion Planning Algorithm for Affine Robotic Systems with Application to a Space Manipulator Tchoń, Ratajczak	Non-Invasive Control of the Hegselmann-Krause Type Model Girejko, Malinowska	Simultaneous Estimation of Multiple Actuator and Sensor Faults for Takagi-Sugeno Fuzzy Systems Pazera, Witczak, Buciakowski, Mrugalski
Estimation of Micro-Doppler Signals Using Viterbi Track-Before-Detect Algorithm Mazurek	Singularity Avoidance in a Robotized Ultrasound Scan Fonte, Vieyres, Poisson, Novales	Reduction Strategies for the Cardinality Constrained Knapsack Problem Pieńkosz	

Thursday, 11:20 - 13:00

Casino D4L-A, page 110	Kalman D4L-B, page 112	Lehar D4L-C, page 113
Base-Stock Distributed Inventory Management in Continuous-Review Logistic Systems – Control System Perspective Ignaciuk	Multivariate Generalized Gaussian Function Mixture for Volume Modeling of Parathyroid Glands Listewnik, Piwowska-Bilska, Safranow, Iwanowski, Laszczyńska, Chosia, Ostrowski, Birkenfeld, Mazurek	Designing of Active Vibration Control System for Smart Structure 2-D with Non-Collocated Piezo-Elements Koszewnik
Determining Orientation of the Aerodynamically Adhesive Wall Climbing Robot Chashchukhin, Knyazkov, Knyazkov, Nunuparov	Takagi-Sugeno Fuzzy Model of Dissolved Oxygen Concentration Dynamics in a Bioreactor at WWTP Zubowicz, Duzinkiewicz, Piotrowski	Reconfiguration of Fixed-Wing UAV Control System in Autonomous Flight Żugaj
Indirect Measurements of Milling Product Quality in the Classification System of Electromagnetic Mill Buchczik, Wegehaupt, Krauze	Deep Neural Networks Approach to Skin Lesions Classification – a Comparative Analysis Kwasigroch, Mikołajczyk, Grochowski	