

# MMAR 2019 Lecture Schedule - Compact Form

Monday, 15:10 - 16:10

<p><b>Marco Polo (Casino)</b>  <b>A1L-A</b>, page 14</p>
<p>Optimization of Decentralized Control Systems  <b>Lall</b></p>

Monday, 16:30 - 17:50

<p><b>Marco Polo (Casino)</b>  <b>A2L-A</b>, page 14</p>	<p><b>Vasco da Gamma (Kalman)</b>  <b>A2L-B</b>, page 16</p>	<p><b>Ferdinand Magellan (Lehar)</b>  <b>A2L-C</b>, page 18</p>
<p>Stability and Angles Between State Matrices of Positive Linear Systems  <b>Kaczorek</b></p>	<p>Selection of Training Options for Deep Learning Neural Network Using Genetic Algorithm  <b>Szymak</b></p>	<p>Model-Based Controller Using Quasi-Velocities for Some Vehicles  <b>Herman</b></p>
<p>Extremal Problems for Integral Time Lag Parabolic Systems  <b>Kowalewski, Miśkiewicz</b></p>	<p>Deep Neural Network Architecture Search Using Network Morphism  <b>Grochowski, Kwasigroch, Mikołajczyk</b></p>	<p>Localization of Workpieces by Robot Manipulators Using RFID Technology  <b>Thormann, Winkler</b></p>
<p>On asymptotic properties of discrete Volterra equations of convolution type  <b>Anh, Babiarz, Czornik, Niezabitowski, Siegmund</b></p>	<p>Enhanced Process Fault Diagnosis Through Integrating Neural Networks and Andrews Plot  <b>Wang, Zhang</b></p>	<p>Cooperative Target Tracking in Elliptical Formation  <b>Ma</b></p>
<p>Techniques for Verified Reachability Analysis of Quasi-Linear Continuous-Time Systems  <b>Rauh, Kersten, Aschemann</b></p>	<p>Style Transfer-Based Image Synthesis As an Efficient Regularization Technique in Deep Learning  <b>Grochowski, Mikołajczyk</b></p>	

Tuesday, 09:00 - 10:00

<p><b>Marco Polo (Casino)</b>  <b>B1L-A</b>, page 25</p>
<p>Normal Forms of Nonlinear Control Systems  <b>Respondek</b></p>

Tuesday, 10:00 - 11:00

<p><b>Marco Polo (Casino)</b>  <b>B2L-A</b>, page 25</p>	<p><b>Vasco da Gamma (Kalman)</b>  <b>B2L-B</b>, page 27</p>	<p><b>Ferdinand Magellan (Lehar)</b>  <b>B2L-C</b>, page 28</p>
<p>Robust and Adaptive Ship Path-Following Control Design with the Full Vessel Model  <b>Zwierzewicz</b></p>	<p>Fusion of Gesture and Speech for Increased Accuracy in Human Robot Interaction  <b>Baranwal, Singh, Hellström</b></p>	<p>A Memetic Algorithm for the Discrete Scheduling-Location Problem with Unrelated Executors  <b>Ławrynowicz, Józefczyk</b></p>
<p>Adaptive, Nonlinear Control of a Third-Order Duffing–Holmes Type Chaotic Oscillator  <b>Kabziński, Mosiołek</b></p>	<p>The Quality Interaction Function Deployment for Lean Human-Robot Interaction  <b>Bonini, Urru, Echelmeyer</b></p>	<p>Cyclic Scheduling of Lots with Setup Times  <b>Smutnicki</b></p>
<p>Adaptive Identification Method for Simulation and Control of Glass Melting Process  <b>Byrski, Drapała</b></p>	<p>Achievable Stereo Vision Depth Accuracy with Changing Camera Baseline  <b>Sasiadek, Walker</b></p>	<p>Scheduling Identical Jobs with Linear Resource Usage Profile to Minimize Schedule Length  <b>Różycki, Waligóra</b></p>

Tuesday, 11:20 - 13:00

<b>Marco Polo (Casino)</b> <b>B4L-A</b> , page 35	<b>Vasco da Gamma (Kalman)</b> <b>B4L-B</b> , page 37	<b>Ferdinand Magellan (Lehar)</b> <b>B4L-C</b> , page 39
Poles and Zeros of Standard and Fractional Positive Stable Linear Systems <b>Sajewski, Kaczorek</b>	Robotic Manipulator Path-Planning: Cost-Function Approximation with Fuzzy Inference System <b>Szabó, Gincsiné Szádeczky-Kardo</b>	Power System Resilience Using Network Reconfiguration <b>Ghadage, Bhopale, Bajaria</b>
An Interpolation Approach to the Integer-Order Approximation of Fractional-Order Systems <b>Casagrande, Viaro</b>	Dynamic Trajectory Planning for Autonomous Driving Based on Fluid Simulation <b>Sułkowski, Bugiel, Izydorczyk</b>	A Simple Heuristic Approach for Attitude/Altitude Control of a Quadrotor with Uncertain Parameters <b>Ailon, Arogeti</b>
Variable-, Fractional-Order Linear MIMO System Matrix Description <b>Ostalczyk</b>	Trajectory Control of the Wheeled Mobile Robots in Dynamic Environment <b>Zhang, Krasnov, Chepinskiy, Grigoriev, Artemov, Liao, Zhang, Wang</b>	On the First Single-Nonlinearity Seven-Term Memristor-Based Chaotic Snap System: a Line Equilibrium and Coexisting Hidden Attractors <b>Ahmad, Srisuchinwong</b>
Expansion of a Solver for Nonlinear Fractional Problems - the Inclusion of Time Delays <b>Sowa, Dziedzic</b>	Formation of Two-Wheeled Mobile Robots Moving in the Task Space with Static Obstacles - Numerical Verification for Bounded Controls <b>Kowalczyk, Kozłowski</b>	Multicriteria Coordination of Flood Control in Water Reservoir Systems <b>Skulimowski</b>
Fractional-Order Difference Basis Functions a New Modeling Concept for Dynamical Systems <b>Gałek, Stanisławski, Rydel, Latawiec, Łukaniszyn</b>	Trajectory Tracking of a Tri-wheel Mobile Robot Using the Castor Wheel's Twist Angle <b>Beniak, Pyka</b>	

Tuesday, 15:00 - 16:20

<b>Marco Polo (Casino)</b> <b>B5L-A</b> , page 40	<b>Vasco da Gamma (Kalman)</b> <b>B5L-B</b> , page 42	<b>Ferdinand Magellan (Lehar)</b> <b>B5L-C</b> , page 44
Calculation of Descriptive Statistics by Devices with Low Computational Resources for Use in Calibration of V2I System <b>Kubiak, Banach, Długosz</b>	An Application of the Induced Matrix Norm in the Minimum-Energy Design of Perfect Control Algorithm <b>Pączko, Hunek</b>	Parameter Optimization of Control with Feedback Linearization for a Model of Thermoelectric Processes in Cylindrical Bodies <b>Gavrikov, Kostin, Knyazkov, Rauh, Aschemann</b>
Techniques to Facilitate the Use of V2I Communication System As Support for Traffic Sign Recognition Algorithms <b>Banach, Długosz</b>	Relative Degree One and Two Sliding Variables for Multi-Input Discrete-Time Systems <b>Latosiński, Bartoszewicz</b>	Optimizing Consumer-Side Electricity Usage in a Smart Household <b>Taik, Kiss</b>
Camera Model for Lens with Strong Distortion in Automotive Application <b>Lelowicz</b>	Periodic Regimes of Motion of a Body with a Moving Internal Mass <b>Figurina, Knyazkov</b>	Optimization of Traffic Signal Control Based on Game Theoretical Framework <b>Guo, Harmati</b>
	Discrete-Time Design of Model Reference Learning Control System <b>Kurniawan, Widiyatmoko, Bayuwati, Afandi, Suryadi, Rofianingrum</b>	An Improved Reinforcement Learning Control Strategy for Batch Processes <b>Zhang, Zhang, Long, Hu</b>

Wednesday, 09:00 - 10:00

<p><b>Marco Polo (Casino)</b> C1L-A, page 49</p>
<p>Game Theory and Distributed Control <b>Shamma</b></p>

Wednesday, 10:00 - 11:00

<p><b>Marco Polo (Casino)</b> C2L-A, page 49</p>	<p><b>Vasco da Gamma (Kalman)</b> C2L-B, page 51</p>
<p>Robust Unknown Input Observer Design for Simultaneous Actuator and Sensor Faults <b>Pazera, Witczak, Kukurowski</b></p>	<p>Explicit Interpolating Control of Unmanned Aerial Vehicle <b>Bouček, Flidr</b></p>
<p>Interval Observer-Based Controller Design for Systems with State Constraints: Application to Solid Oxide Fuel Cells Stacks <b>Ifqir, Rauh, Kersten, Ichalal, Ait-Oufroukh, Mammarr</b></p>	<p>Computation Complexity Evaluation of FastSLAM Algorithm for Unmanned Ground Vehicles <b>Al-Tarras, Yacoub, Asfoor, Sharaf</b></p>
<p>Design of a Takagi-Sugeno State and Disturbance Observer for a Torque-Controlled Hydrostatic Transmission <b>Dang, Aschemann</b></p>	

Wednesday, 11:20 - 13:00

<p><b>Marco Polo (Casino)</b> C4L-A, page 57</p>	<p><b>Vasco da Gamma (Kalman)</b> C4L-B, page 59</p>	<p><b>Ferdinand Magellan (Lehar)</b> C4L-C, page 62</p>
<p>Parameter Identification for the Fractional Order, State Space Model of Heat Transfer Process Using Atangana-Baleanu Operator <b>Oprzędkiewicz, Mitkowski</b></p>	<p>Parametric Identification of PMSM Mathematical Model <b>Zawarczynski, Stefanski</b></p>	<p>Integrated Maintenance Decision Making Platform for Gantry Cranes in Container Terminal <b>Szpytko, Salgado</b></p>
<p>Markov Parameters of the Input-Output Map for Discrete-Time Order Systems with Grunwald-Letnikov h-difference operator <b>Pawluszewicz, Koszewnik</b></p>	<p>Duality-Based Approach to Identification of Linear Time-Varying Hamiltonian Systems with RKHS As Data Descriptors <b>Roman-Flores, Rapisarda, Montesdeoca</b></p>	<p>Approximation State-Space Model for 2x2 Hyperbolic Systems with Collocated Boundary Inputs <b>Bartecki</b></p>
<p>A Digital PID Controller Based on Grunwald-Letnikov Fractional-, Variable-Order Operator <b>Oziabło, Mozyrska, Wyrwas</b></p>	<p>Optimization Techniques for the Design of Identification Procedures for the Electro-Chemical Dynamics of High-Temperature Fuel Cells <b>Frenkel, Rauh, Kersten, Aschemann</b></p>	<p>Simulation Platform for Wireless Data Communication Using a New Signal Reconstruction Method <b>Majewski, Hunek</b></p>
<p>Nonlinear Fractional-Order Impedance Control for Knee Rehabilitation <b>Pomprapa, Kastouri, Liu, Leonhardt</b></p>	<p>Identification of Multichannel Nonlinear Systems Excited by Realisations of Multivariate Orthogonal Multisine Random Time-Series <b>Figwer</b></p>	<p>Modelling of a Highly-Viscous, Non-Isothermal Fluid with Free Surface Using Model Reduction <b>Skeli, Harder, Weidemann, Panreck</b></p>
<p>Digital and Analog Design of Fractional PD Controller for a Servo System <b>Bauer, Baranowski, Kapoulea, Psychalinos</b></p>	<p>FEM Modeling and Parameter Identification of Thermoelectrical Processes in Cylindrical Bodies <b>Knyazkov, Kostin, Gavrikov, Aschemann, Rauh</b></p>	<p>Games with Resources and Their Use in Modeling Control Processes in Heterogeneous Populations <b>Swierniak, Krzeslak, Borys</b></p>

Thursday, 09:00 - 10:20

<b>Marco Polo (Casino)</b> <b>D1L-A</b> , page 66	<b>Vasco da Gamma (Kalman)</b> <b>D1L-B</b> , page 67	<b>Ferdinand Magellan (Lehar)</b> <b>D1L-C</b> , page 70
Static Camera Calibration for Advanced Driver Assistance System Used in Trucks <b>Dlugosz, Dworakowski, Suliga</b>	Modeling of Switching-Mode Nonlinear System by Exponentially Weighted Aggregation <b>Wachel, Śliwiński, Hasiewicz</b>	Automotive Ethernet Applications Using Scalable Service-Oriented Middleware Over IP: Service Discovery <b>Nichitelea, Unguritu</b>
The Application of Virtual Logic Models to Simulate Real Environment for Testing Advanced Driving-Assistance Systems <b>Pikus, Was</b>	Experimental Validation of a Nonlinear Model for Controlled Thermoelectric Processes in Cylindrical Bodies <b>Gavrikov, Kostin, Knyazkov, Rauh, Aschemann</b>	Development of an Agent-Based System for Decentralized Control of District Energy Systems <b>Fritz, Xhonneux, Müller</b>
Lean Systems Engineering for Automotive Perception Systems <b>Buczacki, Cieślak, Oppenheim, Stachnik</b>	Self-Tuning Control for Nonlinear Systems Using a State-Dependent Riccati Equation Approach <b>Wache, Aschemann</b>	Software Framework for Fast Image Retrieval <b>Grycuk, Scherer</b>
Selected Methods for Increasing the Accuracy of Vehicle Lights Detection <b>Bogacki, Długosz</b>	Model-Based Nonlinear Control of the Cathode Pressure of a PEM Fuel Cell System Using a VTG <b>Schitz, Aschemann</b>	Process Fault Detection and Reconstruction by Principal Component Analysis <b>Qi, Zhang</b>

Thursday, 10:40 - 12:00

<b>Marco Polo (Casino)</b> <b>D2L-A</b> , page 72	<b>Vasco da Gamma (Kalman)</b> <b>D2L-B</b> , page 74	<b>Ferdinand Magellan (Lehar)</b> <b>D2L-C</b> , page 76
Performance of Lidar Object Detection Deep Learning Architectures Based on Artificially Generated Point Cloud Data from CARLA Simulator <b>Dworak, Ciepiela, Derbisz, Izzat, Komorkiewicz, Wójcik</b>	Stress Analysis Recorded in the EEG Signal Based on Mathematical Markers <b>żołąbak</b>	Kinematic Predictive Imaging Technique for Telerobotic Surgery with Time Delay Using Model Predictive Control <b>Ladoiye, Neculescu, Sasiadek</b>
Uncertainty Propagation for Vehicle Detections in Experimentally Validated Radar Model for Automotive Application <b>Martowicz, Gallina, Karpiel</b>	Embedded Heart Rate Analysis Based on Sound Sensing <b>Rosół, Więckowski</b>	Social Robot in Diagnosis of Autism Among Preschool Children <b>Arent, Kruk-Lasocka, Niemiec, Szczepanowski</b>
A Generic Validation Scheme for Real-Time Capable Automotive Radar Sensor Models Integrated Into an Autonomous Driving Simulator <b>Jasiński</b>	Soft Real-Time Communication with WebSocket and WebRTC Protocols Performance Analysis for Web-Based Control Loops <b>Karla, Tarnawski</b>	Development of a High-Efficiency Pitch/Roll Inertial Measurement Unit Based on a Low-Cost Accelerometer and Gyroscope Sensors <b>Okulski, Ławryńczuk</b>
Full State Proportional Controller for Adaptive Cruise Control System <b>Długosz, Zhang</b>	Remote Receiver Control in MPTCP Networks in Uncertain Operating Conditions <b>Ignaciuk, Morawski</b>	Features Matching Based Merging of 3D Maps in Multi-Robot Systems <b>Drwięga</b>