

MMAR 2018 Lecture Schedule - Compact Form

Monday, 15:10 - 16:10

Casino A1L-A , page 16
An Intelligent Decision-Making System for Autonomous Units Based on the Mind Model Kowalczyk, Czubenko

Monday, 16:30 - 17:50

Casino A3L-A , page 20	Kalman A3L-B , page 21	Lehar A3L-C , page 23	Strauss A3L-D , page 25
Model Decomposition and Optimal Flux Control for Linear Distributed Heat Transfer Systems Kostin, Rauh, Aschemann	Continuous-Time Nonlinear Block-Oriented Dynamic System Identification from Sampled Step and Step-Like Responses Figwer	Variable-, Fractional-Order RST/PID Controller Transient Characteristics Calculation Ostalczyk	Mixed Energy Model for a Differential Guide Mobile Robot Jaramillo Morales, Gómez Mendoza
Optimal PWA Approximation for a Nonlinear Car on the Hill System and Properties of the Hybrid MPC Constrained Time-Optimal Controller Orlowski	Trajectory Tracking and Nonparametric Identification of Flexible Space Robot Manipulators Sąsiadek, Ulrich, Krzyżak	Logistic Fractional Variable-Order Equation - Numerical Simulations for Fitting Parameters Mozyrska, Oziabło	Feasible Trajectory Planning Algorithm for a Skid-Steered Tracked Mobile Robot Subject to Skid and Slip Phenomena Nardi, Ferraro, Scordamaglia
An Integro-Differential Approach to LQ-Optimal Control Problems for Heat Transfer in a Cylindrical Body Gavrikov, Kostin	Efficient Identification of Hammerstein Systems by Two-Level Optimization with Decomposition Mzyk	The Fractional Variable-Order Cucker-Smale Type Model for a Couple of Agents Girejko, Mozyrska, Wyrwas	Application of Iterative Learning Methods to Control of a LEGO Wheeled Mobile Robot Maniarski, Paszke, Patan
		Predictive Control of Linear Fractional-Order Systems Based on Discrete-Time Fractional-Order Laguerre Filters Stanisławski, Latawiec, Rydel, Łukaniszyn, Gałek	Leader-Follower Control and Collision Avoidance for the Formation of Differentially-Driven Mobile Robots Kowalczyk, Kozłowski

Tuesday, 9:00 - 10:00

Casino B1L-A , page 28
Model Predictive Control and Estimation of Linear Transport-Reaction Distributed Parameter Systems Dubljevic

Tuesday, 10:00 - 11:00

Casino B2L-A , page 28	Kalman B2L-B , page 30	Lehar B2L-C , page 31	Strauss B2L-D , page 33
Linear Matrix Inequality Techniques for the Optimization of Interval Observers for Spatially Distributed Heating Systems Rauh, Kersten, Aschemann	Improving Reliability Through the Product's Life Cycle Management Makarova, Shubenkova, Pashkevich	Relief-Based Feature Ranking and Feature Selection for Monitoring Induction Motors Stief, Ottewill, Baranowski	Iterative Learning Control for a Sub-Class of Uncertain 2D Systems Sulikowski
Remarks on Functional Observers for Distributed Parameter Systems Emirsajlow	Optimisation-Based Tuning of Dynamic Matrix Control Algorithm for Multiple-Input Multiple-Output Processes Sawulski, Ławryńczuk	Application of the Wavelet Transform and Lipschitz Exponent for the Evaluation of Sandwich Panel Deformations at the Support Pozorska, Pozorski	On Leader-Following Consensus Protocol for Positive Discrete-Time Multi-Agent Systems Girejko, Malinowska
Actuator Fault Detection and Estimation for a Class of Hyperbolic PDEs Using Filter-Based Observer Xu, Dubljevic	A New Potential Field Inspired Path Planning Algorithm for Ships Lazarowska	Analytical Steady-State Model of the Pipeline Flow Process Kowalczyk, Tatara	Pole-Free Perfect Control: Theory Vs. Simulation Examples Krok, Hunek

Casino B4L-A, page 38	Kalman B4L-B, page 40	Lehar B4L-C, page 42	Strauss B4L-D, page 45
Fractional Opinion Formation Models with Leadership Almeida, Malinowska, Odziejewicz	A Decoupling Servo Pressure Controller for Pneumatic Muscle Actuators Martens, Seel, Boblan	Physical Modelling of an Antagonistic Pneumatic Pivot Drive Winter, Rücker, Landkammer, Hornfeck, Heß, Paetzold	Second-Order Sliding Mode Control with State and Disturbance Estimation for a Permanent Magnet Linear Motor Aschemann, Haus, Mercorelli
Leader-Following Group Consensus of Discrete Fractional-Order Double-Integrator Multi-Agent Systems Tabatabaei, Shahamatkhah	Practical Validation of the Reduced-Order Active Disturbance Rejection Controller for the Delay-Dominated Processes Nowak, Grelewicz, Czczot	Comparison and Identifiability Analysis of Friction Models for the Dither Motion of a Solenoid Wenzl, Straußberger, Braun, Wirtensohn, Kiltz, Reuter, Aschemann	Sliding Mode Control with Time-Varying Switching Hyperplane for Data Transmission Networks Latosiński, Bartoszewicz
Simple Case of Fractional Sturm-Liouville Problem with Homogeneous Von Neumann Boundary Conditions Klimek	A Quasi-Stationary Approach to Control Problems for Hybrid Flexible Systems Gavrikov, Akulenko	Experimental Modelling of a Floating Offshore Wind Turbine Lindquist, Nielsen, Pedersen, Soltani	Integral Sliding Mode Control and Gain-Scheduled Modified Utkin Observer for an Underground Coal Gasification Energy Conversion Process Uppal, Butt, Bhatti, Aschemann
Extensions of the Cayley-Hamilton Theorem to Fractional Linear Systems Kaczorek	Visual Feedback for Control Using Haar-Like Classifier to Identify the Quadcopter Position Urbanski	ADRC Load Position Controller for Two Mass System with Elastic Joint and Backlash Wicher	Discrete Sliding-Mode Control of Multipath TCP Networks Under Input and Output Uncertainty Ignaciuk, Morawski
On the Observability of Linear Nonstationary Fractional Systems Zaczkiewicz	High Performance Control of a Coupled Tanks System As an Example for Control Teaching Blachuta, Bieda, Grygiel	Structural Sensitivity of Control Models Arising in Combined Chemo-Radiotherapy Dolbniak, Smieja, Swierniak	Sliding Mode Control of an Electromechanical Solenoid Actuator for Soft Landing Kuntuz, Qureshi, Bebek

Casino B5L-A, page 47	Kalman B5L-B, page 49	Lehar B5L-C, page 51	Strauss B5L-D, page 53
Optimality and Sensitivity of Least-Distance and Avoidance Solutions in Multicriteria Optimization Skulimowski	Performance Analysis of the Image Fusion Methods of the Proposed 2D Acoustic Camera Rzepecki, Budzan, Wrona, Pawelczyk	Nonparametric Identification of the Surgeon's Hand Vibration in Haptic Devices Hajnayeb, Ghasemloonia	Guidance and Control of Autonomous, Flexible Wing UAV with Advanced Vision System Al-Isawi, Sasiadek
Optimization of Robot Tasks by Intelligent Objects Using RFID Technology Thormann, Winkler	On Impulsive Noise Suppression Techniques in Color Images Maliński, Smołka	Modeling and Identification of Cylindrical Bodies with Free Convection and Peltier Elements As Sources for Active Heating Knyazkov, Aschemann, Kersten, Kostin, Rauh	MARAAL: a Low Altitude Long Endurance Solar Powered UAV for Surveillance and Mapping Applications Dwivedi, Patrikar, Addamane, Ghosh
Approximate Criteria for the Evaluation of Truly Multi-Dimensional Optimization Problems Kowalczyk, Białaszewski	Research of the Equipment Calibration Methods for Fertilizers Particles Distribution by Size Using Image Processing Measurement Method Laucka, Adaskeviciute, Valinevicius, Andriukaitis	Least Squares and Instrumental Variables Identification of Polynomial Wiener Systems Janczak	Obstacle Detection and Avoidance System for Unmanned Multirotors Stulgis, Ambroziak, Kondratiuk
1st Order Nonstationary Element Optimization Using PSO Algorithm Wiechetek, Kaszyński	Classification of Vehicles in Aerial Imagery Using Deep Convolutional Neural Networks Mazurek, Oszutowska-Mazurek	Parameter Identification for Non Integer Order, Discrete, State Space Model of Heat Transfer Process Using CFE Approximation Oprzędkiewicz, Mitkowski	Development of an Unmanned Vertical Take-Off and Landing Aircraft for Medical Express UAV Challenge Czyba, Lemanowicz, Simon, Kudala, Gorol, Galeja, Hanke, Sikora, Grabowski, Ryczko, Żurawski, Kapała, Kreihls, Langner

Wednesday, 9:00 - 10:00

Casino C1L-A, page 62
Autonomous Flight of Flapping Wing Robots - the Relation Between Body and Mind de Croon

Wednesday, 10:00 - 11:00

Casino C2L-A, page 62	Kalman C2L-B, page 64	Lehar C2L-C, page 65	Strauss C2L-D, page 66
Robust and Adaptive Ship Path-Following Control System Design Zwierzewicz	Control Loop Performance Improvement for OPC Implementation Grega	Performance Assessment of the Tilt Fractional Order Integral Derivative Regulator for Control Flow Rate in Festo MPS® PA Compact Workstation Koszewnik, Ostaszewski, Pawłuszewicz, Radgowski	Feedforward Position Control Concepts for Radial Pneumatic Engines Wache, Aschemann
Model-Free Control Approach for Fixed-Wing UAVs with Uncertain Parameters Analysis Barth, Condomines, Moschetta, Join, Fliess	Amplitude Modulation and Convolutional Encoder Techniques for Gait Speed Classification Elkurdi, Caliskanelli, Nefti-Meziani	Transfer Matrices with Positive Coefficients for Standard and Fractional Positive Linear Systems Kaczorek, Sajewski	Computationally Efficient Implementation of Dynamic Matrix Control Algorithm for Very Fast Processes Using Programmable Logic Controller Wojtulewicz, Ławryńczuk
On Initialization of Adaptation in Active Noise Control Figwer, Michalczyk	Multitasking Filtration Network Sztandera, Kaszyński	Discrepancy Between Derivative Orders in Fractional Supercapacitor Models for Charging and Discharging Cycles Kopka	A Comparative Study on the Nonlinear Control of Ball and Plate Şen, Türker

Wednesday, 11:20 - 13:00

Casino C4L-A, page 72	Kalman C4L-B, page 74	Lehar C4L-C, page 76	Strauss C4L-D, page 78
Further Towards the Analytical Solution of Minimum-Energy Perfect Control Design Problem Hunek, Feliks	A Lyapunov Function Based Nonlinear Controller Design for PVTOL Aircraft Subaşı, Türker	Effective Use of Lightweight Robots in Human-Robot Workstations with Monitoring via RGBD -Camera Bothe, Winkler, Goldhahn	Comprehensive Modeling of Quadrotors for Maneuvering Flight Control Design Peng, Abdul Hamid, Zhu, Lin, Chen
On Polynomial Zero Exclusion from an RHP Sector Casagrande, Krajewski, Viaro	Combining an Internal SMC with an External MTPA Control Loop for an Interior PMSM Zwenger, Mercorelli	Remote Control of Robotic Manipulator Under Delays in Communication Channel Klimkowicz, Patan	A Generalized Crank-Nicolson Method for the Solution of the Subdiffusion Equation Błasik
A New Nonunique PSVD-Based Inverse of Nonsquare Polynomial Matrices Hunek, Majewski	Study on Controller Embedding Stage Using Model-Based-Design for a Bike with CMG Różewicz, Górniczko-Hutnicza, Piłat	Efficient Evaluation and Optimization of Automated Gripper Finger Design for Industrial Robotic Applications Kapilavai, Wolniakowski, Jørgensen, Lindvig, Savarimuthu, Krüger	Numerical Aspects of Extreme Learning Machine Implementation to Regression Problems Kabziński
Application of a Frequency-Discretization Technique for Stability and Control of Uncertain Differential Linear Repetitive Processes Boski, Paszke, Rogers	Effects of Pharmacokinetics and DNA Repair on the Structure of Optimal Controls in a Simple Model of Radio-Chemotherapy Bajger, Fujarewicz, Swierniak	Preliminary Studies on Trajectories Generation for Walking Robot Based on Human Data Parulski, Kozłowski	Estimation of a Stochastic Burgers' Equation Using an Ensemble Kalman Filter Domżański, Kowalczyk
A Characterization of the Distance Between Controllable and Uncontrollable LTI Systems Son, Pérez Chávez, Siegmund	Comparison of Estimator-Based Compensation Schemes for Hydrostatic Transmissions with Uncertainties Danh, Aschemann		Efficiency Improvements to Uniformization for Markovian Birth-and-Death Models Burak

Thursday, 9:00 - 10:20

Casino D1L-A, page 82	Kalman D1L-B, page 84	Lehar D1L-C, page 86	Strauss D1L-D, page 88
Mechatronic 3D Sound Intensity Probe and its Application to DOA Mickiewicz, Raczyński	Robust NMPC Schemes for the Control of Mobile Robots in the Presence of Dynamic Obstacles Subramanian, Nazari, Arslan Alvi, Engell	Extremal Problems for Parabolic Systems with Multiple Time-Varying Lags Kowalewski	Multiple-Model Based Fault-Diagnosis: an Approach to Heterogeneous State Spaces Skeli, Weidemann
New Approach to Accuracy Measurement of the Membrane Shape Mapping of the Heart Assist Pump Sulej, Murawski	Convolutional Neural Network Based Sensors for Mobile Robot Relocalization Sinha, Patrikar, Dhekane, Pandey, Kothari	State-Space Transformations of Uncertain Systems with Purely Real and Conjugate-Complex Eigenvalues Into a Cooperative Form Kersten, Rauh, Aschemann	Binary Classifier for Fault Detection Based on KDE and PCA Cong, Baranowski
Biomechanical System for Measuring the Breaking Force of the Inguinal Hernia Mesh After Lichtenstein Tension-Free Repair Grzeszewski, Kamiński, Okulik, Pietruszewicz, Szydłowski, Waszczuk	The Effect of an Off-Centered Orientable Wheel on Motion Characteristics of a Mobile Robot Beniak, Pyka	Numerical Test for Stability Evaluation of Discrete-Time Systems Grzymkowski, Stefański	SVM Based Bearing Fault Diagnosis in Induction Motors Using Frequency Spectrum Features of Stator Current Andrijauskas, Adaskevicius
Measurement Uncertainty Evaluation of Results Provided by Transducers Working in Control Loops Wiora, Wiora	Coordination of Concurrent Mobile Robot Motion Processes with Composite Automaton Supervisor Roszkowska, Dulewicz, Janiec	When Is Naive Low-Pass Filtering of Noisy Measurements Counter-Productive for the Dynamics of Controlled Systems? Rauh, Romig, Aschemann	

Thursday, 10:40 - 12:00

Casino D3L-A, page 93	Kalman D3L-B, page 95	Lehar D3L-C, page 97	Strauss D3L-D, page 99
Realization of Anchors Selflocalization During Preparation Stage of the Radiolocalization System Romaniuk, Gosiewski	Theoretical and Algorithmic Aspects of Generating Pre-Control Form of the gCBHD Formula Mielczarek, Duleba	An Enumerative Algorithm for a Two-Machine Preemptive Job Scheduling with a Learning Effect Żurowski, Gawiejnowicz	The Use of an Autoencoder in the Problem of Shepherding Kowalczyk, Jędruch, Szymański
Observer Strategies for Virtual Sensing of Embroidered Metal-Polymer Heater Structure Schimmack, Pöschke, Schulte, Mercorelli	Kinematic Track Modelling for Fast Multiple Body Dynamics Simulation of Tracked Vehicle Robot Morita, Hiramatsu, Niccolini, Argiolas, Ragaglia	Improving the Efficiency of Scheduling Jobs Driven by a Common Limited Energy Source Różycki, Węglarz	On Control-Oriented Modeling in Heat Transfer Based on a Projection Technique and the Method of Integrodifferential Relations Saurin, Rauh, Aschemann
Inference Methods for Detecting the Root Cause of Alarm Floods in Causal Models Wunderlich, Niggemann	Accelerating Newton Algorithms of Inverse Kinematics for Robot Manipulators Duleba, Karcz-Duleba	Cyclic Scheduling in Interlaced and Non-Interlaced Mode Smutnicki	Unintended Synchronisation Between Rotational Speed and PWM Frequency in a PM BLDC Drive Unit Tutaj, Drabek, Dziwinski, Baranowski, Piatek
Optimal Selection of Input Features and an Accompanying Neural Network Structure for the Classification Purposes - Skin Lesions Case Study Mikołajczyk, Grochowski, Kwasigroch	Construction, Modelling and Identification of an Experimental and Educational 2DOF Manipulator for Investigation of Model Based Control Algorithms Arent, Prędkiewicz, Panachida, Domski, Klama	Power-Aware Scheduling of Preemptable Independent Jobs on a Single Processor to Meet a Schedule Deadline Różycki, Waligóra	