DSCC 2020

Dynamic Systems and Control Conference

VIRTUAL CONFERENCE
October 5–7, 2020

ASME

Technical Session Program

Session Name	Time	Paper Number	Paper Title	Presenting Author	Session Chair	Session Co-Chair
October 5th - All times in US EDT						
Adaptive and Intelligent Systems Control	11am - 12pm	DSCC2020-3211	Position and Attitude Control of Underactuated Drones Using the Adaptive Function Approximation Technique	Azin Shamshirgaran	ChengZhi Yuan	Xu Jin
		DSCC2020-3111	Further Results on Performance Guarantees in Adaptive Control of Uncertain Systems With Unmodeled Dynamics	Kadriye Merve Dogan		
		DSCC2020-3245	Sensor and Actuator Intrusion Detection for Cyber-Physical Systems via Adaptive Estimation Algorithm	Jiayi Su		
		DSCC2020-3117	Decentralized Iterative Learning Cooperative Impedance Control for a Team of Robot Manipulators	Xu Jin		
		DSCC2020-3112	A Novel Intelligent Learning Control Scheme for Discrete-Time Nonlinear Uncertain Systems in Multiple Environments	Jingting Zhang		
Advanced Driver Assistance and Autonomous Technologies	11am - 12pm	DSCC2020-3286	Control Design for Autonomous Vehicle Emergency Safe Stop System Based on Differential Dynamic Programming	Lisheng Yang	Junmin Wang	Pingen Chen
		DSCC2020-3253	Minimum Safety Distances for Emergency Braking Manuevers in Car-Following Applications	Devin Schafer		
		DSCC2020-3141	The Effects of Trailer Towing on the Dynamics of a Lane-Keeping Controller	Illes Voros		
		DSCC2020-3113	Real-Time Driver Model Parameter Identification: An Algebraic Approach	Zejiang WANG		
		DSCC2020-3115	A Lateral Motion Planning Method for Automated Vehicles Based on Sinusoids	Wei WANG		
Advances in Control Design Methods	12:10pm - 1:10pm	DSCC2020-3191	Iterative Learning Control for Hybrid Systems	Kirti Deo Mishra	Beibei Ren	Kirti Deo Mishra
		DSCC2020-3331	Output-Feedback Lpv Control of Permanent Magnet Synchronous Motors	Shahin Tasoujian		
		DSCC2020-3327	Pd Controller With Self Adaptive Gains for Quadrotor Waypoint Navigation	Madhavan Sudakar		
		DSCC2020-3267	Robust Iterative Learning Control for Interval Linear Systems	Kirti Deo Mishra		
		DSCC2020-3221	Error Dynamics Design via a Repetitive Loop for Ude-Based Robust Control to Reject Periodic Disturbances	Yeqin Wang		
Advances in Nonlinear Control	12:10pm - 1:10pm	DSCC2020-3151	Nonlinear Zero-Dynamics Attacks Targeting Nuclear Power Plants	Jacob Farber	Suresh Reddy	Peiman Naseradinmousavi
		DSCC2020-3271	Constrained Control of Input Delayed Systems With Partially Compensated Input Delays	Imoleayo Abel		
		DSCC2020-3149	New Analysis/design of Generalized Discrete Pi Controller via Discrete Time Delay Control for Nonlinear Systems	Suresh Reddy		
		DSCC2020-3144	New Stability Analysis and Design of Discrete Time Delay Control for Nonaffine Nonlinear Systems	Suresh Reddy		
		DSCC2020-3114	Experimental and Analytical Nonzero-Sum Differential Game-Based Control of a 7-Dof Robotic Manipulator	Mostafa Bagheri		
Invited: Assistive and Rehabilitation Devices Design, Modeling, Analysis and Control,	12:10pm - 1:10pm	DSCC2020-3216	Effect of Additional Weight on Human Squat Exercise Stability: Ground Reaction Forces and Centers of Pressure	Dumitru Caruntu	Dumitru Caruntu	Kamran Iqbal
		DSCC2020-3164	Angular Velocity Control of Pneumatic Soft Robotic Digits	W. Y. Shi		
		DSCC2020-3161	Modeling and Analysis of the Effects of Startle Reaction on Group Coordination	Violet Mwaffo		
		DSCC2020-3269	Optimal Realization of Endpoint Stiffness in Static Human Arm Postures	kamran iqbal		
		DSCC2020-3227	An Inconspicuous, Integrated Electronic Travel Aid for Visual Impairment	Alain Boldini		
Vehicle Dynamics, Estimation and Control	1:20pm - 2:20pm	DSCC2020-3167	Improving Passenger Comfort by Exploiting Hub Motors in Electric Vehicles: Suspension Modeling	Di Chen	YOUSEF SARDAHI	Gladys Abapo
		DSCC2020-3121	Multi-Objective Optimal Design of an Active Aeroelastic Cascade Control System for an Aircraft Wing With a Leading and Trailing Control Surface	Yousef Sardahi		
		DSCC2020-3301	A Novel Plate-Like Sensor Utilizing Curvature-Based Stiffening for Nanometrology Applications	Rafiul Shihab		
Energy and Power Systems	1:20pm - 2:20pm	DSCC2020-3146	Observer Design for the Series Interconnection of Li-Ion Battery Cells Subject to Reduced Voltage Information	Luis D. Couto	John Wagner	Baisravan HomChaudhuri
		DSCC2020-3193	Suggestion-Based Fuel Efficient Control of Connected and Automated Vehicles	Tinu Vellamattathil Baby		
		DSCC2020-3145	Adaptive Equivalent Factors of Multi-Objective Energy Management for Fuel Cell Hybrid Electric Vehicles	Yan Ma		
		DSCC2020-3110	Model Predictive Control Fot a Synchronous Machine With a Pulsed, Constant-Power Load	Adam Parry		
		DSCC2020-3108	A Traveling Wave Thermoacoustic Engine - Design and Test	Chengshi Wang		
		DSCC2020-3210	An Online Transfer Learning Approach for Identification and Predictive Control Design With Application to Rcci Engines	Yajie Bao		

Estimation and Identification I	1:20pm - 2:20pm	DSCC2020-3312	Design, Modeling, and Identification of an Experimental Liquid-Level Control System: Enabling Research in Fault Diagnosis	Hilina Workneh	IOANNIS RAPTIS	Nicole Abaid
		DSCC2020-3235	Bearing-Only Localization of a Quasi-Static Sound Source With a Binaural Microphone Array	Aidan Bradley		
		DSCC2020-3186	Modeling and Parameter Identification for Condition Monitoring of Surface-Mount Permanent Magnet Machines Under Magnet Demagnetization	Fanny Pinto Delgado		
		DSCC2020-3287	Passivity-Based Disturbance Observer Design	Ying-Chun Chen		
Advances in Motion and Vibration Control	2:30pm - 3:30pm	DSCC2020-3153	Advanced Dynamics Analysis of a Drilling Roller Reamer as a Rigid Multibody System	Opeyemi Adewuya	Bryan Maldonado	Xu Chen
		DSCC2020-3320	On the Zeros of an Undamped Three-Dof Flexible System	Siddharth Rath		
		DSCC2020-3246	New Hammerstein Modeling and Analysis for Controlling Melt Pool Width in Powder Bed Fusion Additive Manufacturing	Dan Wang		
		DSCC2020-3251	Nems Circular Plates Under Hard Electrostatic Excitations: Amplitude-Frequency Response of Superharmonic Resonance of Second Order to Include Casimir Effect	Dumitru Caruntu		
		DSCC2020-3342	Adrc-Based Model Predictive Control of Irrigation Canals	Jose Carreno		
Advances in Robotics I	2:30pm - 3:30pm	DSCC2020-3163	Steerable Needle Trajectory Following in the Lung: Torsional Deadband Compensation and Full Pose Estimation With 5dof Feedback for Needles Passing Through Flexible Endoscopes	Tayfun Efe Ertop	Peiman Naseradinmousavi	Scott Bortoff
		DSCC2020-3291	Cooperation and Null-Space Control of Networked Omni-Directional Mobile Manipulators	Michael Chua		
		DSCC2020-3158	Modelica-Based Control of a Delta Robot	Scott Bortoff		
		DSCC2020-3156	Navigation and Obstacle Avoidance of Snake-Robot Guided by a Co-Robot Uav Visual Servoing	Mahdi Haghshenas-Jaryani		
		DSCC2020-3181	Experimental and Analytical Decentralized Adaptive Control of a 7-Dof Robot Manipulator	Alexander Bertino		
Dynamics and Control of Human-Robot Systems	2:30pm - 3:30pm	DSCC2020-3125	Adaptive Trajectory Tracking During Motorized and Fes-Induced Biceps Curls via Integral Concurrent Learning	Brendon Allen	Amirhossein Ghasemi	
		DSCC2020-3296	Adaptive Impedance Control for the Haptic Shared Driving Task Based on Nonlinear Mpc	Amirhossein Ghasemi		
		DSCC2020-3311	Motorized and Functional Electrical Stimulation Induced Cycling via Switched Adaptive Concurrent Learning Control	Jonathan Casas		
		DSCC2020-3177	Galvanic Skin Response as a Measure of Engagement During Play in Virtual Reality	Roni Barak Ventura		
		DSCC2020-3131	Teleoperated Motorized Functional Electric Stimulation Actuated Rehabilitative Cycling	Kimberly Stubbs		
Advances in Sensors and Actuators	3:40pm - 4:40pm	DSCC2020-3297	Design of a Xenia Coral Robot Using a High-Stroke Compliant Linear Electromagnetic Actuator	Noah Kohls	Yi Mazumdar	
		DSCC2020-3324	Band Gap and Natural Frequency Manipulation by Magnetostrictive Material in a Sandwich Plate Structure	Soroush Korivand		
		DSCC2020-3277	The Effect of Simultaneous Auditory and Visual Sensing Cues in a Two-Dimensional Vicsek Model	Subhradeep Roy		
		DSCC2020-3337	Motion Equations for the Ball and Beam and the Ball and Arc Systems	Constance Lare		
		DSCC2020-3321	Dynamic Modeling of Voice Coil Motor-Actuated Flexible Membranes	Hongyang Shi		
Vibration and Control Systems I	3:40pm - 4:40pm	DSCC2020-3132	Stability Analysis and Controller Design for Linear Time Periodic Systems Using Normal Forms	Susheelkumar Cherangara Subramanian	Oumar Barry	Sangram Redkar
		DSCC2020-3254	The Effect of Time Delay on the Stability Control of Trailers	Hanna Zsofia Horvath		
		DSCC2020-3160	Simultaneous Vibration Mitigation and Energy Harvesting of a Nonlinear Oscillator	Paul-Camille Kakou		
		DSCC2020-3176	Effect of Electromechanical Coupling on Locally Resonant Metastructures for Simultaneous Energy Harvesting and Vibration Attenuation Applications	Mohammad Bukhari		
		DSCC2020-3209	Data Driven Feedforward Control Design and Input Shaping Techniques for Multi Actuator Drives	Prateek Shah		
Modeling and Control of Engine and After-treatment Systems	4:50pm - 5:30pm	DSCC2020-3255	Control-Oriented Modeling of Cycle-to-Cycle Combustion Variability at the Misfire Limit in Si Engines	Bryan Maldonado	Pingen Chen	
		DSCC2020-3332	A Receding-Horizon Framework to Co-Optimizing the Velocity and Power-Split of Automated Plug-in Hybrid Electric Vehicles	Di Chen		
		DSCC2020-3317	Control-Oriented Model Development and Experimental Validation for a Modern Diesel Engine	Kuo Yang		
Biomedical and Rehabilitation Systems	4:50pm - 5:30pm	DSCC2020-3129	A Cellular Automata Model for Dynamics and Control of Cardiac Arrhythmias	Min Xiong	Xiaopeng Zhao	
		DSCC2020-3128	On a Gamified Brain-Computer Interface for Cognitive Training of Spatial Working Memory	Ziming Liu		
		DSCC2020-3127	Modeling Analysis of the Wrist Dynamics via an Ellipsoidal Joint	Jiamin Wang		

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Building Energy Systems (invited)	12:25pm - 1:15pm	DSCC2020-3118	Cutting the Deployment Costs of Physics-Based Mpc in Buildings by Simulation-Based Imitation Learning	Jan Drgona	Marcello Canova	Ján Drgoňa
		DSCC2020-3294	Control Structure Design of Building Hvac Systems Using a Data-Driven Self-Optimizing Control With Active Set Change	Zhongfan Zhao		
		DSCC2020-3184	Parametric Modeling and Optimal Control of a Combined Heating and Power System With Energy Storage	Stephanie Stockar		
		DSCC2020-3229	Achieving Improved Personalization and Energy Efficiency in Cohabited Work-Spaces Through Data-Driven Predictive Control	Syed Ahsan Raza Naqvi		
Advandc Power Systems	12:25pm - 1:15pm	DSCC2020-3109	Arm Motion Dynamics to Excite a Mobile Energy Harvesting Autowinder	Abby George	Javad Mohammadpour Velni	John Wagner
		DSCC2020-3252	Development and Implementation of a New Optimal Supplemental Lighting Control Strategy in Greenhouses	Shirin Afzali		
		DSCC2020-3303	Characterization of Duty Cycles for the Peak Shaving Electric Grid Energy Storage Application	Kevin Moy		
		DSCC2020-3318	Parameter Identification and Sensitivity Analysis for Zero-Dimensional Multi-Physics Lithium-Sulfur Battery Models	Chu Xu		
Vibrations: Modeling , Analysis, and Control	12:25pm - 1:15pm	DSCC2020-3284	Including Image-Based Perception in Disturbance Observer for Warehouse Drones	Zhu Chen	Minghui Zheng	Dumitru Caruntu
		DSCC2020-3194	Performance Evaluation of Suspended Energy Harvesting Backpack Using Half-Wave Mechanical Rectification	Jia Mi		
		DSCC2020-3199	Physics Based Multi-Fidelity Data Fusion for Efficient Characterization of Mode Shape Variation Under Uncertainties	Kai Zhou		
		DSCC2020-3217	Frequency-Amplitude Response of Subharmonic Resonance of One-Third Order of Electrostatically Actuated Mems Circular Plates	Dumitru Caruntu		
Estimation and Identification II	1:20pm - 2:20pm	DSCC2020-3230	Effect of Neural Network on Reduction of Noise for Edge Detection	Diane Peters	Qingze Zou	Diane Peters
		DSCC2020-3159	Input Excitation Analysis for Black-Box Quadrotor Model System Identification	John Angarita		
		DSCC2020-3304	Adaptive Parameter Estimation With Convergence Analysis for the Prandtl-Ishlinskii Hysteresis Operator	Xiaobo Tan		
		DSCC2020-3283	An Improved Model of Height Profile for Drop-on-Demand Print of Uv Curable Ink	Yumeng Wu		

		DSCC2020-3264	Mobile Sensing of Multi-Dimensional Dynamic Field via Compressed Sensing	Tianwei Li		
Advances in Mechatronics Systems	1:20pm - 2:20pm	DSCC2020-3105	Hapticwall - an Encountered-Type Two-Dimensional Vertical System for Virtual Reality	Yuwei Li	Min Li	Yuwei Li
		DSCC2020-3306	Design Analysis of a Distributed Actuation-Sensing System Using Direct Field-Feedback for Eddy-Current Pattern Control	Min Li		
		DSCC2020-3288	Dynamic Prediction-Based Optical Localization of a Robot During Continuous Movement	Jason Greenberg		
		DSCC2020-3220	A Numerical Investigation of an Eddy Current Sensor for Detecting Small Defects in Metal Additive Manufacturing	Zhengya Guo		
		DSCC2020-3107	Control Design for an Emulator of Mechatronic Powertrain Dynamics: A Case Study	Laurens Jacobs		
Advanced Manufacturing Systems	2:30pm - 3:30pm	DSCC2020-3238	A Control-Oriented Dynamical Model of Deposited Droplet Volume in Electrohydrodynamic Jet Printing	Isaac Spiegel	Doug Bristow	Layne Clemen
		DSCC2020-3222	A Switched Adaptive Model for Layer-to-Layer Selective Laser Melting With Varying Laser Paths	Xin Wang		
		DSCC2020-3197	Physics-Informed Gaussian Process Based Optimal Control of Laser Powder Bed Fusion	Yong Ren		
		DSCC2020-3260	Application of Mimo Data Driven Feedback Control Design to Dual Stage Hard Disk Drives	Prateek Shah		
		DSCC2020-3258	Modeling Thermal Effects in Dc-Motors Using Pseudo-Bond Graphs	Layne Clemen		
Advances in Robotics II	2:30pm - 3:30pm	DSCC2020-3183	Marker Based Row Alignment Control for an Agricultural Scouting Robot	Qiang Li	Yunjun Xu	Biswanath Samanta
		DSCC2020-3305	Distributed Particle Filter With Online Model Learning for Localization Using Time-Difference-of-Arrival (Tdoa) Measurements	Chandler Panetta		
		DSCC2020-3282	Sensing and Classification of Ambient Vortex Wake From the Kinematics of a Bioinspired Swimming Robot Using Neural Networks	Phanindra Tallapragada		
		DSCC2020-3279	Visual Navigation of Wheeled Mobile Robots Using Deep Reinforcement Learning: Simulation to Real-Time Implementation	Biswanath Samanta		
		DSCC2020-3278	Design of a Parallel Elastic Hopper With a Wrapping Cam Mechanism and Template Based Virtually Tunable Damping Control	Sinan Şahin Candan		
Control and Estimation of Energy Systems	3:40pm - 4:40pm	DSCC2020-3175	Multi-Level Hierarchical Estimation for Thermal Management Systems of Electrified Vehicles	Pamela Tannous	Ellen Yi Mazumdar	Yan Chen
		DSCC2020-3190	Hierarchical Multi-Timescale Energy Management for Hybrid-Electric Aircraft	Wenqing Wang		
		DSCC2020-3203	Nonlinear Hierarchical Mpc for Maximizing Aircraft Thermal Endurance	Daniel Leister		
		DSCC2020-3233	Graph-Based Design and Control Optimization of a Hybrid Electrical Energy Storage System	Cary Laird		
Vibration and Control Systems II	3:40pm - 4:40pm	DSCC2020-3257	Vibrational Control of a 2-Link Mechanism	Zakia Ahmed	Phanindra Talla pragada	Joshua Vaughan
		DSCC2020-3276	Towards a Mobile Robot for Vibration Control and Inspection of Power Lines	Paul-Camille Kakou		
		DSCC2020-3307	Leveraging Conventional Control to Improve Performance of Systems Using Reinforcement Learning	Gerald Eaglin		
		DSCC2020-3310	Parameter Sensitivity Analysis of Peizoelectrically-Actuated Flexural/torsional Vibrating Beams	Roya Salehzadeh		
		DSCC2020-3326	Nonholonomic Systems With Redundant Degrees of Freedom Can Exploit Nonlinear Frequency Response to Improve Speed and Efficiency of Locomotion	Phanindra Tallapragada		
Estimation and Identification III	4:50pm - 5:30pm	DSCC2020-3295	Dynamic Modeling of a Steerable Drifter	Eric Gaskell	Warren White	
		DSCC2020-3292	Data-Driven Drop Formation Modeling in Nanoliter Drop-on-Demand Inkjet Printing	Jie Wang		
		DSCC2020-3298	Continuum of Motion Equations and Control Laws for the Inverted Pendulum Cart and Rotary Pendulum	Constance Lare		
Driver Assistance and Autonomous Technologies	4:50pm - 5:30pm	DSCC2020-3174	Combined Trajectory Planning and Tracking for Autonomous Vehicles on Deformable Terrains	James Dallas	Yao Ma	
		DSCC2020-3293	Switched Control Barrier Functions With Applications to Vehicle Safety Control	Yiwen Huang		
		DSCC2020-3122	Inverse Reinforcement Learning Based Driver Behavior Analysis and Fuel Economy Assessment	Mehmet Ozkan		

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Design, modeling and control of rehabitation devices	11:00am - 12:00pm	DSCC2020-3104	Numerical Simulation of Dynamic Bending Deflection of a Disc Cam Profile With Roller Follower System	Louay S. Yousuf	Nitin Sharma	Ayonga Hereid
		DSCC2020-3225	Sampled-Data Observer Based Dynamic Surface Control of Delayed Neuromuscular Functional Electrical Stimulation	Qiang Zhang		
		DSCC2020-3196	An Ultrasound Imaging Based Observer for Estimating Nmes-Induced Muscle Fatigue: Theory and Simulation	Zhiyu Sheng		
		DSCC2020-3170	Dynamic Locomotion of a Lower-Limb Exoskeleton Through Virtual Constraints Based Zmp Regulation	Victor Paredes Cauna		
		DSCC2020-3140	The Swirling Pendulum: Conceptualization, Modelling, Equilibria and Control Synthesis	Sujay Kadam		
Multi-agent and Networked Systems	11:00am - 12:00pm	DSCC2020-3178	Formation Control for Underactuated Surface Vessel Networks	Bo Wang	Hashem Ashrufiuon	Blake Buchanan
		DSCC2020-3162	Formation Control of Non-Holonomic Mobile Robots Moving on Slippery Surfaces	Violet Mwaffo		
		DSCC2020-3206	Cooperative Localization of Vehicles in Three-Dimensional Space	Juan Carlos Oliveros		
		DSCC2020-3315	Stability and Control of Chaplygin Beanies Coupled to a Platform Through Nonholonomic Constraints	Blake Buchanan		
		DSCC2020-3136	Passivity-Based Distributed Acquisition and Station-Keeping Control of a Satellite Constellation in Areostationary Orbit	Emmanuel Sin		
Path Planning and Motion Control	11:00am - 12:00pm	DSCC2020-3208	Contact-Rich Trajectory Generation in Confined Environments Using Iterative Convex Optimization	Weiye Zhao	Kooktae Lee	Changliu Liu
		DSCC2020-3241	On the Ergodicity of an Autonomous Robot for Efficient Environment Explorations	Rabiul Hasan Kabir		
		DSCC2020-3300	Trajectory Generation From Paths for Autonomous Ground Vehicles	Letian Lin		
		DSCC2020-3169	Predictive Motion Planning for Autonomous Vehicles With Geometric Constraints via Convex Optimization	Yan Ma		
		DSCC2020-3328	Interaction-Aware Behavior Planning for Autonomous Vehicles Validated With Real Traffic Data	Jinning Li		
Unmanned Ground and Aerial Vehicles I	12:10pm - 1:10pm	DSCC2020-3126	A Control Algorithm Framework for Time-of-Arrival and Arrival Airspeed Control	Shawn Stephens	Kam Leang	Manish Kumar
		DSCC2020-3239	Optimal Control of a Multirotor Unmanned Aerial Vehicle Based on a Multiphysical Model	Nicolas Michel		
		DSCC2020-3205	Autonomous Light Assessment Drone for Dark Skies Studies	Matthew N. Goodell		
		DSCC2020-3319	Developmental Reinforcement Learning of Control Policy of a Quadcopter Uav With Thrust Vectoring Rotors	Aditya Milind Deshpande		
		DSCC2020-3139	Attack-Resilient Observer Pruning for Path-Tracking Control of Wheeled Mobile Robot	Yu Zheng		
Modeling and Control of Soft Actuators and Manipulators	12:10pm - 1:10pm	DSCC2020-3232	Modeling and Simulation of Aircell Actuator Seat Cushion With Pneumatic Line Lag and Capacitative Effects	Pavan Nuthi	Ayse Tekes	Olugbenga Moses Anubi
		DSCC2020-3259	Monolithic Leg Design With Compliant Knee Joint for Bipedal Robots: Design and Preliminary Results	Ciaphus Rouse		
		DSCC2020-3313	Towards Explainable Co-Robots: Developingconfidence-Based Shared Control Paradigms	Amirhossein Ghasemi		
		DSCC2020-3204	Design and Analysis of a New Mechanism for a Snake Like Robot	Johnathon Garcia		

		DSCC2020-3198	Development of Wire Actuated Monolithic Soft Gripper Positioned by Robot Manipulator	Martin Garcia		
Unmanned Ground and Aerial Vehicles II	1:20pm - 2:20pm	DSCC2020-3212	Optimal Tuning of Single-Axis Satellite Attitude Control Parameters Using Genetic Algorithm	Amin Ghorbanpour	Xiaobo Tan	Qi Lu
		DSCC2020-3243	Dynamic Genetic Algorithm for Optimizing Movement of a Six-Limb Creature	Javier Viana		
		DSCC2020-3268	Application of Fuzzy Logic for Developing Sense and Avoid Techniques for Uav Flight Operations in National Airspace	Zoe Lee		
		DSCC2020-3308	Uncertainty and Disturbance Estimator-Based Robust Region Tracking Control for Multiple Quadrotors	Qi Lu		
		DSCC2020-3275	Fuzzy Logic Controller for Force Feedback Control of Quadcopter via Tether	Bennett Breese		
Energy Storage Systems	1:20pm - 2:20pm	DSCC2020-3124	Temperature Sensor Deployment for Scalable Battery Packs	Mengzhu Gao	Damoon Soudbakhsh	David Howey
		DSCC2020-3172	Extended Physics-Based Reduced-Order Capacity Fade Model for Lithium Ion Battery Cells	Zachary Salyer		
		DSCC2020-3180	Combining Non-Parametric and Parametric Models for Stable and Computationally Efficient Battery Health Estimation	Antti Aitio		
		DSCC2020-3188	Bending Detection of Li-Ion Pouch Cells Using Impedance Spectra	Mohsen Derakhshan		
		DSCC2020-3218	Estimation of Parameter Probability Distributions for Lithium-Ion Battery String Models Using Bayesian Methods	Luis D. Couto		
Improving Vehicle Efficiency and Reducing Emissions	1:20pm - 2:20pm	DSCC2020-3265	Data-Driven Post-Filtering of Acoustics Noise in Atomic Force Microscope Imaging	Jiarong Chen	Yan Chen	Zongxuan Sun
		DSCC2020-3274	Resilient Flocking Control for Connected and Automated Vehicles With Cyber-Attack Threats	Yan Chen		
		DSCC2020-3240	A Predictive Frontal and Oblique Collision Mitigation System for Autonomous Vehicles	Chuanyang Sun		
		DSCC2020-3213	Computationally Efficient Urea-Dosing Controllers for Urea-Scr	Kaushal Kamal Jain		
		DSCC2020-3192	Investigating Trajectory Based Combustion Control Using a Controlled Trajectory Rapid Compression and Expansion Machine (Ct-Rcem)	Abhinav Tripathi		
Advances in Robotics III	2:30pm - 3:30pm	DSCC2020-3314	Receding Horizon Control for a 2d Point-Mass Hopping Model Navigating on Terrain With Stepping Stones and Stairs	Ali Zamani	Hanz Richter	Minghui Zheng
		DSCC2020-3247	Inverse Kinematic Analysis of Muscular Hydrostat Inspired Soft Robot With Chain-Like Optimization With an Embedded Controller	Edmond Richer		
		DSCC2020-3256	Maximum Correntropy Kalman Filter for Orientation Estimation With Application to Lidar Inertial Odometry	Seyed Fakoorian		
		DSCC2020-3234	Prioritized Foraging Strategies for an Ant Colony-Inspired Swarm System	Hari R Iyer		
		DSCC2020-3200	Energy-Optimal, Direct-Phase Control of Brushless Motors for Robotic Drives	Amin Ghorbanpour		
Tracking Control Systems	2:30pm - 3:30pm	DSCC2020-3329	A Novel Approach to Time Series Forecasting Using Model-Free Adaptive Control Framework	Meenakshi Narayan	Joshua Vaughan	Meenakshi Narayan
		DSCC2020-3207	Two-Stage Robust Tracking Controller for Linear Systems With Known Uncertainty Using Filtered Basis Functions	Keval Ramani		
		DSCC2020-3263	Multiple Sliding Surface Controller for a Quadrotor for Improved Robustness Against Wind Disturbances	Madhavan Sudakar		
		DSCC2020-3316	Effect of Short-Term Weather Predictions on Model Predictive Trajectory Tracking Performance of Unmanned Surface Vessels	Joshua Vaughan		
		DSCC2020-3281	Optimal Data-Driven Modeling-Free Differential-Inversion-Based Iterative Control: A Wafer Stage Example	Zezhou Zhang		
Connected Vehicle Systems	2:30pm - 3:30pm	DSCC2020-3335	Safe Decision and Control for Connected Automated Vehicles	Sanghoon Oh	Cong Wang	GABOR OROSZ
		DSCC2020-3173	High-Fidelity Teleoperated Scaled Vehicles for Research and Development of Intelligent Transportation Technologies	Cong Wang		
		DSCC2020-3150	State-Constrained Optimal Solutions for Safe Eco-Approach and Departure at Signalized Intersections	Jihun Han		
		DSCC2020-3250	Benchmarking Fuel Economy of Connected and Automated Vehicles in Real World Driving Conditions via Monte Carlo Simulation	Shreshta Rajakumar Deshpande		
		DSCC2020-3201	Multi-Car Convex Feasible Set Algorithm in Trajectory Planning	Jing Huang		
Intelligent Transportation and Vehicles	3:40pm - 4:40pm	DSCC2020-3148	Speed Trajectory Generation for Energy Efficient Connected and Automated Vehicles	Lung En Jan	Junfeng Zhao	Yunli Shao
		DSCC2020-3138	Motion Planning for Autonomous Driving With Extended Constrained Iterative Lqr	Yutaka Shimizu		
		DSCC2020-3219	Traffic Prediction for Merging Coordination Control in Mixed Traffic Scenarios	Yunli Shao		
		DSCC2020-3244	Optimal Path Planning for a Team of Heterogeneous Drones to Monitor Agricultural Fields	Saba Faryadi		
		DSCC2020-3334	An Integrated Hardware and Software Platform for Control of Automatic Ground Vehicles	Jian Chu		
Motion and Vibration Control Applications	3:40pm - 4:40pm	DSCC2020-3106	Advanced Dynamics Analysis of a Drilling Stabilizer	Opeyemi Adewuya	Opeyemi Adewuya	Oumar Barry
		DSCC2020-3133	Head-Positioning Control in Triple-Stage-Actuator Hard Disk Drives Using Mixed H2/hinf Synthesis Methodologies	Zhi Chen		
		DSCC2020-3154	Nonlinear Modeling and Analysis of Power Lines With Stockbridge Dampers Under Vortex-Induced Vibrations	Arun Lee Malla		
		DSCC2020-3155	On the Nonlinear Vibration Analysis of a Hand-Held Impact Machine	Oreoluwa Alabi		
		DSCC2020-3338	Optimal Selection of Basis Functions for Minimum-Effort Tracking Control of Nonminimum Phase Systems Using Filtered Basis Functions	Keval Ramani		