ASME® 2018 DSCC

Dynamic Systems and Control Conference

CONFERENCE
September 30 – October 3, 2018

Atlanta, Georgia

Program

www.asme.org/events/dscc

The American Society of Mechanical Engineers®
ASME®

ASME
SETTING THE STANDARD

Welcome

Xiaobo Tan,
Conference General Chair

George Zhu,
Technical Program Chair

On behalf of the Organizing Committee, it is our great pleasure to welcome you to the 2018 ASME Dynamic Systems and Control Conference (DSCC) held at the Hyatt Regency Atlanta, on September 30 – October 3, 2018. The conference venue is located in the heart of downtown Atlanta and only blocks away from major attractions such as the Georgia Aquarium and World of Coco Cola. DSCC is the flagship conference of the ASME Dynamic Systems and Control Division (DSCD), and we are celebrating its eleventh anniversary this year.

This year's technical program contains 238 original papers organized in 9 invited sessions and 33 contributed sessions, which span all core areas of interest to the dynamic systems and control community. In addition, the conference features four exciting plenary talks given by our distinguished colleagues: Professor Huei Peng from University of Michigan delivering his Nyquist Lecture on how control theory improves energy-efficiency and safety of automotive systems; Professor Marcia O'Malley from Rice University speaking on the role of physical interaction in enabling robots to teach and learn from humans; Professor Roberto Horowitz from University of California, Berkeley, delivering his Oldenburger Lecture on modeling, control and estimation of traffic road networks; and Professor Magnus Egerstedt from Georgia Tech discussing new advances in long-duration autonomy and constraint-based coordination of multi-robot systems. The conference also offers five workshops on emerging topics including data analytics, energy-efficient mobile and wearable robotic systems, connected and automated vehicles, autonomous rotorcraft operation, and mechatronics and robotics education.

Aside from the technical program, the conference offers many opportunities for attendees to catch up and network, including the welcome reception, awards ceremony and banquet, and networking breakfast and coffee breaks every day. A number of student programs are planned to facilitate the participation, professional development, and networking for students – the future of our community. These include the student travel support program, Best Student Paper competition, and separate events for networking with academia and industry. For early-career faculty members, postdocs, and graduate students, we organize an Early Academic Career Panel with past NSF CAREER Awardees sharing their insight and tips. A special session on research funding programs is planned for attendees to learn funding programs of interest and interact with program directors. On the last day of the conference, interested attendees will have an opportunity to tour a number of robotics and control labs at Georgia Tech.

Preparation of a high-quality 2018 DSCC would not be possible without contributions from all of you. Specifically, we want to thank the authors for contributing their quality work, the foundation of the technical program; the DSCD Technical Committees for organizing invited sessions; and the reviewers and the Conference Editorial Board members for reviewing the submissions and providing valuable feedback. We want to thank the sponsors for supporting the conference. We recognize the tireless effort of Organizing Committee members: Sean Andersson, Workshops and Tutorials Chair; Douglas A. Bristow, Publications Chair; Kam Leang, Exhibits and Industry Liaison Chair; Juan Ren, Invited and Special Sessions Chair; Vaibhav Srivastava, Students and Young Members Chair; Jun Ueda, Local Arrangements Chair; Yue Wang, Publicity Chair; and Fen Wu, Conference Editorial Board Chair. We gratefully acknowledge the contributions from our ASME staff. In particular, we thank Edmond Valpoort, ASME Conference Program Manager, who is the dependable go-to person for all logistical details of the conference, and Stacey Cooper, ASME Conference Webtool Manager, who has always been collaborative and accommodating in addressing our needs. Special thanks also goes to Timothy Graves, ASME Technical Conferences and Events Managing Director, who has cultivated a positive relationship between ASME and DSCD, including enabling affordable registration fees for this conference without compromising its quality.

Last but not least, we want to thank the past and current members of the ASME DSCD Executive Committee, who have worked hard to ensure the quality and growth of the DSCC. In particular, a DSCC Steering Committee mechanism has been set up recently to allow streamlined planning and execution of sustainable DSC conferences.

We wish you an enjoyable and productive experience at the 2018 DSCC!

Contents

General Information

REGISTRATION HOURS AND LOCATION

Registration will be located in the Atlanta Conference Level Foyer, Lower Level 3 of the hotel. The hours are as follows:

Sunday	
September 30	7:00 AM – 7:00 PM
Monday	
October 1	7:00 AM – 7:00 PM
Tuesday	
October 2	7:00 AM – 7:00 PM
Wednesday	
October 3	7:00 AM – 12:00 PM

ACKNOWLEDGEMENT

This event is supported by the ASME Dynamic Systems and Control Division. Dynamic systems and control is a fast growing and pervasive engineering field. There is rarely an engineering endeavor that does not involve the careful control, analysis, and/or synthesis of physical, dynamic systems. Be it fluids, thermodynamics, heat transfer, machine design, or materials engineering: systems and control contributions are essential. The DSC division via this conference, provides a national and international forum to evaluate, discuss, analyze, and publish new technical results in the field; stimulate and encourage research and education innovations; enhance manpower in research and engineering education in dynamic systems and control; and lead in setting directions for the field in the future.

ATLANTA, GEORGIA

The largest city and capital, Atlanta, GA, can boast itself as a thriving business center with an eclectic mix of residents backdropped by a city with southern roots. With a flare for the arts, Atlanta offers visitors and residents a wide selection of museums, classical music venues and a thriving theatre scene. A major city means major sports teams. Catching an Atlanta Falcons, Hawks or Braves game can make for a thrill of a lifetime.

HOTEL

Located on Peachtree Street and directly connected to MARTA transit system. Walk to Centennial Olympic Park, Georgia Aquarium, College Football Hall of Fame, Georgia World Congress Center, Center for Civil and Human Rights an World of Coca-Cola. Dine at Sway, our Southern style eatery comfort food for the soul, and Polaris, Atlanta's iconic rotating restaurant and lounge.

Hyatt Regency Atlanta
265 Peachtree Street, NE
Atlanta, GA 30303

QUESTIONS ABOUT THE MEETING

If you have any questions or need assistance, an ASME representative will be located at the conference registration area.

NAME BADGES

Please wear your name badge at all times. Admission to all conference functions will be by the badges only (unless noted otherwise). Your badge also provides a helpful introduction to other attendees.

REGISTRANTS WITH DISABILITIES

Whenever possible, we are pleased to make arrangements for registrants with disabilities. Advance notice may be required for certain requests. For on-site assistance, please visit the conference registration area and ask to speak with a conference representative.

TICKETED FUNCTIONS

Access to workshops, receptions and awards banquet will be confirmed by tickets included in your registration packets. If you wish to bring a guest to a luncheon, reception or the conference banquet, you must purchase additional tickets accordingly. Guests are NOT permitted to attend technical sessions, workshops, tutorials or committee meetings. For questions regarding any possible ticketed items, you can ask a conference representative located in the registration area.

CONFERENCE PRESENTATIONS

Registered attendees will receive an email from ASME Publications prior to the start of the conference. This email includes a link to the online access for all scheduled presentations for DSCC. The official 2018 Dynamic Systems and Control Conference proceedings will be produced at the conclusion of the conference. Papers that are not presented on-site will be removed and not be published.

CONFERENCE APP

Get the conference App:

- Go the correct store and search for CrowdCompassAttendeeHub
- Download or Install the app
- Find DSCC
- After installing, the icon will appear on your home screen
- Search DSCC
- Password to access DSCC app is dscc2018
- Download the event
- Enter your details (Name and email address where you'd like your verification email sent. Click next
- You will receive a four-digit verification code
- Return to the app and enter the verification code

Alternatively, the app can be accessed via a web browser at:
https://event.crowdcompass.com/dscc.
Please follow the login instructions as specified above.

If you have any questions about the App, please see the App Help Desk located by Registration.

Sponsors

With great appreciation we thank all of our sponsors for their most generous support! Please be sure to visit their Exhibits in the Registration Foyer on Lower Level 3.

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For more information please visit our website:
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GEORGIA TECH

Georgia Tech offers the first interdisciplinary Ph.D. program in robotics to students enrolled in a participating school within either the College of Computing or the College of Engineering. A fully integrated, multidisciplinary experience, the program educates a new generation of robotics researchers as well as innovative leaders prepared to make an impact upon entering the workforce.

IRIM serves as the flagship for Tech's robotics efforts and, therefore, has an integral relationship with many faculty members serving as research advisors to students pursuing the robotics degree. The program includes both coursework and research, with teaching needs served by faculty members in various units across campus.

Georgia Tech's Ph.D. in robotics is recognized as one of the best in the U.S., and the program's graduates go on to be leaders in both industry and academia, securing positions at companies and institutions such as Google, KUKA Robotics, MIT, and Carnegie Mellon.

For more information please visit our website:
http://www.robotics.gatech.edu/

IEEE/CAA JOURNAL OF
AUTOMATICA SINICA

IEEE/CAA

IEEE/CAA Journal of Automatica Sinica (JAS) is a joint publication of the IEEE and the Chinese Association of Automation. The objective of JAS is high quality and rapid publication of articles, with a strong focus on new trends, original theoretical and experimental research and developments, emerging technologies, and industrial standards in automation. The coverage of JAS mainly includes but not limited to: Automatic control, Artificial intelligence and intelligent control, Systems theory and engineering, Pattern recognition and intelligent systems, Automation engineering and applications, Information processing and information systems, Network based automation, Robotics, Computer-aided technologies for automation systems, Sensing and measurement, Navigation, guidance, and control. JAS is indexed by IEEE, ESCI, EI, Inspec, Scopus, SCImago,CNKI, CSCD. The CiteScore released by Elsevier in 2017 is 2.16, ranking 26% among 211 publications in the category.

JAS papers can be found at http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=6570654 or www.ieee-jas.org

College of Engineering
MICHIGAN STATE UNIVERSITY

MICHIGAN STATE UNIVERSITY

Michigan State University, the nation's pioneer land-grant university, is among the top 100 research universities in the world, offering more than 200 programs of undergraduate, graduate, and professional study. The College of Engineering is one of the largest and oldest colleges on the MSU campus, with nine academic units, and nearly 250 faculty members serving more than 6,500 students through ten undergraduate and ten graduate degree programs at both the MS and PhD levels. The college supports a strong research portfolio – including a range of federally funded research centers and international collaborations that include the MSU-Fraunhofer Center for Coatings and Diamond Technologies; the NSF BEACON Center for the Study of Evolution in Action; the Great Lakes Bioenergy Research Center; and the Institute for Advanced Composites Manufacturing Innovation. It is also home to the Composite Materials and Structures Center, and the U.S. Department of Defense supported Composite Vehicles Research Center. Recent academic growth includes the Department of Computational Mathematics, Science & Engineering, and the Department of Biomedical Engineering (BME). A new bio-engineering facility, houses the Institute for Quantitative Health Sciences and Engineering (IQ) and BME.

For more information please visit the website:
https://www.egr.msu.edu

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Quanser is the global leader in developing lab solutions and products that have transformed the way educators teach the theory, application, and implementation of controls, robotics, and mechatronics. Quanser is driven

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ROBOTICS CENTER
THE UNIVERSITY OF UTAH

THE UNIVERSITY OF UTAH ROBOTICS CENTER

The University of Utah Robotics Center (UURC) consists of faculty and graduate students from the School of Computing and the Department of Mechanical Engineering, with the Robotics Track curriculum that imparts fundamental knowledge about robotics and specific courses in perception, cognition, and action. Current research topics include: aerial robotics, autonomous mobile robotics, bioinstrumentation, computer vision, haptics for tele-operation and virtual environments manipulation, medical and rehabilitation robotics, microrobotics, prosthetics, robot learning, and robot sensors and actuators.

For more information please visit the website:
https://robotics.coe.utah.edu/

Department of
MECHANICAL ENGINEERING
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THE DEPARTMENT OF MECHANICAL ENGINEERING AT THE UNIVERSITY OF UTAH

Challenge. Opportunity. Choice. Excellence. The Future.
The Department of Mechanical Engineering at the University of Utah is a world-class research and teaching organization that graduates Ph.D., M.S. and B.S. engineers to energize the economics of the state, the nation and many foreign countries. Working with state-of-the-art equipment and guided by exceptional faculty members, you can become part of a cutting-edge research team with the potential to make a significant impact on a variety of technical fields, change the future, and improve human lives. Our main research areas include: Design, Ergonomics, Manufacturing, & Systems; Robotics, Controls, & Mechatronics; Solid Mechanics; and, Thermal-Fluids & Energy Systems. Within each group you will find faculty with unique interests and cutting-edge research. In fact in the last several years we have added 18 new faculty members–6 since 2017, making this an especially exciting time to be a member of our team. The University of Utah campus is situated in Salt Lake City, a diverse, cosmopolitan city with a population of 1M nestled against the backdrop of the beautiful Wasatch Mountains. Salt Lake City residents have unparalleled access to national parks (eight within a half day's drive: Arches, Bryce Canyon, Canyonlands, Capitol Reef, Grand Teton, Great Basin, Yellowstone, and Zion), skiing/snowboarding (10 world-class resorts within 30 minutes), hiking, fishing, biking, rafting/kayaking, NBA basketball, MLS soccer, PAC-12 sports, and numerous cultural events including opera, dance, symphony, theater, and outdoor concerts, amongst others. In addition, there's the convenience of an international airport located only 15 minutes from campus.

For more information please visit www.mech.utah.edu

robotics
an open access journal by MDPI

ROBOTICS

Robotics (ISSN 2218-6581, http://www.mdpi.com/journal/robotics) is a fully refereed international journal that presents state-of-the-art research work in the area of robotics. Robotics has been indexed by Scopus and the Emerging Sources Citation Index (ESCI-Web of Science) since 2017, Vol. 6. A first decision on manuscripts is provided to authors approximately 24 days after submission; the median publication time is 57 days (median values for papers published in the first six months of 2018).

machines
an open access journal by MDPI

MACHINES

Machines (ISSN 2075-1702; CODEN: MACHCV) is an international peer-reviewed open access journal on machinery and engineering, published quarterly online by MDPI. Machines has been indexed in Emerging Sources Citation Index (ESCI)-Web of Science and Scopus since 2017. A first decision on manuscripts is provided to authors approximately 22 days after submission; the median publication time is 42 days (median values for papers published in the first six months of 2018).

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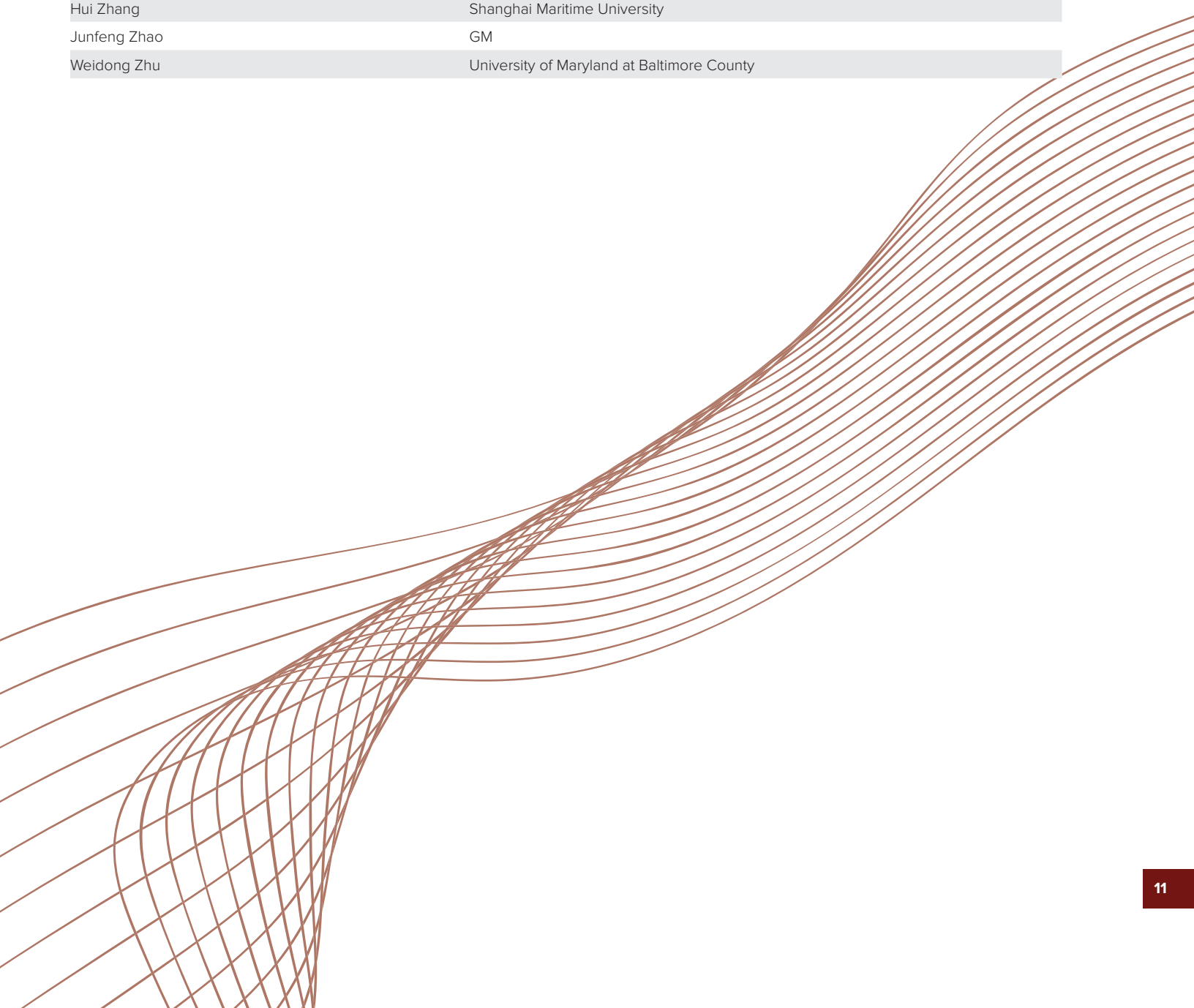


Schedule at a Glance

TECHNICAL SESSIONS

MONDAY, OCTOBER 1

TIME	10:00AM - 12:00PM	1:30PM - 3:30PM	4:00PM - 6:00PM
Inman	**MA1:** Modeling and Control of IC Engines and Powertrain Systems	**MM1:** Automotive Dynamics and Emerging Powertrain Technologies	**ME1:** Control and Optimization of Connected and Automated Ground Vehicles
Kennesaw	**MA2:** Path Planning and Motion Control	**MM2:** Path Planning and Motion Control II	**ME2:** Path Planning and Motion Control III
Piedmont	**MA3:** Unmanned Ground and Aerial Vehicles	**MM3:** Unmanned Ground and Aerial Vehicles II	**ME3:** Unmanned Aerial Vehicles (UAVs) and Application
Lenox	**MA4:** Advances in Control Design Methods	**MM4:** Advances in Control Design Methods II	**ME4:** Vibrations and Control of Systems
Techwood	**MA5:** Multi-Agent and Networked Systems	**MM5:** Advances in Robotics	**ME5:** Advances in Robotics II
Spring	**MA6:** Bio Engineering Applications	**MM6:** Biomedical and Neural Systems	**ME6:** Bio-Mechatronics and Physical Human Robot Interaction

TUESDAY, OCTOBER 2

TIME	10:00AM - 12:00PM	1:30PM - 3:30PM	4:00PM - 6:00PM
Inman	**TA1:** Modeling and Control of IC Engines and Aftertreatment Systems	**TM1:** Automotive Systems	**TE1:** Intelligent Transportation and Vehicles
Kennesaw	**TA2:** Modeling and Validation	**TM2:** Multi-Agent and Networked Systems II	**TE2:** Mechatronics I
Piedmont	**TA3:** Modeling and Management of Power Systems	**TM3:** Dynamics and Control of Renewable Energy systems	**TE3:** Energy Harvesting
Lenox	**TA4:** Vibrations and Control of Systems II	**TM4:** Vibration: Modeling, Analysis, and Control (I)	**TE4:** Vibration in Mechanical Systems
Techwood	**TA5:** Advances in Robotics III	**TM5:** Assistive and Rehabilitation Robotics	**TE5:** Assistive and Rehabilitation Robotics II
Spring	**TA6:** Biomedical and Neural Systems Modeling, Diagnostics and Healthcare	**TM6:** Energy Systems	**TE6:** Energy Systems II

WEDNESDAY, OCTOBER 3

TIME	10:00AM - 12:00PM	1:30PM - 3:30PM	4:00PM - 6:00PM
Inman	**WA1:** Advances in Nonlinear Control		
Kennesaw	**WA2:** Mechatronics II		
Piedmont	**WA3:** Manufacturing		
Lenox	**WA4:** Estimation and Identification		
Techwood	**WA5:** Tracking Control Systems		
Spring	**WA6:** Dynamic Systems and Control Education		

PLENARY AND SPECIAL SESSIONS

SUNDAY, SEPTEMBER 30

1:00pm – 5:00pm (Piedmont)
Workshop #1: From Data to Models and Decisions in Engineering Systems

1:00pm – 5:00pm (Spring)
Workshop #2: Enhancing Energetic Performance for Mobile and Wearable Robotic Systems
12:00pm – 6:00pm (Kennesaw)
Workshop #3: Connected and Automated Vehicles

1:00pm – 5:00pm (Techwood)
Workshop #4: The Future of Mechatronics and Robotics Education

1:00pm – 5:00pm (Lenox)
Workshop #5: Autonomous Control for Rotocraft Operation

6:00pm – 8:30pm (International Ballroom South)
Opening Reception

MONDAY, OCTOBER 1

7:30am – 8:15am (International Ballroom South)
Attendee Breakfast

8:30am – 9:30am (International Ballroom North)
Plenary – Huei Peng, University of Michigan

12:00pm – 1:00pm (Spring)
CAREER Workshop

6:00pm – 7:00pm (Piedmont)
Special Session - Best Student Paper Competition

TUESDAY, OCTOBER 2

7:30am – 8:15am (International Ballroom South)
Attendee Breakfast

8:30am – 9:30am (International Ballroom North)
Plenary – Marcia O'Malley, Rice University

12:00pm – 1:00pm (Roswell/Vinings)
Networking Industry/Networking Academia

7:00pm – 7:45pm (International Ballroom)
Oldenburger Lecture – Roberto Horowitz, UC Berkeley
Awards Banquet

WEDNESDAY, OCTOBER 3

7:30am – 8:15am (International Ballroom South)
Attendee Breakfast

8:30am – 9:30am (International Ballroom North)
Nyquist Lecture – Magnus Egerstedt, Georgia Institute of Technology

1:00pm – 5:00pm
Georgia Tech Tour

Social & Networking Activities

OPENING RECEPTION
SUNDAY, SEPTEMBER 30
6:00PM – 8:30PM
INTERNATIONAL BALLROOM SOUTH, LOWER LEVEL 1

Start this year's conference off right! Enjoy reconnecting with your friends and colleagues over cocktails and hors d'oeuvres and take this opportunity to also meet with this year's sponsors and exhibitors.

Tickets and/or Badges are required.

BREAKFAST SERVICE
DAILY (MONDAY THROUGH WEDNESDAY)
7:30AM – 8:15AM
INTERNATIONAL BALLROOM SOUTH

Prior to the start of the morning plenary each day, please meet in the International Ballroom South for breakfast and network with fellow attendees.

COFFEE BREAKS
DAILY (MONDAY THROUGH WEDNESDAY, WITH NO PM BREAK ON WEDNESDAY)
9:30AM–10:00AM AND 3:30PM–4:00PM
FOYER, LOWER LEVEL 3

Morning and afternoon coffee breaks are scheduled daily in the Registration Area. Coffee, tea, lemonade, iced tea and light snacks will be served.

LUNCH
TUESDAY, OCTOBER 2ND
12:00PM – 1:30PM
INTERNATIONAL BALLROOM SOUTH, LOWER LEVEL 1

This year's conference program includes one group lunch and is scheduled for Tuesday. On Monday, attendees will be given a break from 12:00pm – 1:30pm where you will have the opportunity to explore the hotel and surrounding areas.

STUDENT CAREER ADVISING/NETWORKING EVENT (ACADEMIA)
TUESDAY, OCTOBER 2ND
12:00PM – 1:00PM
ROOM—VININGS, LOWER LEVEL 3

The 2018 ASME Dynamic Systems and Control Conference is providing an opportunity for student attendees to receive advice from professors about career in academia. Students are highly encouraged to bring their resume to the event. Students who have pre-registered (by September 15th) will have priority seating in this event. For those who did not have the chance to register in advance for this function, please inquire further at the registration desk.

STUDENT CAREER ADVISING/NETWORKING EVENT (INDUSTRY)
TUESDAY, OCTOBER 2ND
12:00PM – 1:00PM
ROOM—ROSWELL, LOWER LEVEL 3

The 2018 ASME Dynamic Systems and Control Conference is providing an opportunity for student attendees to receive career advice from professionals working in industry. Students are highly encouraged to bring their resume to the event. Students who have pre-registered (by September 15th) will have priority seating in this event. For those who did not have the chance to register in advance for this function, please inquire further at the registration desk.

BEST STUDENT PAPER AWARD COMPETITION SESSION
MONDAY, OCTOBER 1ST
6:00PM – 7:00PM
ROOM—PIEDMONT, LOWER LEVEL 3

The Best Student Paper Award Competition recognizes students who have authored extraordinary papers in the 2018 ASME DSCC as the first author. The following five finalists for the best student paper competition will present their work at the best student paper award competition session:

Sahand Sadeghi, *Clemson University*
Paper title: The Effect of Nonlinear Springs in Jumping Mechanism

Poya Khalaf, *Cleveland State University*
Paper title: Development and Experimental Validation of an Energy Regenerative Prosthetic Knee Controller and Prototype

Abhinav Tripathi, *University of Minnesota*
Paper title: Experimental Investigation and Analysis of Auto-Ignition Combustion Dynamics

Bingjie Hao, *Huazhong Univ. of Sci. and Tech*
Paper title: Eddy-Current Dynamic Model for Simultaneous Geometrical and Material Parameter Measurements of Magnetic Materials

Huan Yu, *University of California, San Diego*
Paper title: Stabilization of Traffic Flow with Autonomous Vehicles

AWARDS BANQUET
TUESDAY, OCTOBER 2ND
6:30PM – 9:30PM
INTERNATIONAL BALLROOM, LOWER LEVEL 1

The Awards Banquet will recognize the exceptional achievements and dedication of the numerous leaders within the Dynamic Systems and Control community. Award Presentations include: Henry M. Paynter Outstanding Investigator Award, Michael J. Rabins Leadership Award, Charles Stark Draper Innovative Practice Award, and the Rudolf E. Kalman Best Paper Award. The Nyquist Lecturer and Plenary speakers will be acknowledged. The Student Best Paper finalists will be introduced and the winner will be announced. The awards ceremony will be concluded by the presentation and acceptance of the ASME Rufus Oldenberger Medal.

Committee Meetings

AUTOMOTIVE AND TRANSPORTATION SYSTEMS (ATS) TECHNICAL COMMITTEE
MONDAY, OCTOBER 1ST
6:00PM – 7:00PM
LENOX, LOWER LEVEL 3

BIO-SYSTEMS & HEALTH CARE (BSHC) TECHNICAL COMMITTEE
TUESDAY, OCTOBER 2ND
12:15PM – 1:15PM
LENOX, LOWER LEVEL 3

DSCD EXECUTIVE COMMITTEE
MONDAY, OCTOBER 1ST
1:30PM – 5:30PM
ROSWELL, LOWER LEVEL 3

DSCD GENERAL MEETING
MONDAY, OCTOBER 1ST
7:30PM – 10:30PM
INTERNATIONAL BALLROOM NORTH, LOWER LEVEL 1

ENERGY SYSTEMS (ES) TECHNICAL COMMITTEE
TUESDAY, OCTOBER 2ND
12:00PM – 1:00PM
MARIETTA, LOWER LEVEL 3

JOINT 2018/2019 DSCC ORGANIZING COMMITTEES MEETING
TUESDAY, OCTOBER 2ND
12:00PM – 1:00PM
INMAN, LOWER LEVEL 3

MECHATRONICS TECHNICAL COMMITTEE
MONDAY, OCTOBER 1ST
6:00PM – 7:00PM
VININGS, LOWER LEVEL 3

ROBOTICS TECHNICAL COMMITTEE
MONDAY, OCTOBER 1ST
6:15PM – 7:15PM
MARIETTA, LOWER LEVEL 3

VIBRATIONS TECHNICAL COMMITTEE
MONDAY, OCTOBER 1ST
12:00PM – 1:15PM
VININGS, LOWER LEVEL 3

DSCC STEERING COMMITTEE MEETING
MONDAY, OCTOBER 1ST
10:00AM – 12:00PM
MARIETTA, LOWER LEVEL 3

Plenary Sessions

"HOW CONTROL THEORIES WERE USED TO IMPROVE ENEREGY AND SAFETY OF AUTOMOTIVE SYSTEMS"

MONDAY, OCTOBER 1
8:30AM – 9:30AM
INTERNATIONAL BALLROOM NORTH (LOWER LEVEL 1)

Session Chair: **Anna Stefanopoulou,** *University of Michigan*

Huei Peng,
University of Michigan

Abstract: Tomorrow's vehicles will be more electrified, connected, automated, and shared compared with vehicles today. Modeling and control will continue to play a key role in making these vehicles safer, more efficient, and less polluting. In this talk, I will present my personal experience in applying advanced modeling and control techniques to several automotive applications, to improve their safety and energy consumption. The talk will end with future trend and remaining challenges.

Biography: Huei Peng received his Ph.D. in Mechanical Engineering from the University of California, Berkeley in 1992. He is now a Professor at the Department of Mechanical Engineering at the University of Michigan. His research interests include adaptive control and optimal control, with emphasis on their applications to vehicular and transportation systems. His current research focuses include design and control of electrified vehicles, and connected/automated vehicles. In the last 10 years, he was involved in the design of several military and civilian concept vehicles, including FTTS, FMTV, Eaton/Fedex, and Super-HUMMWV—for both electric and hydraulic hybrid concepts. He served as the US Director of the DOE sponsored Clean Energy Research Center—Clean Vehicle Consortium, which supports more than 30 research projects related to the development of clean vehicles in the US and in China. He currently serves as the Director of Mcity, which studies connected and autonomous vehicle technologies and promotes their deployment. He has served as the PI or co-PI of more than 50 research projects, with a total funding of more than 50 million dollars. He has more than 250 technical publications, including 110 in referred journals and transactions and four books. His h-index is 69 according to the Google scholar analysis. The total number of citations to his work is more than 18,000. He believes in setting high expectation and helping students to exceed it by selecting innovative research topics with real impact. One of his proudest achievements is that more than half of his Ph.D. students have each published at least one paper cited more than 100 times. Huei Peng has been an active member of the Society of Automotive Engineers (SAE) and the American Society of Mechanical Engineers (ASME). He is both an SAE fellow and an ASME Fellow. He is a ChangJiang Scholar at the Tsinghua University of China.

"TOWARDS ROBOTS THAT TEACH AND LEARN THROUGH PHYSICAL HUMAN-ROBOT INTERACTION"

TUESDAY, OCTOBER 2
8:30AM – 9:30AM
INTERNATIONAL BALLROOM NORTH (LOWER LEVEL 1)

Session Chair: **George Zhu,** *Michigan State University*

Marcia O'Malley,
Rice University

Abstract: Robots are increasingly transitioning from factories to human environments: today we use robots in healthcare, households, and social settings. In such circumstances where the human and the robot work in close proximity---physical interactions are almost inevitable. In the past, these physical interactions have typically been treated as a disturbance, which should be avoided or rejected. But physical interaction offers an opportunity for the human and robot to implicitly communicate; when the robot guides the human, or the human corrects the robot, the human and robot are leveraging physical interactions to inform each other about some aspect of the current task. This talk will explore how robots can both teach and learn from humans through physical interaction.

Biography: Marcia O'Malley is the Stanley C. Moore Professor of Mechanical Engineering, of Computer Science, and of Electrical and Computer Engineering at Rice University. She received the Bachelor of Science degree in mechanical engineering from Purdue University, and her MS and PhD in mechanical engineering from Vanderbilt University. She currently serves as Special Advisor to the Provost on Educational and Research Initiatives in Collaborative Health. She is also the Director of Rehabilitation Engineering at TIRR-Memorial Hermann Hospital. Her research addresses issues that arise when humans physically interact with robotic systems, with a focus on training and rehabilitation in virtual environments. She has twice received the George R. Brown Award for Superior Teaching at Rice University. She is a Fellow of the American Society of Mechanical Engineers, and serves as an associate editor for the IEEE Transactions on Robotics and as a senior associate editor for the ACM Transactions on Human Robot Interaction.

RUFUS OLDENBURGER LECTURE
"MODELING, CONTROL AND ESTIMATION OF TRAFFIC ROAD NETWORKS"

TUESDAY, OCTOBER 2
7:00PM – 7:45PM
INTERNATIONAL BALLROOM (LOWER LEVEL 1)

Session Chair: **Dawn Tilbury,** *National Science Foundation*

Roberto Horowitz,
University of California, Berkeley

Abstract: This talk discusses some of our recent advancements in management and estimation of traffic road networks. Traffic congestion is a major source of world-wide inefficiency, with one study estimating that, in 2014, delays due to congestion cost 7 billion hours and $160B in the US alone. However, mitigating congestion through management techniques is difficult, as traffic congestion exists in a confluence of complex phenomena, such as nonlinear shockwaves, emergent macroscopic network effects from multiple agents, and low system observability and controllability. Growth of traffic demand shows no sign of decreasing, so continued infrastructure expansion must be combined with continued development of traffic control engineering to abate these societal costs. Some of today's traffic control efforts make use of novel formulations of these nonlinear systems and new sources of data provided by the connected and autonomous vehicles now entering the fleet.

Biography: Roberto Horowitz is a Professor in the Department of Mechanical Engineering at UC Berkeley and holds the James Fife Endowed Chair in the College of Engineering. He received a B.S. degree with highest honors in 1978 and a Ph.D. degree in 1983 in mechanical engineering from the University of California at Berkeley and became a faculty member of the Mechanical Engineering Department in 1982. Dr. Horowitz teaches and conducts research in the areas of adaptive, learning, nonlinear and optimal control, with applications to Micro-Electromechanical Systems (MEMS), computer disk file systems, robotics, mechatronics and Intelligent Vehicle and Highway Systems (IVHS). He is currently the Chair of the Department of Mechanical Engineering Department is a former co-director of the Partners for Advanced Transportation Technology (PATH) research center at U.C. Berkeley. Dr. Horowitz is a member of IEEE and ASME and the recipient of the 2010 ASME Dynamic Systems and Control Division (DSCD) Henry M. Paynter Outstanding Investigator Award.

"LONG DURATION AUTONOMY AND CONSTRAINT-BASED COORDINATION OF MULTI-ROBOT SYSTEMS"

WEDNESDAY, OCTOBER 3
8:30AM – 9:30AM
INTERNATIONAL BALLROOM NORTH (LOWER LEVEL 1)

Session Chair: **Jun Ueda,** *Georgia Institute of Technology*

Magnus Egerstedt,
Georgia Institute of Technology

Abstract: By now, we have a fairly good understanding of how to design coordinated control strategies for making teams of mobile robots achieve geometric objectives in a distributed manner, such as assembling shapes or covering areas. But, the mapping from high-level tasks to these objectives is not particularly well understood. In this talk, we investigate this topic in the context of long duration autonomy, i.e., we consider teams of robots, deployed in an environment over a sustained period of time, that can be recruited to perform a number of different tasks in a distributed, safe, and provably correct manner. This development will involve the composition of multiple barrier certificates for encoding the tasks and safety constraints, as well as a detour into ecology as a way of understanding how persistent environmental monitoring, as a special instantiation of the long duration autonomy concept, can be achieved by studying animals with low-energy life-styles, such as the three-toed sloth.

Biography: Magnus Egerstedt is the Executive Director for the Institute for Robotics and Intelligent Machines at the Georgia Institute of Technology and a Professor and the Julian T. Hightower Chair in Systems and Controls in the School of Electrical and Computer Engineering. He received the M.S. degree in Engineering Physics and the Ph.D. degree in Applied Mathematics from the Royal Institute of Technology, Stockholm, Sweden, the B.A. degree in Philosophy from Stockholm University, and was a Postdoctoral Scholar at Harvard University. Dr. Egerstedt is a Fellow of the IEEE and a recipient of a number of research and teaching awards, including the Ragazzini Award from the American Automatic Control Council.

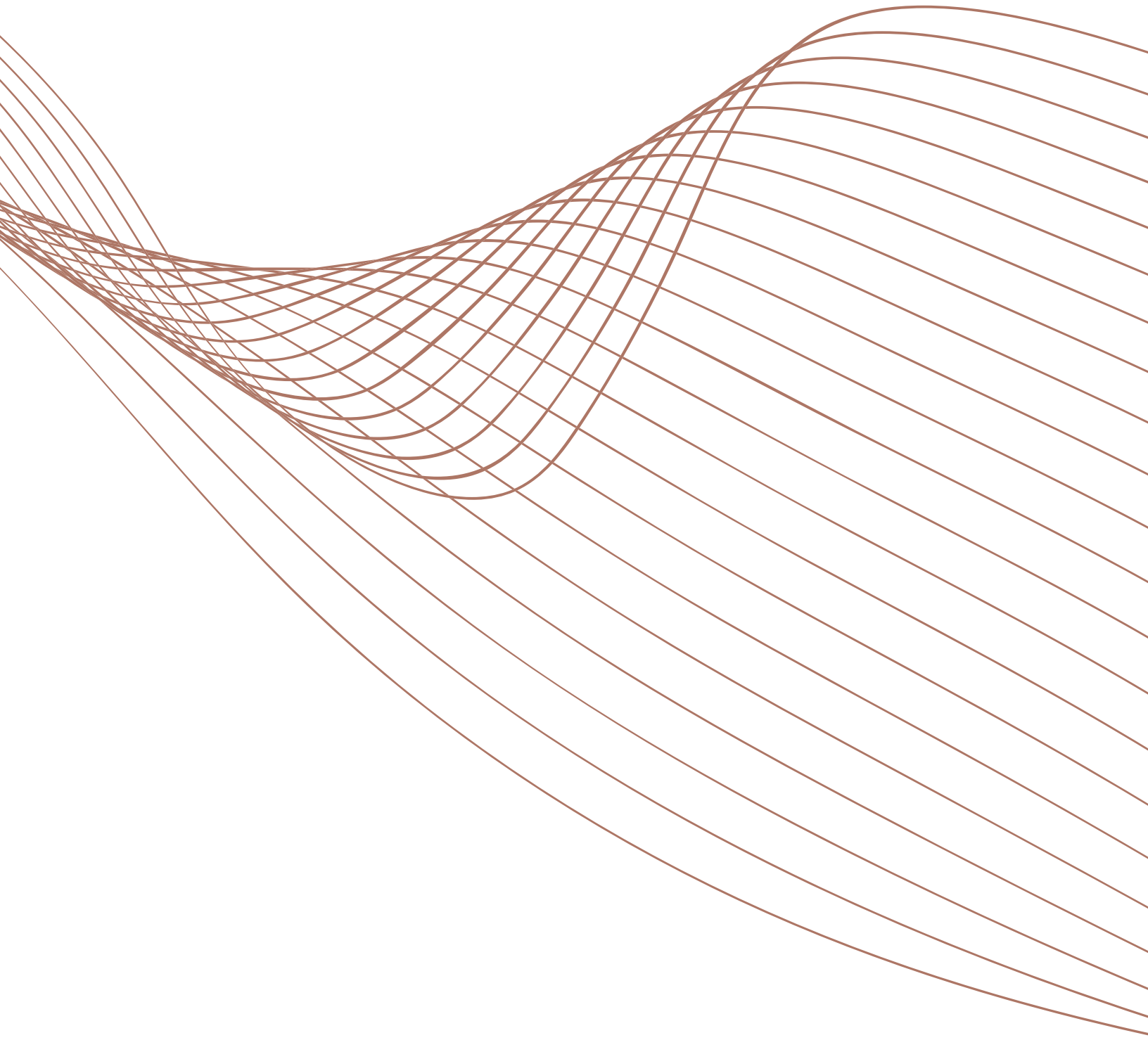
Special Sessions

NSF CAREER AWARD PANEL
MONDAY, OCTOBER 1
12:00PM – 1:00PM
LOCATION: SPRING

This event is geared towards junior faculty members who are interested in pursuing the NSF CAREER award. Graduate students and postdocs are also welcome. A panel formed by previous NSF CAREER awardees will share their experiences and tips on proposal preparation. Senior panelists will also share their successful experiences on tenure and promotion. The event will begin with a moderated panel discussion followed by a question and answer session.

SPECIAL SESSION ON FEDERAL FUNDING OPPORTUNITIES AND GETTING FUNDED BY NSF
TUESDAY, OCTOBER
1:30PM – 3:30PM
LOCATION: MARIETTA

The goal of this special session is to provide an update on National Science Foundation (NSF) funding opportunities of interest to the dynamic systems and control community. The presentations will include NSF programs in Dynamic, Control and System Diagnostics (DCSD), Network for Computational Nanotechnology (NCN), Engineering Research Centers (ERC), and new cross-cutting initiatives. The presenters will also go over NSF review process and Intellectual Merit and Broader Impacts criteria, as well as share most common mistakes made by Principal Investigators when submitting a proposal. A question-and-answer session will follow the presentations.



Awards

AWARDS CEREMONY

TIME: 6:30-7:00 TUESDAY, OCTOBER 2 2018
LOCATION: INTERNATIONAL BALLROOM

LIST OF BEST STUDENT PAPER FINALISTS

Sahand Sadeghi, Blake D. Betsill, Phanindra Tallapragada, and Suyi Li
DSCC2018-8969: *The Effect of Nonlinear Springs in Jumping Mechanism*

Poya Khalaf, Holly Warner, Elizabeth Hardin, Hanz Richter, and Daniel Simon
DSCC2018-9091: *Development and Experimental Validation of an Energy Regenerative Prosthetic Knee Controller and Prototype*

Abhinav Tripathi, Chen Zhang, and Zongxuan Sun
DSCC2018-9184: *Experimental Investigation and Analysis of Auto-Ignition Combustion Dynamics*

Bingjie Hao, Kok Meng Lee, and Kun Bai
DSCC2018-9211: *Eddy-Current Dynamic Model for Simultaneous Geometrical and Material Parameter Measurements of Magnetic Materials*

Huan Yu, Shumon Koga, and Miroslav Krstic
DSCC2018-9239: *Stabilization of Traffic Flow with Autonomous Vehicles*

ASME DSCD KALMAN BEST PAPER AWARD

Kræn Vodder Busk, MAN Energy Solutions, Denmark
Mogens Blanke, Technical University of Denmark
Lars Eriksson, Linköping University, Sweden
Morten Vejlgaard-Laursen, Maersk, Denmark

for their paper "*Control-Oriented Model of Molar Scavenge Oxygen Fraction for Exhaust Recirculation in Large Diesel Engines*", Journal of Dynamic Systems, Measurement, and Control, 139(2), 021007, February 2017

HENRY M. PAYNTER OUTSTANDING INVESTIGATOR AWARD

Dr. Tsu-Chin Tsao
UCLA

Dr. Tsu-Chin Tsao (B.S. National Taiwan University, M.S. and Ph.D. University of California Berkeley), a Fellow of American Society of Mechanical Engineers (ASME), is Professor at UCLA Henry Samuelli School of Engineering and Applied Science Mechanical and Aerospace Engineering Department. He has been an active contributor in the academic communities and has served leadership roles as Department Chair, technical divisions and committees in ASME and International Federation of Automatic Control (IFAC), and conference program chairs and journal editors. Dr. Tsao's research areas are in controls and mechatronics with applications in manufacturing, robotics, and other engineered systems. Recognitions of his research include ASME Journal of Dynamic Systems, Measurement, and Control Best Paper Award, ASME DSCD Outstanding Young Investigator Award, American Automatic Control Council Hugo S. Shuck Best Paper Award, International Symposium on Flexible Automation Best Paper Award, and IFAC Mechatronic Systems Award.

ASME DSCD MICHAEL J. RABINS LEADERSHIP AWARD

Dr. Kok-Meng Lee
Georgia Institute of Technology

Dr. Kok-Meng Lee is a Professor in George W. Woodruff School of Mechanical Engineering at Georgia Institute of Technology and a Distinguished Professor in School of Mechanical Science and Engineering at Huazhong University of Science and Technology, China. He received his S. M. and Ph. D. degrees in mechanical engineering from the Massachusetts Institute of Technology in 1982 and 1985 respectively. His research interests include system dynamics and control, robotics, automation, machine vision and mechatronics. Dr. Lee is a fellow of IEEE and ASME. Recognitions of his research contributions include the NSF Presidential Young Investigator (PYI) Award, Sigma Xi Junior Faculty Award, International Hall of Fame New Technology Award, and Woodruff Faculty Fellow. Dr. Lee is founding Editor-in-Chief for the Springer International Journal on Intelligent Robotics and Applications. Prior to this appointment, he served as Editor-in-Chief (2008-2013) and Technical Editor (1995-1999) for the IEEE/ASME Transactions on Mechatronics. He was IEEE/ASME AIM General Co-Chair (1997) and General Chair (1999) and as ASME Liaison for IEEE/ASME AIM (1999-2013, 2017-persent).

ASME DSCD CHARLES STARK DRAPER INNOVATIVE PRACTICE AWARD

Prof. Anna Stefanopoulou
University of Michigan

Prof. Anna Stefanopoulou is the William Clay Ford Professor of Manufacturing at the University of Michigan. She was an assistant professor at the University of California, Santa Barbara and a technical specialist at Ford Motor Company. She is an ASME (08), an IEEE (09) and a SAE (18) fellow, an elected member of the Executive Committee of the ASME Dynamics Systems and Control Division and the Board of Governors of the IEEE Control Systems Society. She has received multiple awards in powertrain control technology and was a member of a U.S. National Academies committee on Light Duty Vehicle fuel efficiency. She has co-authored a book, 20 US patents, 250 publications (5 of which have received awards) on estimation and control of internal combustion engines and electrochemical processes such as fuel cells and batteries.

NYQUIST LECTURER

Dr. Huei Peng
University of Michigan

Dr. Huei Peng received his Ph.D. in Mechanical Engineering from the University of California, Berkeley in 1992. He is now a Professor at the Department of Mechanical Engineering at the University of Michigan. His research interests include adaptive control and optimal control, with emphasis on their applications to vehicular and transportation systems. His current research focuses include design and control of electrified vehicles, and connected/automated vehicles. In the last 10 years, he was involved in the design of several military and civilian concept vehicles, including FTTS, FMTV, Eaton/Fedex, and Super-HUMMWV—for both electric and hydraulic hybrid concepts. He served as the US Director of the DOE sponsored Clean Energy Research Center—Clean Vehicle Consortium, which supports more than 30 research projects related to the development of clean vehicles in the US and in China. He currently serves as the Director of Mcity, which studies connected and autonomous vehicle technologies and promotes their deployment. He has served as the PI or co-PI of more than 50 research projects, with a total funding of more than 50 million dollars. He has more than 250 technical publications, including 110 in referred journals and transactions and four books. His h-index is 69 according to the Google scholar analysis. The total number of citations to his work is more than 18,000. He believes in setting high expectation and helping students to exceed it by selecting innovative research topics with real impact. One of his proudest achievements is that more than half of his Ph.D. students have each published at least one paper cited more than 100 times. Huei Peng has been an active member of the Society of Automotive Engineers (SAE) and the American Society of Mechanical Engineers (ASME). He is both an SAE fellow and an ASME Fellow. He is a ChangJiang Scholar at the Tsinghua University of China.

OLDENBURGER MEDALIST

Roberto Horowitz
UC Berkeley

Roberto Horowitz is the current chair of the Department of Mechanical Engineering at UC Berkeley and holds the James Fife Endowed Chair in the College of Engineering. He received a B.S. degree with highest honors in 1978 and a Ph.D. degree in 1983 in mechanical engineering from the University of California at Berkeley and became a faculty member of the Mechanical Engineering Department in 1982. Dr. Horowitz teaches and conducts research in the areas of adaptive, learning, nonlinear and optimal control, with applications to Micro-Electromechanical Systems (MEMS), computer disk file systems, robotics, mechatronics and Intelligent Vehicle and Highway Systems (IVHS). He is a former co-director of the Partners for Advanced Transportation Technology (PATH) research center at U.C. Berkeley. Dr. Horowitz is a member of IEEE and ASME and the recipient of the 2010 ASME Dynamic Systems and Control Division (DSCD) Henry M. Paynter Outstanding Investigator Award.

Workshops

W1: FROM DATA TO MODELS AND DECISIONS IN ENGINEERING SYSTEMS

SUNDAY, SEPTEMBER 30
1:00PM – 5:00PM
PIEDMONT (LOWER LEVEL 3)

Organizers:
Annalisa Scacchioli, *Rutgers University*
Mahdi Shahbakhti, *Michigan Technological University*

Abstract: The design and control of the next generation of automotive and aerospace vehicles requires innovations in computational methods involving the role of big data in modeling and decisions. This workshop presents leading researchers working on various aspects of data analytics, including data management, data- driven modeling, machine learning, and control with applications to aerospace, driverless vehicles, human-machine interactions, and power grids. The future directions of data science and control engineering important to the mechanical engineering community will be emphasized in this workshop.

W2: ENHANCING ENERGETIC PERFORMANCE FOR MOBILE AND WEARABLE ROBOTIC SYSTEMS

SUNDAY, SEPTEMBER 30
1:00PM – 5:00PM
SPRING (LOWER LEVEL 3)

Organizers:
Anirban Mazumdar, *Georgia Institute of Technology*
Aaron Young, *Georgia Institute of Technology*

Abstract: The interplay between energy and performance is particularly critical for mobile and human-worn systems that must carry their own energy supply (battery). There is an inherent trade-off between increasing performance capabilities of many robots and energetic cost. For example, low endurance can restrict the ability to perform many tasks, while a large battery can restrict performance through added weight and size. Minimizing energy consumption while maintaining high levels of functionality requires a multi-disciplinary approach. Actuator dynamics, drivetrain selection, gait control approaches, interface dynamics and harvesting capacity all influence the overall energetic performance of autonomous systems. Mobility itself may present new opportunities and recent works have shown how platooning or flocking strategies can increase vehicle range. Similarly, new studies have demonstrated the promise of using mobile systems that can optimize their location for harvesting energy from time and spatially varying flows. Wearable robots often have a dual and often competing objective function in terms of improving energetic economy of not only the robot but also the human operator. This frontier session seeks to advance knowledge and collaboration in this growing field by bringing together experts from legged robotics, prosthesis, exoskeletons, novel actuators, and energy harvesting.

W3: CONNECTED AND AUTOMATED VEHICLES

SUNDAY, SEPTEMBER 30
12:00PM – 6:00PM
KENNESAW (LOWER LEVEL 3)

Organizers:
Mahdi Shahbakhti, *Michigan Technological University*
Hosam Fathy, *Pennsylvania State University*

Abstract: The automotive industry is undergoing major changes, with substantial growth in the areas of autonomy and connectivity. By 2021, the majority of vehicles sold in US will be connected vehicles. In addition, different automotive OEMs have launched large-scale programs for deploying autonomous vehicles (ranging from L2 to L5) on the road over the next 10 years. Connected and autonomous vehicles (CAVs) reduce traffic congestion, improve mobility, and decrease vehicular energy consumption. To realize these benefits, integrated vehicle controls, including both vehicle dynamics and powertrain (VD&PT) control, eco-routing, and transportation analytics are required. Future CAVs call for advanced control and real-time energy-efficiency optimization methods. Some of major CAV challenges include: the development of computationally-efficient VD&PT control and optimization methods, virtual sensing and data construction, V2X (vehicle to vehicle, infrastructure, etc.), cyber security, real-time traffic data mining, diagnosis and fault tolerance. This workshop aims to discuss the CAV opportunities, challenges, and present some of the recent developments in the areas of controls, dynamical analysis, fault diagnosis, communication, cyber security, and traffic management of CAVs.

W4: THE FUTURE OF MECHATRONICS AND ROBOTICS EDUCATION

SUNDAY, SEPTEMBER 30
1:00PM – 5:00PM
TECHWOOD (LOWER LEVEL 3)

Organizers:
Vikram Kapila, *New York University*
Michael A. Gennert, *Worcester Polytechnic Institute*
James Mynderse, *Lawrence Technological University*
Nima Lotfi, *Southern Illinois University Edwardsville*

Abstract: Mechatronics and Robotics are experiencing tremendous, dynamic growth owing to recent advances in integrated circuits and electronics, embedded systems and computers, networks, and intelligent system as well as democratization of access through open source hardware/software, and Maker movement. Mechatronics and Robotics engineers are shaping the world by designing smart and autonomous systems and processes that can improve human life and welfare. Such engineers require an interdisciplinary knowledge of mechanical, electrical, computer, software, and systems engineering to oversee the entire design and development process. To address the needs of industry for trained individuals in this field, many universities and colleges have introduced courses, minors, and degree programs. Furthermore, numerous experimental platforms have been developed and utilized to provide engaging, hands-on experiences to students; however, these efforts lack cohesion. Now is the time to unify and standardize educational material, including frameworks, curricula, course outlines, experiments, and

assignments to make Mechatronics and Robotics education more widely available.

The objectives of this workshop are to bring together industry and academic professionals in Mechatronics and Robotics, share experiences, and initiate efforts towards defining the field. We aim to encourage and facilitate the wide adoption of Mechatronics and Robotics degree programs. Workshop participants will learn about recent successes in offering these degrees, help influence the future of the field, and contribute to the growing Mechatronics and Robotics education community. This workshop will benefit a wide range of DSCC participants including educators teaching mechatronics, robotics, dynamics, and control courses; PhD students seeking academic careers in mechatronics and robotics; and industry professionals desiring to shape the future workforce.

W5: AUTONOMOUS CONTROL FOR ROTOCRAFT OPERATION

SUNDAY, SEPTEMBER 30
1:00PM – 5:00PM
LENOX (LOWER LEVEL 3)

Organizer:
Cornel Sultan, *Virginia Tech*

Abstract: Autonomous operation of rotorcraft will greatly expand the range of achievable missions and operational envelopes. Autonomy is enabled by a multidisciplinary approach in which advanced feedback control plays a central role. This workshop discusses critical needs and challenges related to autonomy and control design for rotorcraft, along with recent contributions.

Highly constrained autonomous rotorcraft missions demand increasingly complex control models which capture the dynamics associated with mission requirements. Novel control technologies enable a larger space for control variables and improved control authority beyond what is typically achieved by conventional rotorcraft controls. Modern control in rotorcraft control is necessary to adequately handle the highly coupled large models and multiple objectives associated with complex missions. In this context, the current and future trend in rotorcraft design and control is towards integration of complex models and control designs.

By bringing together students and professionals from diverse related areas such as dynamics, control, structures, system design, computations, the workshop is expected to foster interdisciplinary cooperation. The workshop will educate the audience about challenges, solutions, future directions in rotorcraft autonomy, along with ramifications in other areas such as turbomachinery and turbine control, in which the presenter is also active. It will also illustrate how knowledge from different fields can be leveraged to address complex problems.

MONDAY, OCTOBER 1

MA1 - INVITED SESSION
MODELING AND CONTROL OF IC ENGINES AND POWERTRAIN SYSTEMS
INMAN **10:00AM - 12:00PM**

Session Chair: **Zongxuan Sun**, *University Of Minnesota, Minneapolis, MN, United States*

Session Co-Chair: **Pingen Chen**, *Tennessee Technological University, Cookeville, TN, United States*

Session Organizer: **Carrie M. Hall**, *Illinois Institute of Technology, Chicago, IL, United States*

MODEL PREDICTIVE CONTROL BASED ENERGY MANAGEMENT OF POWER-SPLIT HYBRID ELECTRIC VEHICLES IN PRESENCE OF UNCERTAINTY

Technical Paper Publication. DSCC2018-8961

Baisravan Homchaudhuri, Carrie M. Hall, *Illinois Institute of Technology, Chicago, IL, United States*

A CONTROL-ORIENTED REACTION-BASED SI ENGINE COMBUSTION MODEL

Technical Paper Publication. DSCC2018-8988

Ruixue Christine LI, Guoming Zhu, *Michigan State University, East Lansing, MI, United States*

OPTIMAL ENERGY MANAGEMENT IN A RANGE EXTENDER PHEV USING A CASCADED DYNAMIC PROGRAMMING APPROACH

Technical Paper Publication. DSCC2018-9043

Pradeep Sharma Oruganti, *The Ohio State University, Columbus, OH, United States*, ***Daniel Jung, Mukilan Arasu***, *The Ohio State University, Columbus, OH, United States*, ***Qadeer Ahmed***, *Center For Automotive Research, Columbus, OH, United States*, ***Giorgio Rizzoni***, *Ohio State University, Columbus, OH, United States*

REALIZING TRAJECTORY-BASED COMBUSTION CONTROL IN A HYDRAULIC FREE PISTON ENGINE VIA A FAST-RESPONSE DIGITAL VALVE

Technical Paper Publication. DSCC2018-9057

Chen Zhang, *University of Minnesota, Twin city, MN, United States*, ***Zongxuan Sun***, *University Of Minnesota, Minneapolis, MN, United States*

OPTIMIZATION OF MODE SWITCHING TIMING CONTROL FOR A LEAN-BURN GASOLINE ENGINE WITH A PROTOTYPE PASSIVE SCR SYSTEM

Technical Paper Publication. DSCC2018-9062

Dakota Strange, Pingen Chen, *Tennessee Technological University, Cookeville, TN, United States*, ***Vitaly Y., Prikhodko***, *Oak Ridge National Laboratory, Knoxville, TN, United States*, ***James Parks***, *Oak Ridge Natl Lab, Knoxville, TN, United States*

ENERGY AVAILABILITY STUDY FOR A REGENERATIVE HYDRAULICALLY ASSISTED TURBOCHARGER

Technical Paper Publication. DSCC2018-9134

Tao Zeng, *DENSO International America, Bloomfield Hills, MI, United States*, ***Yifan Men***, *Michigan State University, East Lansing, MI, United States*, ***Devesh Upadhyay***, *Ford Motor Company, Dearborn, MI, United States*, ***Guoming Zhu***, *Michigan State University, East Lansing, MI, United States*

MA2 - CONTRIBUTED SESSION
PATH PLANNING AND MOTION CONTROL
KENNESAW **10:00AM - 12:00PM**

Session Chair: **Yue Wang**, *Clemson University, Clemson, SC, United States*

Session Co-Chair: **Ardalan Vahidi**, *Clemson University, Clemson, SC, United States*

Session Organizer: **Zheng Chen**, *Zhejiang University, Hangzhou, -, China*

GEOMETRIC MOTION PLANNING FOR SYSTEMS WITH TOROIDAL AND CYLINDRICAL SHAPE SPACES

Technical Paper Publication. DSCC2018-9144

Chaohui Gong, *Bito Robotics, Pittsburgh, PA, United States*, ***Julian Whitman, Jaskaran Singh Grover***, *Carnegie Mellon University, Pittsburgh, PA, United States*, ***Zhongqiang Ren***, *Bito Robotics, Pittsburgh, PA, United States*, ***Baxi Chong, Howie Choset***, *Carnegie Mellon University, Pittsburgh, PA, United States*

TRUST-BASED RUN-TIME VERIFICATION FOR MULTI-QUADROTOR MOTION PLANNING WITH A HUMAN-IN-THE-LOOP

Technical Paper Publication. DSCC2018-9174

Maziar Fooladi Mahani, Yue Wang, *Clemson University, Clemson, SC, United States*

THE SECANT METHOD: GLOBAL TRAJECTORY PLANNING WITH VARIABLE RADIUS, SOLID OBSTACLES

Technical Paper Publication. DSCC2018-9176

Konrad Ahlin, Ai-Ping Hu, *Georgia Institute of Technology, Atlanta, GA, United States*, ***Nader Sadegh***, *Georgia Inst Of Tech, Atlanta, GA, United States*

ERGODIC EXPLORATION FOR ADAPTIVE SAMPLING OF WATER COLUMNS USING GLIDING ROBOTIC FISH

Technical Paper Publication. DSCC2018-9179

Osama Ennasr, *Michigan State University, East Lansing, MI, United States*, ***Giorgos Mamakoukas, Todd Murphey***, *Northwestern University, Evanston, IL, United States*, ***Xiaobo Tan***, *Michigan State University, East Lansing, MI, United States*

PATH PLANNING FOR AUTONOMOUS CAR PARKING

Technical Paper Publication. DSCC2018-9195

Letian Lin, *Ohio University, Athens, OH, United States*, ***J.Jim Zhu***, *Ohio University, Athen, OH, United States*

TOWARDS INTEGRATED PATH PLANNING AND CONTROL OF AUTONOMOUS VEHICLES USING NESTED MPCS

Technical Paper Publication. DSCC2018-9224

***Anson Maitland**, University of Waterloo, Waterloo, ON, Canada, **John McPhee**, Univ Of Waterloo, Waterloo, ON, Canada*

MA3 - CONTRIBUTED SESSION
UNMANNED GROUND AND AERIAL VEHICLES
PIEDMONT **10:00AM - 12:00PM**

Session Chair: **Yunjun Xu**, *UCF, Orlando, FL, United States*

Session Co-Chair: **Sean Brennan**, *PSU, xx, PA, United States*

Session Organizer: **Stephanie Stockar**, *Penn State University, University Park, PA, United States*

IMAGE QUALITY-DRIVEN OCTOROTOR FLIGHT CONTROL VIA REINFORCEMENT LEARNING

Technical Paper Publication. DSCC2018-9039

***Qiang Li**, University of Central Florida, Orlando, FL, United States, **Yunjun Xu**, UCF, Orlando, FL, United States*

USING COMPRESSIVE SENSING WITH IN-AIR ULTRASONIC MEASUREMENTS FOR ROBOTIC MAPPING

Technical Paper Publication. DSCC2018-9140

***Sean Sanchez**, Boston University, Boston, MA, United States, **Sean Andersson**, Boston Univ, Boston, MA, United States*

TRAJECTORY TRACKING AND CONTROL FOR NONHOLONOMIC GROUND VEHICLE: PRELIMINARY AND EXPERIMENTAL TEST

Technical Paper Publication. DSCC2018-9148

***Yuanyan Chen**, Ohio University, Logan, OH, United States, **J.Jim Zhu**, Ohio University, Athen, OH, United States*

NEGATIVE OBSTACLE DETECTION USING LIDAR SENSORS FOR A ROBOTIC WHEELCHAIR

Technical Paper Publication. DSCC2018-9231

***Taylor Baum, Kelilah Wolkowicz**, Penn State University, University Park, PA, United States, **Joseph Chobot**, Penn State University, State College, PA, United States, **Sean Brennan**, Pennsylvania State University, University Park, PA, United States*

PARTICLE SWARM OPTIMIZATION OF FAULT TOLERANT SLIDING MODE CONTROL FOR QUADROTOR

Technical Paper Publication. DSCC2018-9078

***Sital Khatiwada**, University of New Hampshire, Dover, NH, United States, **John McCormack**, University of New Hampshire, Malvern, PA, United States, **May-Win Thein**, University of New Hampshire, Lee, NH, United States*

PROPORTIONAL NAVIGATION AND MODEL PREDICITVE CONTROL OF AN UNMANNED AUTONOMOUS VEHICLE FOR OBSTACLE AVOIDANCE

Technical Paper Publication. DSCC2018-9080

***Ryan Shaw, David Bevly**, Auburn University, Auburn, AL, United States*

MA4 - CONTRIBUTED SESSION
ADVANCES IN CONTROL DESIGN METHODS
LENOX **10:00AM - 12:00PM**

Session Chair: **Xu Chen**, *University of Connecticut, Storrs, CT, United States*

Session Co-Chair: **Jing Cheng**, *Tsinghua University, Beijing, China*

Session Organizer: **Xiaojun Ban**, *Harbin Institute of Technology, Harbin, Helongjiang, China*

STOCHASTIC POLICIES FOR ONLINE COMPUTATION TRIGGERING IN POWERTRAIN CONTROL

Technical Paper Publication. DSCC2018-9045

***Kuan Liu**, University of Michigan — Ann Arbor, Ann Arbor, MI, United States, **Yue Yun Wang, Ibrahim Haskara**, General Motors R&D Ctr, Pontiac, MI, United States, **Chenfang Chang**, General Motors R&D Ctr, Warren, MI, United States, **Anouck Girard**, University of Michigan, Ann Arbor, MI, United States, **Ilya Kolmanovsky**, The University of Michigan, Ann Arbor, Ann Arbor, MI, United States*

A PLANT-INVERSION BASED SWITCHED ITERATIVE LEARNING CONTROL SCHEME FOR A SPECIAL CLASS OF MULTIVARIABLE SYSTEMS

Technical Paper Publication. DSCC2018-9069

***He Li, Douglas A. Bristow, Robert G. Landers**, Missouri University of Science and Technology, Rolla, MO, United States*

MODEL-BASED SPARSE INFORMATION RECOVERY BY COLLABORATIVE SENSOR MANAGEMENT

Technical Paper Publication. DSCC2018-9088

***Hui Xiao, Yaakov Bar-Shalom, Xu Chen**, University of Connecticut, Storrs, CT, United States*

INDIVIDUALIZED INTER-STIMULUS INTERVAL ESTIMATION FOR NEURAL FACILITATION IN HUMAN MOTOR SYSTEM: A PARTICLE FILTERING APPROACH

Technical Paper Publication. DSCC2018-9155

***Kentaro Takemura**, Tokai University, Hiratsuka, Kanagawa, Japan, **Euisun Kim, Jun Ueda**, Georgia Institute of Technology, Atlanta, GA, United States*

PARTITIONED ADAPTIVE CONTROL BASED ON NEURAL NETWORK OF A FLEXIBLE SPACE ROBOT AFTER CAPTURE OPERATION

Technical Paper Publication. DSCC2018-9167

***Jing Cheng**, Tsinghua University, Beijing, China, **Li Chen**, Fuzhou University, Fuzhou, China, **Jianxun Liang**, Tsinghua University, Beijing, Select State/Province, China, **Wei Ma**, Beijing Key Laboratory of Intelligent Space Robotic Systems and Applications, Beijing, Select State/Province, China*

CONTROLLER DESIGN FOR TWO-INPUT SINGLE-OUTPUT SYSTEMS EXPLOITING PLANT/CONTROLLER ALIGNMENT

Technical Paper Publication. DSCC2018-9182

***Nathan Weir**, University of Illinois, Urbana, IL, United States, **Andrew G. Alleyne**, University Of Illinois, Urbana, IL, United States*

MA5 - CONTRIBUTED SESSION
MULTI-AGENT AND NETWORKED SYSTEMS
TECHWOOD **10:00AM - 12:00PM**

Session Chair: **Nicole Abaid**, *Virginia Tech, Blacksburg, VA, United States*

Session Co-Chair: **Santosh Devasia**, *Univ Of Washington, Seattle, WA, United States*

Session Organizer: **Wenlong Zhang**, *Arizona State University, Mesa, AZ, United States*

RAPID INFORMATION TRANSFER IN SWARMS UNDER UPDATE-RATE-BOUNDS USING DELAYED SELF REINFORCEMENT

Technical Paper Publication. DSCC2018-9001

Santosh Devasia, *University Of Washington, Seattle, WA, United States*

COOPERATIVE DETERMINISTIC LEARNING-BASED TRAJECTORY TRACKING FOR A GROUP OF UNICYCLE-TYPE VEHICLES

Technical Paper Publication. DSCC2018-9003

Xiaonan Dong, Chengzhi Yuan, *University of Rhode Island, Kingston, RI, United States*, ***Fen Wu***, *North Carolina State University, Raleigh, NC, United States*

DIFFERENTIATION OF COLLECTIVE BEHAVIOR BASED ON AUTOMATED DISCOVERY OF DYNAMICAL KINDS

Technical Paper Publication. DSCC2018-9139

Amanda Hashimoto, Subhradeep Roy, Colin Shea-Blymyer, Benjamin Jantzen, Nicole Abaid, *Virginia Tech, Blacksburg, VA, United States*

DESIGN OF A PERIODIC EVENT BASED REPETITIVE CONTROLLER WITH DYNAMIC OUTPUT FEEDBACK FOR LINEAR SYSTEMS

Technical Paper Publication. DSCC2018-9146

Guoqi Ma, Prabhakar R. Pagilla, *Texas A&M University, College Station, TX, United States*

HUMAN-ROBOT TRUST INTEGRATED TASK ALLOCATION AND SYMBOLIC MOTION PLANNING FOR HETEROGENEOUS MULTI-ROBOT SYSTEMS

Technical Paper Publication. DSCC2018-9161

Huanfei Zheng, Zhanrui Liao, Yue Wang, *Clemson University, Clemson, SC, United States*

EXPLORING THE OPTIMALITY OF A LIMITED VIEW ANGLE IN THE TWO-DIMENSIONAL VICSEK MODEL

Technical Paper Publication. DSCC2018-9232

Masoud Jahromi Shirazi, Nicole Abaid, *Virginia Tech, Blacksburg, VA, United States*

MA6 - CONTRIBUTED SESSION
BIO ENGINEERING APPLICATIONS
SPRING **10:00AM - 12:00PM**

Session Chair: **Qingze Zou**, *Rutgers University, Piscataway, NJ, United States*

Session Co-Chair: **Juan Ren**, *Iowa State University, Ames, IA, United States*

Session Organizer: **Chang Duan**, *Prairie ViewA&M, Prairie View, TX, United States*

COMPUTATIONAL MODELING OF SPONTANEOUS OTOACOUSTIC EMISSIONS BY THE MAMMALIAN COCHLEA

Technical Paper Publication. DSCC2018-9044

Julien Meaud, *Georgia Institute of Technology, ATLANTA, GA, United States*, ***Thomas Bowling***, *Georgia Tech, Atlanta, GA, United States*, ***Charlsie Lemons***, *Georgia Institute of Technology, Atlanta, GA, United States*

HUMAN-INSPIRED ALGEBRAIC CURVES FOR WEARABLE ROBOT CONTROL

Technical Paper Publication. DSCC2018-9061

Alireza Mohammadi, *University of Texas at Dallas, Dallas, TX, United States*, ***Robert D. Gregg***, *University of Texas At Dallas, Richardson, TX, United States*

ROTARY VERSUS FLAPPING FLIGHT: AN APPLICATION STUDY FOR OPTIMAL PERIODIC CONTROL THEORY

Technical Paper Publication. DSCC2018-9118

Mohammad Ghanaatpishe, *Pennsylvania State University, University Park, PA, United States*, ***Yagiz E. Bayiz***, *The Pennsylvania State University, University Park, PA, United States*, ***Bo Cheng***, *Pennsylvania State University, University Park, PA, United States*, ***Hosam K. Fathy***, *The Pennsylvania State University, University Park, PA, United States*

RAPID PROBE ENGAGEMENT AND WITHDRAWAL WITH ONLINE MINIMIZED PROBE-SAMPLE INTERACTION FORCE IN ATOMIC FORCE MICROSCOPY

Technical Paper Publication. DSCC2018-9156

Jingren Wang, Qingze Zou, *Rutgers University, Piscataway, NJ, United States*

NEW ALGORITHM TO DESIGN REAL TIME OPTIMAL AND ROBUST ULTRAFILTRATION RATES IN CHRONIC KIDNEY DISEASE TO PREVENT CARDIOVASCULAR MORBIDITY AND MORTALITY

Technical Paper Publication. DSCC2018-9172

Rammah Abohtyra, *University of Massachusetts, Amherst, MA, United States*, ***Yossi Chait***, *University of Massachusetts, Amherst,, MA, United States*

MODELING AND CONTROL OF DYNAMIC CELLULAR MECHANOTRANSDUCTION (I): ACTIN CYTOSKELETON QUANTIFICATION

Technical Paper Publication. DSCC2018-9180

YI LIU, Juan Ren, *Iowa State University, Ames, IA, United States*

MM1 - INVITED SESSION
AUTOMOTIVE DYNAMICS AND EMERGING POWERTRAIN TECHNOLOGIES
INMAN **1:30PM - 3:30PM**

Session Chair: **Yan Chen**, *Arizona State University, Mesa, AZ, United States*

Session Co-Chair: **Xiangrui Zeng**, *Ford Motor Company, Dearborn, MI, United States*

Session Organizer: **Hoseinali Borhan**, *Cummins Inc., Columbus, IN, United States*

ESTIMATING THE ROLL AND PITCH RATE SIGNAL DRIFT IN A MOVING GROUND VEHICLE

Technical Paper Publication. DSCC2018-8974

Xiangrui Zeng, Amit Mohanty, *Ford Motor Company, Dearborn, MI, United States*

A FAULT TOLERANT VEHICLE STABILITY CONTROL USING ADAPTIVE CONTROL ALLOCATION

Technical Paper Publication. DSCC2018-8976

Ozan Temiz, Melih Cakmakci, Yildiray Yildiz, *Bilkent University, Ankara, Bilkent, Turkey*

AN OPTIMIZATION-ORIENTED SUPERVISORY CONTROLLER DESIGN FOR HYBRID FUEL CELL ELECTRIFIED VEHICLES

Technical Paper Publication. DSCC2018-8995

Kai Wu, *University of Michigan, Ann Arbor, MI, United States*, ***Milos Milacic, Alhadi Albousefi, Ming Kuang***, *Ford Motor Company, Dearborn, MI, United States*, ***Jing Sun***, *University Of Michigan, Ann Arbor, MI, United States*

BATTERY DISCHARGE STRATEGIES FOR ENERGY MANAGEMENT IN ELECTRIFIED TRUCK FOR PICK-UP AND DELIVERY APPLICATION

Technical Paper Publication. DSCC2018-9116

Mukilan Arasu, *The Ohio State University, Columbus, OH, United States*, ***Qadeer Ahmed***, *Center For Automotive Research, Columbus, OH, United States*, ***Giorgio Rizzoni***, *Ohio State University, Columbus, OH, United States*

HIERARCHICAL INPUT-OUTPUT DECOUPLING CONTROL FOR VEHICLE ROLLOVER MITIGATION

Technical Paper Publication. DSCC2018-9166

Fengchen Wang, Yan Chen, *Arizona State University, Mesa, AZ, United States*

PREDICTIVELY COORDINATED VEHICLE ACCELERATION AND LANE SELECTION USING MIXED INTEGER PROGRAMMING

Technical Paper Publication. DSCC2018-9177

Robert Dollar, Ardalan Vahidi, *Clemson University, Clemson, SC, United States*

MM2 - CONTRIBUTED SESSION
PATH PLANNING AND MOTION CONTROL II
KENNESAW **1:30PM - 3:30PM**

Session Chair: **Phanindra Tallapragada**, *Clemson University, Clemson, SC, United States*

Session Co-Chair: **Zhaojian Li**, *Michigan State University, East Lansing, MI, United States*

Session Organizer: **Shreekant Gayaka**, *Applied Materials Company, San Francisco, CA, United States*

PURSUIT STRATEGIES FOR A TARGETTRACKING GAME AROUND A CIRCULAR OBSTACLE

Technical Paper Publication. DSCC2018-9127

Rui Zou, Tianshuang Gao, Sourabh Bhattacharya, *Iowa State University, Ames, IA, United States*

CONTROLLABILITY OF A PAIR OF SWIMMING MICROROTORS IN A BOUNDED DOMAIN at LOW REYNOLDS NUMBER

Technical Paper Publication. DSCC2018-9013

Jake Buzhardt, *Clemson University, Clemson, SC, United States*, ***Vitaliy Fedonyuk***, *Clemson University, Rock Hill, SC, United States*, ***Senbagaraman Sudarsanam, Phanindra Tallapragada***, *Clemson University, Clemson, SC, United States*

NAVIGATION STRATEGIES FOR A MULTI-ROBOT GROUND-BASED ROW CROP PHENOTYPING PLATFORM

Technical Paper Publication. DSCC2018-9096

Tianshuang Gao, Hamid Emadi, Homagni Saha, Jiaoping Zhang, Alec Lofquist, Arti Singh, Baskar Ganapathysubramanian, Soumik Sarkar, Asheesh Singh, Sourabh Bhattacharya, *Iowa State University, Ames, IA, United States*

INTEGRATION OF MULTIBODY SYSTEM DYNAMICS WITH SLIDING MODE CONTROL USING FPGA TECHNIQUE FOR TRAJECTORY TRACKING PROBLEMS

Technical Paper Publication. DSCC2018-9108

Ayman A. Nada, Abdullateef Bashiri, *Jazan University, Jazan, OO, Saudi Arabia*

COMPARISON BETWEEN POSITION AND RATE CONTROL USING A FOOT INTERFACE

Technical Paper Publication. DSCC2018-9115

Zachary Dougherty, Ryder Winck, *Rose-Hulman Institute of Technology, Terre Haute, IN, United States*

VIRTUAL MOTION CAMOUFLAGE BASED VISUAL SERVO CONTROL OF A LEAF PICKING MECHANISM

Technical Paper Publication. DSCC2018-9042

Sinem Defterli, *University of Central Florida, Orlando, FL, United States*, ***Yunjun Xu***, *UCF, Orlando, FL, United States*

Technical Sessions

MM3 - CONTRIBUTED SESSION
UNMANNED GROUND AND AERIAL VEHICLES II
PIEDMONT 1:30PM - 3:30PM

Session Chair: **Garrett Clayton**, *Villanova University, Villanova, PA, United States*

Session Co-Chair: **Rumit Kumar**, *University of Cincinnati, Cincinnati, OH, United States*

Session Organizer: **Junfeng Zhao**, *General Motors, Pontiac, MI, United States*

PREDICTION OF WHEEL SLIPPING LIMITS FOR MOBILE ROBOTS

Technical Paper Publication. DSCC2018-9053

***Alan Whitman, Garrett Clayton, Hashem Ashrafiuon**, Villanova University, Villanova, PA, United States*

DISCRIMINATING SPATIAL INTENT FROM NOISY JOYSTICK SIGNALS FOR WHEELCHAIR PATH PLANNING AND GUIDANCE

Technical Paper Publication. DSCC2018-9228

***Kelilah Wolkowicz**, Penn State University, University Park, PA, United States, **Robert Leary**, The Pennsylvania State University, State College, PA, United States, **Jason Moore**, The Pennsylvania State University, University Park, PA, United States, **Sean Brennan**, Pennsylvania State Univ, University Park, PA, United States*

FAULT TOLERANCE OF A RECONFIGURABLE TILT-ROTOR QUADCOPTER USING SLIDING MODE CONTROL

Technical Paper Publication. DSCC2018-9199

***Siddharth Sridhar, Rumit Kumar, Kelly Cohen**, University of Cincinnati, Cincinnati, OH, United States, **Manish Kumar**, University of Cincinnati, Wyoming, OH, United States*

RECONFIGURABLE FAULT-TOLERANT TILT-ROTOR QUADCOPTER SYSTEM

Technical Paper Publication. DSCC2018-9197

***Rumit Kumar, Siddharth Sridhar**, University of Cincinnati, Cincinnati, OH, United States, **Franck Cazaurang**, University of Bordeaux, Talence, Select State/Province, France, **Kelly Cohen**, University of Cincinnati, Cincinnati, OH, United States, **Manish Kumar**, University of Cincinnati, Wyoming, OH, United States*

ROAD CONDITION BASED ADAPTIVE MODEL PREDICTIVE CONTROL FOR AUTONOMOUS VEHICLES

Technical Paper Publication. DSCC2018-9095

***Xin Wang**, Chang'an University, Shaanxi, China, **Longxiang Guo, Yunyi Jia**, Clemson University, Greenville, SC, United States*

A FAST INTEGRATED PLANNING AND CONTROL FRAMEWORK FOR AUTONOMOUS DRIVING VIA IMITATION LEARNING

Technical Paper Publication. DSCC2018-9249

***Liting Sun, Cheng Peng, Wei Zhan, Masayoshi Tomizuka**, University of California, Berkeley, Berkeley, CA, United States*

MM4 - CONTRIBUTED SESSION
ADVANCES IN CONTROL DESIGN METHODS II
LENOX 1:30PM - 3:30PM

Session Chair: **Shahin Nudehi**, *Valparaiso University, Valparaisio, IN, United States*

Session Co-Chair: **Yousef Sardahi**, *Marshall University, Huntington, WV, United States*

Session Organizer: **Minghui Zheng**, *UC Berkeley, Berkeley, CA, United States*

OPTIMAL SWITCHING OF VOLTAGE SOURCE INVERTERS USING APPROXIMATE DYNAMIC PROGRAMMING

Technical Paper Publication. DSCC2018-8998

***Ataollah Gogani Khiabani, Ali Heydari**, Southern Methodist University, Dallas, TX, United States*

SETPOINT TRACKING CONTROL WITH DISCRETE ACTUATORS USING CONTROLLER SWITCHING

Technical Paper Publication. DSCC2018-8956

***Yuichi Chida, Ryotaro Hara**, Shinshu University, Nagano, Japan*

SPEED CONTROL OF SHUNT-WOUND DC MOTORS USING SWITCHING TECHNIQUE

Technical Paper Publication. DSCC2018-8953

***Shahin Nudehi**, Valparaiso University, Valparaisio, IN, United States, **Ryan Newendyke, Dylan Antonides, Timothy Zange**, Valparaiso University, Valparaiso, IN, United States*

MULTI-OBJECTIVE OPTIMAL DESIGN OF FOUR-PARAMETER PID CONTROLS

Technical Paper Publication. DSCC2018-8935

***Yousef Sardahi, Almuatazbellah Boker**, Marshall University, Huntington, WV, United States*

EXPERIMENTAL STUDY OF NMP SAMPLE AND HOLD INPUT USING AN INVERTED PENDULUM

Technical Paper Publication. DSCC2018-8994

***Yingxu Wang, Guoming Zhu, Ranjan Mukherjee**, Michigan State University, East Lansing, MI, United States*

STABILITY ANALYSIS AND CONTROLLER DESIGN FOR FUZZY PARAMETER VARYING SYSTEMS BASED ON FUZZY LYAPUNOV FUNCTION

Technical Paper Publication. DSCC2018-8996

***Xiaojun Ban, Hongyang Zhang**, Harbin Institute of Technology, Harbin, Helongjiang, China, **Fen Wu**, North Carolina State Univ, Raleigh, NC, United States*

MM5 - CONTRIBUTED SESSION
ADVANCES IN ROBOTICS
TECHWOOD 1:30PM - 3:30PM

Session Chair: **Hanz Richter**, *Cleveland State Univ, Cleveland, OH, United States*

Session Co-Chair: **Alicia Keow**, *University of Houston, Houston, TX, United States*

Session Organizer: **Guodong Yin**, *Southeast University, Nanjing, Jiangsu, China*

CONTACT AND TRACKING HYBRID CONTROL WITH IMPULSE-MOMENTUM SLIDING SURFACE AND TERMINAL SLIDING MODE

Technical Paper Publication. DSCC2018-8945

Hanz Richter, *Cleveland State Univ, Cleveland, OH, United States*, ***Saleh Mobayen***, *Zanjan University, Zanjan, Iran*, ***Daniel Simon***, *Cleveland State University, Cleveland, OH, United States*

APEX HEIGHT CONTROL OF A TWO-MASS ROBOT HOPPING ON A VISCOELASTIC FOUNDATION WITH INERTIA

Technical Paper Publication. DSCC2018-8975

Amer Allafi, *Michigan State University, East Lansing, MI, United States*, ***Frank Mathis***, *GeoControl system, Houston, TX, United States*, ***Ranjan Mukherjee***, *Michigan State University, East Lansing, MI, United States*

LIMIT CYCLE BEHAVIOR AND MODEL REDUCTION OF AN OSCILLATING FISH-LIKE ROBOT

Technical Paper Publication. DSCC2018-9016

Beau Pollard, *Clemson University, Central, SC, United States*, ***Vitaliy Fedonyuk***, *Clemson University, Rock Hill, SC, United States*, ***Phanindra Tallapragada***, *Clemson University, Clemson, SC, United States*

STRAWBERRY PLANT LOCALIZATION VIA RELATIVE PIXELS IN SEQUENTIAL IMAGES

Technical Paper Publication. DSCC2018-9034

Xiangling Kong, *University of Central Florida, Orlando, FL, United States*, ***Yunjun Xu***, *UCF, Orlando, FL, United States*

A TRAVELING WAVE MODEL GUIDED ROBOTIC FISH DESIGN USING DOUBLE SLOT-CRANK MECHANISM

Technical Paper Publication. DSCC2018-9064

Wenyu Zuo, Zheng Chen, *University of Houston, Houston, TX, United States*

MODELING AND CONTROL OF ARTIFICIAL SWIMMING BLADDER ENABLED BY IPMC WATER ELECTROLYSIS

Technical Paper Publication. DSCC2018-9076

Alicia Keow, Zheng Chen, *University of Houston, Houston, TX, United States*

MM6 - CONTRIBUTED SESSION
BIOMEDICAL AND NEURAL SYSTEMS
SPRING 1:30PM - 3:30PM

Session Chair: **Biswanath Samanta**, *Georgia Southern University, Statesboro, GA, United States*

Session Co-Chair: **Manan Gandhi**, *Georgia Institute of Technology, Lawrenceville, GA, United States*

Session Organizer: **Jim Dabney**, *University of Houston-Clear Lake, Houston, TX, United States*

LEARNING TO PREDICT CORONARY PERFUSION PRESSURE

Technical Paper Publication. DSCC2018-8968

Manan Gandhi, *Georgia Institute of Technology, Lawrenceville, GA, United States*, ***Pierre Sebastian***, *University of Minnesota, Minneapolis, MN, United States*, ***Yunpeng Pan***, *JD.COM, Santa Clara, CA, United States*, ***Matt Olson, Demetri Yannopoulos***, *University of Minnesota, Minneapolis, MN, United States*, ***Evangelos Theodorou***, *Georgia Institute of Technology, Atlanta, GA, United States*

SLIDING MODE IMPEDANCE CONTROL OF A HYDRAULIC ARTIFICIAL MUSCLE

Technical Paper Publication. DSCC2018-9186

Jonathon Slightam, Mark Nagurka, *Marquette University, Milwaukee, WI, United States*, ***Eric Barth***, *Vanderbilt Univ, Nashville, TN, United States*

CHARACTERIZING COMBUSTION INSTABILITY USING DEEP CONVOLUTIONAL NEURAL NETWORK

Technical Paper Publication. DSCC2018-9208

Tryambak Gangopadhyay, *Iowa State University, Ames, IA, United States*, ***Anthony Locurto***, *Iowa State University, Mount Pleasant, WI, United States*, ***Paige Boor, James B. Michael, Soumik Sarkar***, *Iowa State University, Ames, IA, United States*

DESIGN AND EVALUATION OF A PROPORTIONAL MYOELECTRIC CONTROLLER FOR HIP EXOSKELETON DURING NORMAL WALKING

Technical Paper Publication. DSCC2018-9226

Hsiang Hsu, Inseung Kang, Aaron J. Young, *Georgia Institute of Technology, Atlanta, GA, United States*

BRAIN COMPUTER INTERFACE USING MOTOR IMAGERY AND FACIAL EXPRESSIONS TO CONTROL A MOBILE ROBOT

Technical Paper Publication. DSCC2018-9234

James Kuffuor, Biswanath Samanta, *Georgia Southern University, Statesboro, GA, United States*

MODELING AND VALIDATION OF CAPACITIVE TYPE RF MEMS FOR LOW ACTUATION VOLTAGE AND HIGH ISOLATION

Technical Paper Publication. DSCC2018-8939

Vishram Sawant, *Shivaji University, Kolhapur, India*, ***Suhas Mohite, Mukesh Madhewar***, *Government College of Engineering, Karad,, Karad, India*

Technical Sessions

ME1- INVITED SESSION
CONTROL AND OPTIMIZATION OF CONNECTED AND AUTOMATED GROUND VEHICLES
INMAN **4:00PM - 6:00PM**

Session Chair: **Junmin Wang**, *Ohio State University, Columbus, OH, United States*

Session Co-Chair: **Baisravan Homchaudhuri**, *Illinois Institute of Technology, Chicago, IL, United States*

Session Organizer: **Pingen Chen**, *Tennessee Technological University, Cookeville, TN, United States*

LINEAR MULTI-TARGET INTEGRATED PROBABILISTIC DATA ASSOCIATION FILTER WITH AUTOMATIC TRACK MANAGEMENT FOR AUTONOMOUS VEHICLES

Technical Paper Publication. DSCC2018-8930

Andinet Hunde, *Clemson Univerity, Clemson, SC, United States*, ***Beshah Ayalew***, *Clemson University, Greenville, SC, United States*

COMPUTATIONALLY-EFFICIENT FUEL-ECONOMIC HIGH-LEVEL CONTROLLER DESIGN FOR A GROUP OF CONNECTED VEHICLES IN URBAN ROADS

Technical Paper Publication. DSCC2018-9124

Alejandro Fernandez Canosa, Baisravan Homchaudhuri, *Illinois Institute of Technology, Chicago, IL, United States*

A DYNAMIC-SYSTEM-BASED APPROACH TO MODELING DRIVER MOVEMENTS ACROSS GENERAL-PURPOSE/MANAGED LANE INTERFACES

Technical Paper Publication. DSCC2018-9125

Matthew A. Wright, Roberto Horowitz, Alex A. Kurzhanskiy, *University of California, Berkeley, Berkeley, CA, United States*

AN END-TO-END FULLY AUTOMATIC BAY PARKING APPROACH FOR AUTONOMOUS VEHICLES

Technical Paper Publication. DSCC2018-9126

Rui Li, Weitian Wang, Yi Chen, Srivatsan Srinivasan, Venkat N. Krovi, *Clemson University, Greenville, SC, United States*

PARAMETER SELECTION OF AN LTV-MPC CONTROLLER FOR VEHICLE PATH TRACKING CONSIDERING CPU COMPUTATIONAL LOAD

Technical Paper Publication. DSCC2018-9129

Zejiang Wang, Yunhao Bai, Junmin Wang, Xiaorui Wang, *Ohio State University, Columbus, OH, United States*

OPTIMIZATION OF ENERGY-EFFICIENT SPEED PROFILE FOR ELECTRIFIED VEHICLES

Technical Paper Publication. DSCC2018-9138

Hadi Abbas, Youngki Kim, *University of Michigan, Dearborn, MI, United States*, ***Jason Siegel***, *University Of Michigan, Ann Arbor, MI, United States*, ***Denise Rizzo***, *U.S. Army TARDEC, Warren, MI, United States*

ME2 - CONTRIBUTED SESSION
PATH PLANNING AND MOTION CONTROL III
KENNESAW **4:00PM - 6:00PM**

Session Chair: **Nader Jalili**, *Northeastern University, Boston, MA, United States*

Session Co-Chair: **Ming Ding**, *Nara Institute of Science and Technology, Ikoma, Nara, Japan*

Session Organizer: **Punit Tulpule**, *The Ohio State University, Dublin, OH, United States*

ADAPTIVE HAPTIC SHARED CONTROL FRAMEWORK IN STEERING OPERATION

Technical Paper Publication. DSCC2018-9009

Amirhossein Ghasemi, *University of North Carolina Charlotte, Charlotte, NC, United States*, ***Hossein Rastgoftar***, *University of Michigan, Ann Arbor, MI, United States*

PATH CONTROL OF A HEAT TREATMENT TRUCK CONSIDERING DRIVER-VEHICLE INTERACTION

Technical Paper Publication. DSCC2018-9040

Andong Dai, *University of Central Florida, Oviedo, FL, United States*, ***Yunjun Xu***, *UCF, Orlando, FL, United States*

ALGORITHMS FOR LOCALIZATION AND ROUTING OF UNMANNED VEHICLES IN GPS-DENIED ENVIRONMENTS

Technical Paper Publication. DSCC2018-8949

Bingyu Wang, Sivakumar Rathinam, *Texas A&M University, College Station, TX, United States*, ***Rajnikant Sharma***, *University of Cincinnati, Cincinnati, OH, United States*, ***Kaarthik Sundar***, *Los Alamos National Laboratory, Los Alamos, NM, United States*

MODELING AND DYNAMICS ANALYSIS OF A BEAM-HOVERBOARD SELF-TRANSPORTATION SYSTEM

Technical Paper Publication. DSCC2018-9048

Amin Mehrvarz, Mohammad Javad Khodaei, William Clark, Nader Jalili, *Northeastern University, Boston, MA, United States*

SCOOP THE SEMI-LIQUID OBJECTS USING A SPOON-EQUIPPED ROBOT ARM FOR MEAL SUPPORT

Technical Paper Publication. DSCC2018-9022

Ming Ding, Daiki Yoshioka, Gustavo Alfonso Garcia Ricardez, Jun Takamatsu, Tsukasa Ogasawara, *Nara Institute of Science and Technology, Ikoma, Nara, Japan*

LOCALLY ADAPTIVE ONLINE TRAJECTORY OPTIMIZATION IN UNKNOWN ENVIRONMENTS WITH RRTS

Technical Paper Publication. DSCC2018-8997

Ethan Evans, Patrick Meyer, *Georgia Institute of Technology, Atlanta, GA, United States*, ***Samuel Seifert***, *Georgia Tech, Atlanta, GA, United States*, ***Dimitri Mavris, Evangelos A. Theodorou***, *Georgia Institute Of Technology, Atlanta, GA, United States*

ME3 - INVITED SESSION
UNMANNED AERIAL VEHICLES (UAVS) AND APPLICATION
PIEDMONT **4:00PM - 6:00PM**

Session Chair: **Mark W. Mueller**, *UC Berkeley, Berkeley, CA, United States*

Session Co-Chair: **Wenlong Zhang**, *Arizona State University, Mesa, AZ, United States*

Session Organizer: **Manish Kumar**, *University of Cincinnati, Wyoming, OH, United States*

A DYNAMICS-AGNOSTIC STATE ESTIMATOR FOR UNMANNED AERIAL VEHICLES USING ULTRA-WIDEBAND RADIOS

Technical Paper Publication. DSCC2018-9079

***Mark W. Mueller**, UC Berkeley, Berkeley, CA, United States*

DECENTRALIZED 3D PDE BASED COLLABORATIVE TRAJECTORY PLANNING AND TARGET SURROUNDING FOR SWARM OF UAVS IN CLUTTERED ENVIRONMENT

Technical Paper Publication. DSCC2018-9137

***Mohammadreza Radmanesh**, University of Cincinnati, Cincinnati, OH, United States, **Manish Kumar**, University of Cincinnati, Wy-ming, OH, United States, **David Casbeer**, AFRL, Dayton, OH, United States, **Kelly Cohen**, University of Cincinnati, Cincinnati, OH, United States*

GENETIC ALGORITHM APPROACH FOR UAV PERSISTENT VISITATION PROBLEM

Technical Paper Publication. DSCC2018-8950

***Alexander Von Moll**, AFRL, WPAFB, OH, United States, **Krishna Kalyanam**, Infoscitex Corporation, Dayton, OH, United States, **David Casbeer**, AFRL, Dayton, OH, United States, **Satyanarayana Gupta Manyam**, Infoscitex Corporation, Dayton, OH, United States*

DESIGN AND CONTROL OF A HEXACOPTER WITH SOFT GRASPER FOR AUTONOMOUS OBJECT DETECTION AND GRASPING

Technical Paper Publication. DSCC2018-9107

***Shatadal Mishra, Dangli Yang, Carly Thalman, Panagiotis Polygerinos, Wenlong Zhang**, Arizona State University, Mesa, AZ, United States*

ENERGY-EFFICIENT ADAPTIVE ROBUST CONTROL OF VECTOR THRUST UAVS WITH UNKNOWN INERTIA PARAMETERS

Technical Paper Publication. DSCC2018-9133

***Caiwu Ding, Lu Lu, Cong Wang**, New Jersey Institute of Technology, Newark, NJ, United States*

ROBUST UAVS ATTITUDE ESTIMATION USING A CASCADE OF NONLINEAR OBSERVER AND LINEARIZED KALMAN FILTER

Technical Paper Publication. DSCC2018-9123

***Haukur Kristinsson, Søren Petersen, Agus Hasan, Valthor Gudmundsson**, University of Southern Denmark, Odense, Denmark*

ME4 - CONTRIBUTED SESSION
VIBRATIONS AND CONTROL OF SYSTEMS
LENOX **4:00PM - 6:00PM**

Session Chair: **Aldo Ferri**, *Georgia Institute of Technology, Atlanta, GA, United States*

Session Co-Chair: **Aqeel Madhag**, *Michigan State University, East Lansing, MI, United States*

Session Organizer: **Fariba Fateh**, *Kansas State University, Manhattan, KS, United States*

A COMPREHENSIVE FLUID COUPLED LATERAL DRILL STRING VIBRATION MODEL BASED ON CLASSICAL VIBRATION THEORIES

Technical Paper Publication. DSCC2018-8902

***Abhijeet Chodankar, Abdennour Seibi**, University of Louisiana At Lafayette, Lafayette, LA, United States*

A NOVEL DYNAMIC MODEL OF A REACTION WHEEL ASSEMBLY FOR HIGH ACCURACY POINTING SPACE MISSIONS

Technical Paper Publication. DSCC2018-8918

***Francesco Sanfedino**, ISAE Supaero, Toulouse, France, France, **Daniel Alazard**, ISAE SUPAERO Toulouse, Toulouse, France, **Valérie Pommier-Budinger**, ISAE, Toulouse, France, **Fabrice Boquet**, European Space Agency (ESTEC), Noordwjik, Netherlands, **Alexandre Falcoz**, Airbus D&S, Toulouse, France*

CONTROL OF SLENDER-BEAM PAYLOADS DURING LIFT-UP OPERATIONS

Technical Paper Publication. DSCC2018-8967

***Shenghai Wang**, Dalian Maritime University, Dalian, Dalian, China, **Aldo Ferri**, Georgia Institute of Technology, Atlanta, GA, United States, **William Singhose, Yujia Yang**, Georgia Tech, Atlanta, GA, United States*

CONTROL DESIGN FOR THE SYSTEM OF MANIPULATOR HANDLING A FLEXIBLE PAYLOAD WITH INPUT CONSTRAINTS

Technical Paper Publication. DSCC2018-8970

***Shuyang Liu**, Changchun University of Technology, Changchun, China, **Reza Langari**, Texas A&M University, College Station, TX, United States, **Yuanchun Li**, Changchun University of Technology, Changchun, China*

GUARANTEE PERFORMANCE ICC-LPV CONTROL WITH SENSOR AGING

Technical Paper Publication. DSCC2018-8992

***Aqeel Madhag, Guoming Zhu**, Michigan State University, East Lansing, MI, United States*

ME5 - CONTRIBUTED SESSION
ADVANCES IN ROBOTICS II
TECHWOOD 4:00PM - 6:00PM

Session Chair: **Pushparaj Mani Pathak**, *Indian Institute of Technology, Roorkee, Roorkee, India*

Session Co-Chair: **Roberto Belotti**, *Free University of Bolzano-Bozen, Bolzano, BZ, Italy*

Session Organizer: **Hui Zhang**, *Ohio State University, Columbus, OH, United States*

LEARNING BASED SPEED CONTROL OF SOFT ROBOTIC FISH

Technical Paper Publication. DSCC2018-8977

Sunil Kumar Rajendran, Feitian Zhang, *George Mason University, Fairfax, VA, United States*

CONTROL WITH OPTIMAL ENERGY REGENERATION IN ROBOT MANIPULATORS DRIVEN BY BRUSHLESS DC MOTORS

Technical Paper Publication. DSCC2018-8972

Amin Ghorbanpour, *Cleveland State University, Cleveland, OH, United States*, ***Hanz Richter***, *Cleveland State Univ, Cleveland, OH, United States*

THE EFFECT OF NONLINEAR SPRINGS IN JUMPING MECHANISM

Technical Paper Publication. DSCC2018-8969

Sahand Sadeghi, Blake D. Betsill, Phanindra Tallapragada, Suyi Li, *Clemson University, Clemson, SC, United States*

THE EFFECTS OF SWITCHING TIME ON SHARED HUMAN-ROBOT CONTROL

Technical Paper Publication. DSCC2018-9194

Roberto Belotti, Karl D. von Ellenrieder, *Free University of Bolzano-Bozen, Bolzano, BZ, Italy*

DEVELOPMENT OF MAGNETIC ADHESION BASED WHEEL-DRIVEN CLIMBING MACHINE FOR FERROUS SURFACE APPLICATIONS

Technical Paper Publication. DSCC2018-9181

Ravindra Singh Bisht, *IIT Roorkee, Roorkee, Uttarakhand, India*, ***Pushparaj Mani Pathak***, *Indian Institute of Technology, Roorkee, Roorkee, India*, ***Saroj Kumar Panigrahi***, *CSIR-CBRI,, Roorkee, Uttarakhand, India*

TRUST-BASED IMPEDANCE CONTROL STRATEGY FOR HUMAN-ROBOT COOPERATIVE MANIPULATION

Technical Paper Publication. DSCC2018-9170

Behzad Sadrfaridpour, Zhanrui Liao, Maziar Fooladi Mahani, Yue Wang, *Clemson University, Clemson, SC, United States*

ME6 - INVITED SESSION
BIO-MECHATRONICS AND PHYSICAL HUMAN ROBOT INTERACTION
SPRING 4:00PM - 6:00PM

Session Chair: **Jun Ueda**, *Georgia Institute of Technology, Atlanta, GA, United States*

Session Co-Chair: **Edmond Richer**, *SMU, Dallas, TX, United States*

Session Organizer: **Anirban Mazumdar**, *Georgia Institute of Technology, Atlanta, GA, United States*, **Wenlong Zhang**, *Arizona State University, Mesa, AZ, United States*

ENERGY IMPLICATIONS OF TORQUE FEEDBACK CONTROL AND SERIES ELASTIC ACTUATORS FOR MOBILE ROBOTS

Technical Paper Publication. DSCC2018-9141

Stephen Buerger, *Sandia National Laboratories, Albuquerque, NM, United States*, ***Anirban Mazumdar***, *Georgia Institute of Technology, Atlanta, GA, United States*, ***Steven Spencer***, *Sandia National Laboratories, Albuquerque, NM, United States*

DESIGN AND VALIDATION OF A TORQUE CONTROLLABLE HIP EXOSKELETON FOR WALKING ASSISTANCE

Technical Paper Publication. DSCC2018-9198

Inseung Kang, Hsiang Hsu, Aaron J. Young, *Georgia Institute of Technology, Atlanta, GA, United States*

CAPTURABILITY OF INVERTED PENDULUM GAIT MODEL UNDER SLIP CONDITIONS

Technical Paper Publication. DSCC2018-9203

Marko Mihalec, *Rutgers University, Piscataway, NJ, United States*, ***Jingang Yi***, *Rutgers University, Mechanical and Aerospace Engineering Dept, Piscataway, NJ, United States*

CONTROL AND EXPERIMENTAL VALIDATION OF A POWERED KNEE AND ANKLE PROSTHETIC DEVICE

Technical Paper Publication. DSCC2018-9218

Krishan Bhakta, *Georgia Institute of Technology, Atlanta, GA, United States*, ***Jonathan Camargo, Aaron J. Young***, *Georgia Institute of Technology, Atlanta, GA, United States*

VARIABILITY IN MUSCLE RECRUITMENT STRATEGY BETWEEN OPERATORS DURING ASSISTED ASSEMBLY TASKS

Technical Paper Publication. DSCC2018-9222

Yingxin Qiu, *G.W.W. School of Mechanical Engineering, Georgia Institute of Technology, Atlanta, GA, United States*, ***Atsushi Okabe***, *Dept. of Mechanical Engineering and Intelligent Systems, University of Electro-Communications, Tokyo, Japan*, ***Keerthana Murali***, *G.W.W. School of Mechanical Engineering, Georgia Institute of Technology, Atlanta, GA, United States*, ***Dalong Gao***, *General Motors, Detroit, MI, United States*, ***Jun Ueda***, *Georgia Institute of Technology, Atlanta, GA, United States*

MULTI-PHYSICS DESIGN AND MODELING OF 3D PRINTED HYDRAULICALLY AMPLIFIED DIELECTRIC ELASTOMER ACTUATORS WITH LARGE ACTUATION STROKES

Technical Paper Publication. DSCC2018-9227

Amir Hosein Zamanian, Daniel A. Porter, Paul S. Krueger, *Southern Methodist University, Dallas, TX, United States*, ***Edmond Richer***, *SMU, Dallas, TX, United States*

TUESDAY, OCTOBER 2

TA1 - CONTRIBUTED SESSION
MODELING AND CONTROL OF IC ENGINES AND AFTERTREATMENT SYSTEMS
INMAN **10:00AM - 12:00PM**

Session Chair: **Pingen Chen**, *Tennessee Technological University, Cookeville, TN, United States*

Session Co-Chair: **Rasoul Salehi**, *University of Michigan, Ann Arbor, MI, United States*

Session Organizer: **Yan Chen**, *Arizona State University, Mesa, AZ, United States*

OPTIMAL EXHAUST VALVE OPENING CONTROL FOR FAST AFTERTREATMENT WARM UP IN DIESEL ENGINES

Technical Paper Publication. DSCC2018-9178

Rasoul Salehi, *University of Michigan, Ann Arbor, MI, United States*, ***Anna Stefanopoulou***, *University Of Michigan, Ann Arbor, MI, United States*

Model Predictive Air-fuel Ratio Control for an Integrated Gasoline Engine and Three-way Catalytic Converter System
Technical Paper Publication. DSCC2018-9072

Kuo Yang, Pingen Chen, *Tennessee Technological University, Cookeville, TN, United States*

MODELING THE TRANSPORT DYNAMICS IN GASOLINE PARTICULATE FILTERS
Technical Paper Publication. DSCC2018-9160

Simona Onori, *Stanford University, Stanford, CA, United States*, ***Svyatoslav Korneev***, *Stanford University, Stanford University, CA, United States*

EXPERIMENTAL INVESTIGATION AND ANALYSIS OF AUTO-IGNITION COMBUSTION DYNAMICS
Technical Paper Publication. DSCC2018-9184

Abhinav Tripathi, *University of Minnesota, Minneapolis, MN, United States*, ***Chen Zhang***, *University of Minnesota, Twin city, MN, United States*, ***Zongxuan Sun***, *University Of Minnesota, Minneapolis, MN, United States*

Configuration and Control Design for a Passive SCR System with NOx Storage Capability
Technical Paper Publication. DSCC2018-9241

Qinghua Lin, Pingen Chen, *Tennessee Technological University, Cookeville, TN, United States*, ***Vitaly Y., Prikhodko***, *Oak Ridge National Laboratory, Knoxville, TN, United States*, ***James Parks***, *Oak Ridge Natl Lab, Knoxville, TN, United States*

Simultaneous Optimization of Configuration and Control for a Passive SCR System
Technical Paper Publication. DSCC2018-9243

Pingen Chen, Qinghua Lin, *Tennessee Technological University, Cookeville, TN, United States*

TA2 - CONTRIBUTED SESSION
MODELING AND VALIDATION
KENNESAW **10:00AM - 12:00PM**

Session Chair: **Ayse Tekes**, *Kennesaw State University, Marietta, GA, United States*

Session Co-Chair: **Meghashyam Panyam**, *Clemson University Restoration Institute, North Charleston, SC, United States*

Session Organizer: **Meng (rachel) Wang**, *Eaton Corporation, Eden Prairie, MN, United States*

ADJUSTABLE COMPLIANT MECHANISM LOAD DEFLECTION TEST BENCH DESIGN

Technical Paper Publication. DSCC2018-8943

Ayse Tekes, *Kennesaw State University, Marietta, GA, United States*, ***Kevin McFall***, *Kennesaw State University, GA, GA, United States*, ***Franklin Woods, Alexander Bryant***, *Kennesaw State University, Marietta, GA, United States*

ELECTROCHEMICAL MODEL BASED AGING CHARACTERIZATION OF LITHIUM-ION BATTERY CELL IN ELECTRIFIED VEHICLES

Technical Paper Publication. DSCC2018-8947

Meng Huang, Mrinal Kumar, *The Ohio State University, Columbus, OH, United States*

A MULTIBODY TOOLBOX FOR HYBRID DYNAMIC SYSTEM MODELING BASED ON NONHOLONOMIC SYMBOLIC FORMALISM

Technical Paper Publication. DSCC2018-9000

Jiamin Wang, Vinay Kamidi, Pinhas Ben-Tzvi, *Virginia Tech, Blacksburg, VA, United States*

EXPERIMENTAL BIFURCATION DIAGRAM OF FURUTA PENDULUM

Technical Paper Publication. DSCC2018-9030

Mate Benjamin Vizi, *Budapest University of Technology and Economics, Budapest, Hungary*, ***Gabor Stepan***, *Budapest University of Tech and Eco, Budapest, Hungary*

ON THE MULTI-BODY MODELING AND VALIDATION OF A FULL SCALE WIND TURBINE NACELLE TEST BENCH

Technical Paper Publication. DSCC2018-9100

Meghashyam Panyam, Amin Bibo, *Clemson University Restoration Institute, North Charleston, SC, United States*, ***Sam Roach***, *Unversity of Texas, Austin, TX, United States*

STOCHASTIC OPTIMIZATION OF IMPEDANCE PARAMETERS FOR A POWERED PROSTHESIS USING A 3D SIMULATION ENVIRONMENT

Technical Paper Publication. DSCC2018-9206

Jonathan Camargo, *Georgia Institute of Technology, Atlanta, GA, United States*, ***Krishan Bhakta***, *Georgia Institute of Technology, Atlanta, GA, United States*, ***Aaron J. Young***, *Georgia Institute of Technology, Atlanta, GA, United States*

TA3 - INVITED SESSION
MODELING AND MANAGEMENT OF POWER SYSTEMS
PIEDMONT **10:00AM - 12:00PM**

Session Chair: **John Hall**, *University At Buffalo, Buffalo, NY, United States*

Session Co-Chair: **Fenglin Zhou**, *University of Texas at Dallas, Richardson, TX, United States*

Session Organizer: **Satadru Dey**, *University of Colorado Denver, Aurora, CO, United States*

SECOND LAW MODELING AND ROBUST CONTROL FOR THERMAL-FLUID SYSTEMS

Technical Paper Publication. DSCC2018-9056

Austin Nash, *Purdue University, Lafayette, IN, United States*, ***Neera Jain***, *Purdue University, West Lafayette, IN, United States*

AN ECONOMIC MODEL PREDICTIVE CONTROL APPROACH FOR WIND POWER SMOOTHING AND TOWER LOAD MITIGATION

Technical Paper Publication. DSCC2018-9032

Mohamed Alhneaish, Mohamed Shaltout, Sayed Metwalli, *Cairo University, Giza, Giza, Egypt*

INTEGRATIVE MODELING PLATFORM FOR DESIGN AND CONTROL OF AN ADAPTIVE WIND TURBINE BLADE

Technical Paper Publication. DSCC2018-9235

Hamid Khakpour Nejadkhaki, *University at Buffalo, State University, Buffalo, NY, United States*, ***John Hall***, *University At Buffalo, Buffalo, NY, United States*, ***Minghui Zheng***, *UC Berkeley, Berkeley, CA, United States*, ***Teng Wu***, *University at Buffalo, State University, Buffalo, NY, United States*

MODELING LI-ION BATTERY THERMAL RUNAWAY USING A THREE SECTION THERMAL MODEL

Technical Paper Publication. DSCC2018-9086

Ting Cai, *University of Michigan, Ann Arbor, MI, United States*, ***Anna Stefanopoulou, Jason Siegel***, *University Of Michigan, Ann Arbor, MI, United States*

MODELING AND OPTIMAL CONTROL OF MICROCSP AND A BUILDING HVAC SYSTEM TO MINIMIZE ELECTRICITY COST

Technical Paper Publication. DSCC2018-9131

Chethan Reddy, *Michigan technological university, Houghton, MI, United States*, ***Mohamed Toub***, *Mohammed V University of Rabat, Rabat, Morocco*, ***Meysam Razmara, Mahdi Shahbakhti, Rush Robinett III***, *Michigan Technological University, Houghton, MI, United States*, ***Ghassane Aniba***, *Mohammed V University of Rabat, Rabat, Select State/Province, Morocco*

ENENGY MANAGEMENT OF SMART COMMUNITY WITH EV CHARGING USING DISTRIBUTED MODEL PREDICTIVE CONTROL

Technical Paper Publication. DSCC2018-9240

Fenglin Zhou, Yaoyu Li, Wenyi Wang, *University of Texas at Dallas, Richardson, TX, United States*

TA4 - CONTRIBUTED SESSION
VIBRATIONS AND CONTROL OF SYSTEMS II
LENOX **10:00AM - 12:00PM**

Session Chair: **Mohammad Ali Ayoubi**, *Santa Clara University/ Dept of Mechanical Eng., Santa Clara, CA, United States*

Session Co-Chair: **Yousef Sardahi**, *Marshall University, Huntington, WV, United States*

Session Organizer: **Cornel Sultan**, *Virginia Tech, Blacksburg, VA, United States*

MULTI-OBJECTIVE OPTIMAL DESIGN OF PASSIVE SUSPENSION SYSTEM WITH INERTER DAMPER

Technical Paper Publication. DSCC2018-9011

Xiaotian Xu, Yousef Sardahi, Chenyu Zheng, *Marshall University, Huntington, WV, United States*

PLANAR MOTION CONTROL, COORDINATION, AND DYNAMIC ENTRAINMENT IN CHAPLYGIN BEANIES

Technical Paper Publication. DSCC2018-9037

Scott D Kelly, *University of North Carolina, Charlotte, Charlotte, NC, United States*, ***Rodrigo Abrajan-Guerrero***, *University of North Carolina At Charlotte, Charlotte, NC, United States*, ***Jaskaran Singh Grover, Matthew Travers, Howie Choset***, *Carnegie Mellon University, Pittsburgh, PA, United States*

CONTROL DESIGN WITH INVERSE FEEDBACK SHAPER FOR QUADCOPTER WITH SUSPENDED LOAD

Technical Paper Publication. DSCC2018-9052

Jaroslav Busek, Matej Kure, Martin Hromcik, Tomas Vyhlidal, *Czech Technical University in Prague, Prague, Czech Republic*

A NOVEL NON-RASTER SCAN METHOD FOR AFM IMAGING

Technical Paper Publication. DSCC2018-9049

Nastaran Nikooienejad, Mohammad Maroufi, S. O. Reza Moheimani, *University of Texas at Dallas, Richardson, TX, United States*

OPEN-LOOP MINIMUM-ENERGY MANEUVER OF A SOLAR-SAIL USING MAGNETIC TORQUES AND REACTION WHEELS

Technical Paper Publication. DSCC2018-9093

Mohammad Ali Ayoubi, *Santa Clara University/ Dept of Mechanical Eng., Santa Clara, CA, United States*, ***Peiman Naseradinmousavi***, *San Diego State University, San Diego, CA, United States*

TA5 - CONTRIBUTED SESSION
ADVANCES IN ROBOTICS III
TECHWOOD 10:00AM - 12:00PM

Session Chair: **Stephen Mascaro**, *University Of Utah, Salt Lake City, UT, United States*

Session Co-Chair: **Feitian Zhang**, *George Mason University, Fairfax, VA, United States*

Session Organizer: **Xin Wang**, *SIUE, Edwardsville, IL, United States*

GRASP FORCE SENSING USING VISUAL SERVOING AND FINGERNAIL IMAGING

Technical Paper Publication. DSCC2018-9097

Navid Fallahinia, *The University of Utah, Salt Lake City, UT, United States*, ***Sonoma Harris***, *University of Utah, Bountiful, UT, United States*, ***Stephen Mascaro***, *University Of Utah, Salt Lake City, UT, United States*

ANALYTICAL AND EXPERIMENTAL PREDICTOR-BASED TIME DELAY CONTROL OF BAXTER ROBOT

Technical Paper Publication. DSCC2018-9101

Mostafa Bagheri, *UC San Diego & San Diego State Univ., La Jolla, CA, United States*, ***Miroslav Krstic***, *University of California, San Diego, La Jolla, CA, United States*, ***Peiman Naseradinmousavi***, *San Diego State University, San Diego, CA, United States*

FOVEATION CONTROL OF A ROBOTIC EYE USING DEEP REINFORCEMENT LEARNING

Technical Paper Publication. DSCC2018-9209

Sunil Kumar Rajendran, Qi Wei, Feitian Zhang, *George Mason University, Fairfax, VA, United States*

OMNIDIRECTIONAL FORCE FEEDBACK FOR TELEOPERATION OF OMNIDIRECTIONAL WHEELED ROBOTS

Technical Paper Publication. DSCC2018-9122

Rajat Tyagi, *University of Utah, Salt Lake City, UT, United States*, ***Stephen Mascaro***, *University Of Utah, Salt Lake City, UT, United States*

STIFFNESS CONTROL OF PARALLEL CONTINUUM ROBOTS

Technical Paper Publication. DSCC2018-9112

Vincent Aloi, *University of Tennessee, Knoxville, Knoxville, TN, United States*, ***Caroline Black***, *University of Alabama, Huntsville, Huntsville, AL, United States*, ***Caleb Rucker***, *University of Tennessee, Knoxville, TN, United States*

DMD-BASED DISTRIBUTED FLOW SENSING FOR BIO-INSPIRED AUTONOMOUS UNDERWATER ROBOTS

Technical Paper Publication. DSCC2018-9113

Fengying Dang, Feitian Zhang, *George Mason University, Fairfax, VA, United States*

TA6 - INVITED SESSION
BIOMEDICAL AND NEURAL SYSTEMS MODELING, DIAGNOSTICS AND HEALTHCARE
SPRING 10:00AM - 12:00PM

Session Chair: **Kenn Oldham**, *University of Michigan, Ann Arbor, MI, United States*

Session Co-Chair: **Xiaopeng Zhao**, *University of Tennessee, Knoxville, TN, United States*

Session Organizer: **Jin Oh Hahn**, *University of Maryland, College Park, MD, United States*

EXPERIMENTAL WALKING TO RUNNING TRANSITION

Technical Paper Publication. DSCC2018-9041

Salvador Alcorta, Dumitru Caruntu, *University of Texas Rio Grande Valley, Edinburg, TX, United States*

IDENTIFICATION OF COMPENSATORY ARTERIAL DYNAMICS IN SWINE USING A NON-INVASIVE SENSOR FOR LOCAL VASCULAR RESISTANCE

Technical Paper Publication. DSCC2018-9063

Lu Wang, Sardar Ansari, Kevin Ward, Kayvan Najarian, Kenn Oldham, *University of Michigan, Ann Arbor, MI, United States*

A REDUCED ORDER MODEL FOR SPATIOTEMPORAL DYNAMICS AND CONTROL OF CARDIAC ALTERNANS

Technical Paper Publication. DSCC2018-9071

Xiaopeng Zhao, *University of Tennessee, Knoxville, TN, United States*, ***Elena Tolkacheva***, *University of Minnesota, Minneapolis, TN, United States*

TRANSIENT DYNAMICS OF HARMONIC DEVICES UNDER THERMAL LOADING

Technical Paper Publication. DSCC2018-9111

Heshan Unamboowe, Amit Shukla, *Miami University, Oxford, OH, United States*

MODELING OF COLLECTIVE CELL BEHAVIORS INTERACTING WITH EXTRACELLULAR MATRIX USING DUAL FACETED LINEARIZATION

Technical Paper Publication. DSCC2018-9164

Michaelle Mayalu, *Caltech, Pasadena, CA, United States*, ***Haruhiko Asada***, *Mass Inst Of Tech, Cambridge, MA, United States*, ***Min-Cheol Kim***, *MIT, Cambridge, MA, United States*

TENDON TAPPING STIMULUS CHARECTERIZATION THROUGH CONTACT MODELING

Technical Paper Publication. DSCC2018-9246

Waiman Meinhold, Jun Ueda, *Georgia Institute of Technology, Atlanta, GA, United States*

Technical Sessions

TM1 - CONTRIBUTED SESSION
AUTOMOTIVE SYSTEMS
INMAN 1:30PM - 3:30PM

Session Chair: **Rasoul Salehi**, *University of Michigan, Ann Arbor, MI, United States*

Session Co-Chair: **Jing Wang**, *Ford Motor Company, Dearborn, MI, United States*

AN ONLINE MODEL PREDICTIVE CONTROL FRAMEWORK FOR ROBOT DRIVER SPEED CONTROL

Technical Paper Publication. DSCC2018-8957

Jing Wang, Yan Wang, Dimitar Filev, *Ford Motor Company, Dearborn, MI, United States*

ENERGY-EFFICIENT CONTROL APPROACH FOR AUTOMATED HEV AND BEV WITH SHORT-HORIZON PREVIEW INFORMATION

Technical Paper Publication. DSCC2018-8980

Jinwoo Seok, *University of Michigan, Ann Arbor, MI, United States*, ***Yan Wang, Dimitar Filev***, *Ford Motor Company, Dearborn, MI, United States*, ***Ilya Kolmanovsky***, *The University of Michigan, Ann Arbor, Ann Arbor, MI, United States*, ***Anouck Girard***, *University of Michigan, Ann Arbor, MI, United States*

SENSITIVITY ANALYSIS OF DRIVETRAIN OSCILLATIONS

Technical Paper Publication. DSCC2018-8965

Matthias Foerth, *Technical University of Munich, Garching, Bavaria, Germany*, ***Junya Ota***, *Toyota Motor Corporation, Susono City, Shizuoka Prefecture, Japan*, ***Markus Lienkamp***, *Technical University of Munich, Garching, Bavaria, Germany*

ANALYSIS OF TIRE RELAXATION CONSTANTS FOR MODELING VEHICLE TRACTION PERFORMANCE AND HANDLING

Technical Paper Publication. DSCC2018-9026

Vladimir Vantsevich, *The University of Alabama at Birmingham, Birmingham, AL, United States*, ***Lyubomyr Demkiv, Sviatoslav Klos***, *Lviv Polytechnic National University, Lviv, Ukraine*

A COMPREHENSIVE FRAMEWORK FOR SIMULATING DYNAMICS OF AN OFF-ROAD VEHICLE IN UCONSTRUCTED ENVIRONMENTS

Technical Paper Publication. DSCC2018-9189

Shahab Karimi, Ardalan Vahidi, *Clemson University, Clemson, SC, United States*, ***Paramsothy Jayakumar***, *U.S. Army Tardec, Warren, MI, United States*

UTILIZATION OF ADAS FOR IMPROVING IDLE STOP-AND-GO CONTROL

Technical Paper Publication. DSCC2018-8931

Kwangwoo Jeong, *HATCI, Superior Charter Township, MI, United States*, ***Hoon Lee***, *Hyundai-Kia America Technical Center Inc., Superior Township, MI, United States*, ***Jaihyun Lee, Sanghoon Yoo, Byungho Lee, Sejun Kim***, *Hyundai-Kia America Technical Center Inc., Superior Charter Township, MI, United States*

TM2 - CONTRIBUTED SESSION
MULTI-AGENT AND NETWORKED SYSTEMS II
KENNESAW 1:30PM - 3:30PM

Session Chair: **Reza Tafreshi**, *Texas A&m University At Qatar, College Station, TX, United States*

Session Co-Chair: **Piyush Grover**, *Mitsubishi Electric Research Laboratories, Cambridge, MA, United States*

Session Organizer: **Chengzhi Yuan**, *University of Rhode Island, Kingston, RI, United States*

HELICOPTER SWASHPLATE DESIGN AND ANALYSIS USING SEMI COMPLIANT MECHANISM

Technical Paper Publication. DSCC2018-8944

Ayse Tekes, Adeel Khalid, Niko Giannakakos, Alexander Bryant, *Kennesaw State University, Marietta, GA, United States*

STABILITY ANALYSIS IN MEAN-FIELD GAMES VIA AN EVANS FUNCTION APPROACH

Technical Paper Publication. DSCC2018-8926

Piyush Grover, *Mitsubishi Electric Research Laboratories, Cambridge, MA, United States*

NUMERICAL EVALUATION OF PRESSURE DROP ACROSS ORIFICES FOR DIFFERENT GAS-LIQUID MIXTURES

Technical Paper Publication. DSCC2018-9038

Zurwa Khan, *Texas A&M University At Qatar, Doha, Qatar*, ***Reza Tafreshi***, *Texas A&M University At Qatar, College Station, TX, United States*, ***Matthew Franchek, Karolos Grigoriadis***, *University of Houston, Houston, TX, United States*

FURTHER RESULTS ON FINITE-TIME DISTRIBUTED CONTROL OF MULTIAGENT SYSTEMS WITH TIME TRANSFORMATION

Technical Paper Publication. DSCC2018-8959

Ehsan Arabi, Tansel Yucelen, *University of South Florida, Tampa, FL, United States*, ***John R. Singler***, *Missouri University of Science and Technology, Rolla, MO, United States*

DISTRIBUTED COORDINATION OF A MULTI-AGENT SYSTEM WITH INTERMITTENT COMMUNICATION: A SWITCHED SYSTEMS APPROACH

Technical Paper Publication. DSCC2018-8954

Federico Zegers, Hsi-Yuan Chen, Patryk Deptula, Warren Dixon, *University of Florida, Gainesville, FL, United States*

TM3 - CONTRIBUTED SESSION
DYNAMICS AND CONTROL OF RENEWABLE ENERGY SYSTEMS
PIEDMONT **1:30PM - 3:30PM**

Session Chair: **Verica Radisavljevic-Gajic**, *Villanova University, Villanova, PA, United States*

Session Co-Chair: **Joseph Deese**, *University of North Carolina At Charlotte, Charlotte, NC, United States*

Session Organizer: **Tuhin Das**, *University of Central Florida, Orlando, FL, United States*

PROPORTIONAL POWER SHARING CONSENSUS IN DISTRIBUTED GENERATORS

Technical Paper Publication. DSCC2018-9023

Farzad Aalipour, Tuhin Das, *University of Central Florida, Orlando, FL, United States*

DYNAMIC ANALYSES OF DIRECTIONAL DRILLING USING CURVED BEAM THEOREM

Technical Paper Publication. DSCC2018-9020

Tianheng Feng, *The University of Texas at Austin, Austin, TX, United States*, ***Qiuying Gu, Inho Kim***, *Halliburton, Houston, TX, United States*, ***Dongmei Chen***, *The University of Texas at Austin, Austin, TX, United States*

FUSED CLOSED-LOOP FLIGHT DYNAMICS AND WAKE INTERACTION MODELING OF TETHERED ENERGY SYSTEMS

Technical Paper Publication. DSCC2018-9190

Joseph Deese, Peyman Razi, *University of North Carolina At Charlotte, Charlotte, NC, United States*, ***Michael Muglia***, *University of North Carolina, Wanchese, NC, United States*, ***Praveen Ramaprabhu, Christopher Vermillion***, *University Of North Carolina At Charlotte, Charlotte, NC, United States*

OPTIMAL LINEAR-QUADRATIC INTEGRAL FEEDBACK CONTROLLER DESIGN WITH DISTURBANCE REJECTION FOR PROTON EXCHANGE MEMBRANE FUEL CELL

Technical Paper Publication. DSCC2018-9225

Milos Milanovic, *Villanova University, Villanova, PA, United States*, ***Verica Radisavljevic-Gajic***, *Villanova University, Villanova, PA, United States*

WEIGHTED-LEAST SQUARES OPTIMIZATION METHOD FOR CONTROL AND SHAPE DESIGN OF AN ADAPTIVE BLADE TWIST DISTRIBUTION TO INCREASE WIND CAPTURE

Technical Paper Publication. DSCC2018-9233

Fuzhao Mou, Hamid Khakpour Nejadkhaki, Aaron Estes, *University at Buffalo, State University, Buffalo, NY, United States*, ***John Hall***, *University At Buffalo, Buffalo, NY, United States*

TM4 - INVITED SESSION
VIBRATIONS: MODELING, ANALYSIS, AND CONTROL (I)
LENOX **1:30PM - 3:30PM**

Session Chair: **Dumitru Caruntu**, *University of Texas Rio Grande Valley, Edinburg, TX, United States*

Session Co-Chair: **Weidong Zhu**, *Univ Of Maryland, Baltimore Ct, Baltimore, MD, United States*

Session Organizer: **S. Nima Mahmoodi**, *The University of Alabama, Tuscaloosa, AL, United States*

BARRIER LYAPUNOV FUNCTION BASED CONTROL OF A FLEXIBLE LINK COROBOT WITH SAFETY CONSTRAINTS

Technical Paper Publication. DSCC2018-9006

Siyang Song, *Ohio State University, Columbus, OH, United States*, ***Yu She***, *The Ohio State University, Columbus, OH, United States*, ***Junmin Wang***, *Ohio State University, Columbus, OH, United States*, ***Hai-Jun Su***, *The Ohio State University, Columbus, OH, United States*

EXPERIMENTAL AND NUMERICAL ANALYSIS OF A SANDWICH BEAM WITH TIP MASS

Technical Paper Publication. DSCC2018-9015

Es'hagh Farzaneh Joubaneh, *Central Michigan University, Mount Pleasant, MI, United States*, ***Oumar Barry***, *Virginia Tech, Blacburg, VA, United States*, ***Donatus Oguamanam***, *Ryerson University, Toronto, ON, Canada*

EXPERIMENTAL INVESTIGATION ON VIBRATION DAMPING CHARACTERISTICS OF MAGNETORHEOLOGICAL DAMPER

Technical Paper Publication. DSCC2018-9214

Ming Cheng, *Harbin Institute of Technology, Harbin, China*, ***Zhaobo Chen***, *Harbin Inst Of Tech, Harbin, Heilongjiang, China*, ***S. Nima Mahmoodi***, *The University of Alabama, Tuscaloosa, AL, United States*

VOLTAGE RESPONSE FOR PARAMETRICALLY ACTUATED MEMS CANTILEVER BEAM USING HOMOTOPY ANALYSIS METHOD AND METHOD OF MULTIPLE SCALES

Technical Paper Publication. DSCC2018-9012

Christopher Reyes, *The University of Texas Rio Grande Valley, Edinburg, TX, United States*, ***Dumitru Caruntu***, *University of Texas Rio Grande Valley, Edinburg, TX, United States*

PERFORMANCE EVALUATION OF TRAIN SUSPENSION ENERGY HARVESTING SHOCK ABSORBER ON RAILWAY VEHICLE DYNAMICS

Technical Paper Publication. DSCC2018-9202

Yu Pan, *Virginia Tech, Blacksburg, VA, United States*, ***Sijing Guo***, *Virginia Polytechnic Institute and State University, Blacksburg, VA, United States*, ***Lei Zuo***, *Virginia Tech, Blacksburg, VA, United States*, ***Ruijin Jiang***, *CRRC Yangtze Co., Ltd, Wuhan, Hubei Province, China, China*, ***Yong Xu, Zhiwen Tu***, *CRRC Yangtze Co., Ltd., Wuhan, China*

THEORETICAL AND EXPERIMENTAL ANALYSIS OF COUPLED FLEXURAL-TORSIONAL VIBRATIONS OF ROTATING BEAMS

Technical Paper Publication. DSCC2018-9050

Mohammad Javad Khodaei, Amin Mehrvarz, Nicholas Candelino, Nader Jalili, *Northeastern University, Boston, MA, United States*

TM5 - CONTRIBUTED SESSION
ASSISTIVE AND REHABILITATION ROBOTICS
TECHWOOD 1:30PM - 3:30PM

Session Chair: **Hakki Erhan Sevil**, *The University of Texas at Arlington Research Institute (UTARI), Fort Worth, TX, United States*

Session Co-Chair: **Courtney Rouse**, *University of Florida, Gainesville, FL, United States*

Session Organizer: **Zheng Chen**, *University of Houston, Houston, TX, United States*

A BOWDEN CABLE-BASED SERIES ELASTIC ACTUATION MODULE FOR ASSESSING THE HUMAN WRIST

Technical Paper Publication. DSCC2018-8963

Andrew Erwin, Nick Moser, Craig G. McDonald, Marcia K. O'Malley, *Rice University, Houston, TX, United States*

LATENT VARIABLE GRASP PREDICTION FOR EXOSKELETAL GLOVE CONTROL

Technical Paper Publication. DSCC2018-8978

Raghuraj Chauhan, Pinhas Ben-Tzvi, *Virginia Tech, Blacksburg, VA, United States*

STABLE CADENCE TRACKING OF ADMITTING FUNCTIONAL ELECTRICAL STIMULATION CYCLE

Technical Paper Publication. DSCC2018-8989

Christian Cousin, Victor Duenas, Courtney Rouse, Warren Dixon, *University of Florida, Gainesville, FL, United States*

DESIGN OPTIMIZATION OF RML GLOVE FOR IMPROVED GRASP PERFORMANCE

Technical Paper Publication. DSCC2018-9004

Teja Vanteddu, *Virginia Tech, Blacksburg, VA, United States*, ***Bijo Sebastian***, *Virginia Polytechnic Institute and State University, Blacksburg, VA, United States*, ***Pinhas Ben-Tzvi***, *Virginia Tech, Blacksburg, VA, United States*

REACHABILITY ANALYSIS FOR ROBUSTNESS EVALUATION OF THE SIT-TO-STAND MOVEMENT FOR POWERED LOWER LIMB ORTHOSES

Technical Paper Publication. DSCC2018-9066

Octavio Narvaez-Aroche, *University of California, Berkeley, Berkeley, CA, United States*, ***Pierre-Jean Meyer, Murat Arcak, Andrew Packard***, *University of California Berkeley, Berkeley, CA, United States*

IMPLEMENTATION OF OBJECT FETCHING TASK AND HUMAN SUBJECT TESTS USING AN ASSISTIVE ROBOT

Technical Paper Publication. DSCC2018-9248

Ankur Vipulkumar Dalal, Ajinkya Mahadeo Ghadge, Cody Lee Lundberg, Jeongsik Shin, Hakki Erhan Sevil, *The University of Texas at Arlington Research Institute (UTARI), Fort Worth, TX, United States*, ***Deborah Behan***, *The University of Texas at Arlington, Arlington, TX, United States*, ***Dan O. Popa***, *The University of Louisville, Louisville, KY, United States*

TM6 - CONTRIBUTED SESSION
ENERGY SYSTEMS
SPRING 1:30PM - 3:30PM

Session Chair: **Yan Chen**, *Arizona State University, Mesa, AZ, United States*

Session Co-Chair: **Jason Siegel**, *University Of Michigan, Ann Arbor, MI, United States*

Session Organizer: **Christopher Vermillion**, *University of North Carolina At Charlotte, Charlotte, NC, United States*

DECOUPLING METHOD FOR PI CONTROLLERS VIA SETPOINT MODIFICATION APPLIED TO HVAC SYSTEMS

Technical Paper Publication. DSCC2018-8916

Timothy Salsbury, *Johnson Controls, Milwaukee, WI, United States*, ***John House***, *Johnson Controls, Montreal, QC, Canada*, ***Carlos Alcala***, *Johnson Controls, Inc., Milwaukee, WI, United States*

COMPARISON OF INDIVIDUAL-ELECTRODE STATE OF HEALTH ESTIMATION METHODS FOR LITHIUM ION BATTERY

Technical Paper Publication. DSCC2018-9014

Suhak Lee, *University of Michigan, Ann Arbor, MI, United States*, ***Jason Siegel, Anna Stefanopoulou***, *University Of Michigan, Ann Arbor, MI, United States*, ***Jang-Woo Lee, Tae-Kyung Lee***, *Samsung SDI Co., Ltd., Yongin-si, Korea (Republic)*

MODELING OF A LINEAR POWER GENERATOR DRIVEN BY A PULSE DETONATION ENGINE

Technical Paper Publication. DSCC2018-9055

Umang Dighe, Frank K Lu, *The University of Texas at Arlington, Arlington, TX, United States*

SOLID-STATE BATTERY MODELING CASE STUDIES FOR THE ANALYSIS OF A MICRO-ROBOT POWER SYSTEM

Technical Paper Publication. DSCC2018-9060

Kendall Teichert, *Trine University, Angola, IN, United States*, ***Kenn Oldham***, *University of Michigan, Ann Arbor, MI, United States*

LARGE SIGNAL STABILITY ANALYSIS OF A HYBRID AC/DC MICROGRID WITH A CASCADED CONTROL INVERTER

Technical Paper Publication. DSCC2018-9163

Hongru Xu, Yan Chen, *Arizona State University, Mesa, AZ, United States*, ***Brian Keel***, *Salt River Project Corp., Scottsdale, AZ, United States*

TE1 - CONTRIBUTED SESSION
INTELLIGENT TRANSPORTATION AND VEHICLES
INMAN **4:00PM - 6:00PM**

Session Chair: **Amirhossein Ghasemi**, *University of North Carolina Charlotte, Charlotte, NC, United States*

Session Co-Chair: **Zongxuan Sun**, *University Of Minnesota, Minneapolis, MN, United States*

Session Organizer: **Zhaojian Li**, *Michigan State University, East Lansing, MI, United States*

OPTIMAL ECO-APPROACH CONTROL WITH TRAFFIC PREDICTION FOR CONNECTED VEHICLES

Technical Paper Publication. DSCC2018-9059

Yunli Shao, Zongxuan Sun, *University of Minnesota, Minneapolis, MN, United States*

INTEGRATED STEERING AND BRAKING CONTROL SYSTEM FOR COLLISION AVOIDANCE BY USING VIRTUAL REPULSIVE FORCE FIELD METHOD

Technical Paper Publication. DSCC2018-8907

Atsushi Yokoyama, *Hitachi America, Ltd., Farmington Hills, MI, United States*, ***Pongsathorn Raksincharoensak, Naoto Yoshikawa***, *Tokyo University of Agriculture and Technology, Koganei, Tokyo, Japan*

GAME THEORETIC MODELING OF A STEERING OPERATION IN A HAPTIC SHARED CONTROL FRAMEWORK

Technical Paper Publication. DSCC2018-9105

Amirhossein Ghasemi, *University of North Carolina Charlotte, Charlotte, NC, United States*

VEHICLE DYNAMICS OF PERMANENT-MAGNET LEVITATION BASED HYPERLOOP CAPSULES

Technical Paper Publication. DSCC2018-9130

Roshan Pradhan, Aditya Katyayan, *Birla Institute of Technology and Science, Pilani, Pilani, Rajasthan, India*

STABILIZATION OF TRAFFIC FLOW WITH AUTONOMOUS VEHICLES

Technical Paper Publication. DSCC2018-9239

Huan Yu, *University of California, San Diego, San Diego, CA, United States*, ***Shumon Koga***, *University of California San Diego, San Diego, CA, United States*, ***Miroslav Krstic***, *University of California, San Diego, La Jolla, CA, United States*

A ROBUST AND OPTIMAL VISUAL TRACKING WITH BLOCKING OBSTACLES AND REFLECTION NOISES

Technical Paper Publication. DSCC2018-9162

Xiongfeng Yi, Zheng Chen, *University of Houston, Houston, TX, United States*

TE2 - CONTRIBUTED SESSION
MECHATRONICS I
KENNESAW **4:00PM - 6:00PM**

Session Chair: **Min Li**, *Georgia Inst. of Tech., Norcross, GA, United States*

Session Co-Chair: **Gregory D. Buckner**, *North Carolina State University, Raleigh, NC, United States*

Session Organizer: **Huazhen Fang**, *University of Kansas, Lawrence, KS, United States*

NONLINEAR DYNAMIC ANALYSIS OF A POLYDYNE CAM WITH TRANSLATED ROLLER FOLLOWER MECHANISM WITH CLEARANCE

Technical Paper Publication. DSCC2018-8901

Louay S. Yousuf, *Auburn University, Walled Lake, MI, United States*, ***Anis Drira***, *University of Michigan Dearborn, Dearborn, MI, United States*

SLIDING MODE CONTROL OF LOW COST PRESSURE SENSOR CALIBRATION DEVICE

Technical Paper Publication. DSCC2018-9033

Chang-Hwan Lee, Deukhwan Ahn, Sunghoon Kim, Kwan-Woong Gwak, *Sejong University, Seoul, Korea (Republic)*

MODELING AND CONTROL OF A NOVEL VARIABLE-STIFFNESS REGENERATIVE ACTUATOR

Technical Paper Publication. DSCC2018-9054

Erivelton Gualter Dos Santos, *Cleveland State University, Cleveland, OH, United States*, ***Hanz Richter***, *Cleveland State University, Cleveland, OH, United States*

FINITE ELEMENT ANALYSIS-BASED MODELING AND FEEDBACK LINEARIZING CONTROL OF A LARGE AIR GAP MAGNETIC LEVITATOR

Technical Paper Publication. DSCC2018-9074

Samuel Miller, Gregory D. Buckner, *North Carolina State University, Raleigh, NC, United States*

HYSTERESIS COMPENSATION USING EXTENDED HIGH-GAIN OBSERVER AND DYNAMIC INVERSION

Technical Paper Publication. DSCC2018-9082

Dhrubajit Chowdhury, Yasir Khudhair Al-Nadawi, Xiaobo Tan, *Michigan State University, East Lansing, MI, United States*

A NOVEL CURRENT-INTERFERENCE SCANNING METHOD FOR DETECTION OF ABNORMAL TISSUES

Technical Paper Publication. DSCC2018-9175

Kok Meng Lee, *Georgia institute of technology, Atlanta, GA, United States*, ***Junwei Li***, *Huazhong University of Science and Technology, Wuhan, China*, ***Kun Bai***, *Huazhong Univ of Sci and Tech, Wuhan Hubei, China*

TE3 - INVITED SESSION
ENERGY HARVESTING
PIEDMONT 4:00PM - 6:00PM

Session Chair: **Lei Zuo**, *Virginia Tech, Blacksburg, VA, United States*

Session Co-Chair: **Xu Chen**, *University of Connecticut, Storrs, CT, United States*

Session Organizer: **Oumar Barry**, *Virginia Tech, Blackburg, VA, United States*

WIDE-BAND LOOP SHAPING FOR MODULATION OF ENERGY TRANSMISSION IN NONMINIMUM-PHASE SYSTEMS

Technical Paper Publication. DSCC2018-9089

***Tianyu Jiang, Jiong Tang, Xu Chen**, University of Connecticut, Storrs, CT, United States*

ENHANCED VIBRATION ENERGY-HARVESTING USING INERTER-BASED TWO-DEGREE-OF-FREEDOM SYSTEM AND MECHANICAL MOTION RECTIFIER

Technical Paper Publication. DSCC2018-9152

***Mingyi Liu, Lei Zuo, Wei Che Tai**, Virginia Tech, Blacksburg, VA, United States*

SEMI-ACTIVE CONTROL FOR TWO-BODY OCEAN WAVE ENERGY CONVERTER BY USING HYBRID MODEL PREDICTIVE CONTROL

Technical Paper Publication. DSCC2018-9157

***Qiuchi Xiong**, Virginia Polytechnic Institute and State University, Blacksburg, VA, United States, **Xiaofan Li**, Virginia Tech, Blacksburg, VA, United States, **Dillon Martin**, Virginia Polytechnic Institute and State University, Bethesda, MD, United States, **Sijing Guo**, Virginia Polytechnic Institute and State University, Blacksburg, VA, United States, **Lei Zuo**, Virginia Tech, Blacksburg, VA, United States*

ANALYTICAL STUDY OF A PIEZOELECTRIC FREQUENCY UP-CONVERSION HARVESTER UNDER SAWTOOTH WAVE EXCITATION

Technical Paper Publication. DSCC2018-9173

***Saeed Onsorynezhad, Amin Abedini**, Southern Illinois University Edwardsville, Edwardsville, IL, United States, **Fengxia Wang**, SIUE, Edwardsville, IL, United States*

ON THE VIBRATION SUPPRESSION AND ENERGY HARVESTING OF BUILDING STRUCTURES USING AN ELECTROMAGNETIC-INERTER-ABSORBER

Technical Paper Publication. DSCC2018-9187

***Es'hagh Farzaneh Joubaneh**, Central Michigan University, Mount Pleasant, MI, United States, **Oumar Barry**, Virginia Tech, Blackburg, VA, United States, **Lei Zuo**, Virginia Tech, Blacksburg, VA, United States*

TE4 - CONTRIBUTED SESSION
VIBRATION IN MECHANICAL SYSTEMS
LENOX 4:00PM - 6:00PM

Session Chair: **Mark Jankauski**, *Montana State University, Bozeman, MT, United States*

Session Co-Chair: **Weidong Zhu**, *Univ Of Maryland, Baltimore Ct, Baltimore, MD, United States*, **Subramanian Ramakrishnan**, *Unversity of Minnesota at Duluth, Duluth, MN, United States*

COULD CHALK HOPPING BE CAUSED BY REVERSE CHATTER?

Technical Paper Publication. DSCC2018-8906

***John W. Sanders**, California State University Fullerton, Fullerton, CA, United States*

ON STEADY-STATE SOLUTIONS OF A WAVE EQUATION BY SOLVING A DELAY DIFFERENTIAL EQUATION WITH AN INCREMENTAL HARMONIC BALANCE METHOD

Technical Paper Publication. DSCC2018-8933

***Xuefeng Wang**, Georgia Institute of Technology, Atlanta, GA, United States, **Mao Liu**, University of Maryland, Baltimore County, Baltimore, MD, United States, **Weidong Zhu**, University Of Maryland, Baltimore Ct, Baltimore, MD, United States*

PASSIVE PITCH MECHANICS OF ELASTIC FLAPPING WINGS

Technical Paper Publication. DSCC2018-8942

***Mark Jankauski**, Montana State University, Bozeman, MT, United States*

MONITORING AND CONTROL OF WORKPIECE VIBRATIONS USING PROPORTIONAL HYDRAULIC CLAMPING MECHANISM

Technical Paper Publication. DSCC2018-8964

***Manisha Yadav**, Govt. College of Engineering, Karad, Karad, India, **Suhas Mohite**, Government College of Engineering, Karad,, Karad, India*

CONTROL ORIENTED DYNAMIC MODELING OF A TENSION-LEG PLATFORM BASED FLOATING OFFSHORE WIND TURBINE WITH DYNAMIC VIBRATION ABSORBERS

Technical Paper Publication. DSCC2018-9084

***Zhongyou Wu**, The University of Texas at Dallas, Richardson, TX, United States, **Yaoyu Li**, University of Texas Dallas, Richardson, TX, United States*

TE5 - CONTRIBUTED SESSION
ASSISTIVE AND REHABILITATION ROBOTICS II
TECHWOOD 4:00PM - 6:00PM

Session Chair: **Manish Kumar**, *University of Cincinnati, Cincinnati, OH, United States*

Session Co-Chair: **Christian Cousin**, *University of Florida, Gainesville, FL, United States*

Session Organizer: **Seok Chang Ryu**, *Texas A&M University, College Station, TX, United States*

DEVELOPMENT AND EXPERIMENTAL VALIDATION OF AN ENERGY REGENERATIVE PROSTHETIC KNEE CONTROLLER AND PROTOTYPE

Technical Paper Publication. DSCC2018-9091

Poya Khalaf, Holly Warner, *Cleveland State University, Cleveland, OH, United States*, ***Elizabeth Hardin***, *Cleveland FES Center, Motion Study Laboratory, Cleveland, OH, United States*, ***Hanz Richter***, *Cleveland State University, Cleveland, OH, United States*, ***Daniel Simon***, *Cleveland State University, Cleveland, OH, United States*

VARYING MOTOR ASSISTANCE DURING BICEPS CURLS INDUCED VIA FUNCTIONAL ELECTRICAL STIMULATION

Technical Paper Publication. DSCC2018-9083

Courtney Rouse, Christian Cousin, Victor Duenas, Warren Dixon, *University of Florida, Gainesville, FL, United States*

DEVELOPMENT OF A MOTORIZED ROBOTIC WALKER GUIDED BY AN IMAGE PROCESSING SYSTEM FOR HUMAN WALKING ASSISTANCE AND REHABILITATION

Technical Paper Publication. DSCC2018-9223

Tao Shen, Md Rayhan Afsar, *The University of Alabama, Tuscaloosa, AL, United States*, ***He Zhang***, *University of Arkansas at Little Rock, Little Rock, AR, United States*, ***Cang Ye***, *Virginia Commonwealth University, Richmond, VA, United States*, ***Xiangrong Shen***, *The University of Alabama, Tuscaloosa, AL, United States*

PARALLEL DEEP LEARNING ENSEMBLES FOR HUMAN POSE ESTIMATION

Technical Paper Publication. DSCC2018-9007

Hailin Ren, Anil Kumar, Xinran Wang, Pinhas Ben-Tzvi, *Virginia Tech, Blacksburg, VA, United States*

A ROBOTIC ANKLE-FOOT ORTHOSIS FOR DAILY-LIFE ASSISTANCE AND REHABILITATION

Technical Paper Publication. DSCC2018-9242

MD Rejwanul Haque, *University of Alabama, Tuscaloosa, AL, United States*, ***Hao Zheng, Saroj Thapa***, *The University of Alabama, Tuscaloosa, AL, United States*, ***Geza Kogler***, *Georgia Institute of Technology, Atlanta, GA, United States*, ***Xiangrong Shen***, *The University of Alabama, Tuscaloosa, AL, United States*

TE6 - CONTRIBUTED SESSION
ENERGY SYSTEMS II
SPRING 4:00PM - 6:00PM

Session Chair: **Pierluigi Pisu**, *Clemson University, xx, NC, United States*

Session Co-Chair: **Donald J. Docimo**, *University of Illinois at Urbana-Champaign, Urbana, IL, United States*

Session Organizer: **Azad Ghaffari**, *UC San Diego, San Diego, CA, United States*

HIERARCHICAL CONTROL FOR ELECTRO-THERMAL POWER MANAGEMENT OF AN ELECTRIC VEHICLE POWERTRAIN

Technical Paper Publication. DSCC2018-9215

Donald J. Docimo, Herschel C. Pangborn, *University of Illinois at Urbana-Champaign, Urbana, IL, United States*, ***Andrew G. Alleyne***, *University Of Illinois, Urbana, IL, United States*

FAULT DETECTION AND ISOLATION FOR COMPLEX THERMAL MANAGEMENT SYSTEMS

Technical Paper Publication. DSCC2018-9132

Pamela Tannous, *University of Illinois at Urbana-Champaign, Urbana, IL, United States*, ***Andrew G. Alleyne***, *University Of Illinois, Urbana, IL, United States*

INTER-AREA OSCILLATION DAMPING IN LARGE-SCALE POWER SYSTEMS USING DECENTRALIZED CONTROL

Technical Paper Publication. DSCC2018-9119

Roghieh A. Biroon, *Clemson university, Greenville, SC, United States*, ***Pierluigi Pisu***, *Clemnson University, Clemson, SC, United States*, ***David Schoenwald***, *Sandia National Lab, Albuquerque, NM, United States*

MODEL PREDICTIVE CONTROL OF A PUMPED TWO-PHASE COOLING SYSTEM WITH MICROCHANNEL HEAT EXCHANGERS

Technical Paper Publication. DSCC2018-9143

Oyuna Angatkina, *University of Illinois at Urbana-Champaign, Urbana, IL, United States*, ***Andrew G. Alleyne***, *University Of Illinois, Urbana, IL, United States*

OPTIMAL SCHEDULING OF HOME ENERGY MANAGEMENT SYSTEM WITH PLUG-IN ELECTRIC VEHICLES USING MODEL PREDICTIVE CONTROL

Technical Paper Publication. DSCC2018-9159

Yue Zhao, *Arizona State University, Gilbert, AZ, United States*, ***Yan Chen***, *Arizona State University, Mesa, AZ, United States*, ***Brian Keel***, *Salt River Project Corp., Scottsdale, AZ, United States*

WEDNESDAY, OCTOBER 3

WA1 - CONTRIBUTED SESSION
ADVANCES IN NONLINEAR CONTROL
INMAN 10:00AM - 12:00PM

Session Chair: **Anoop Sathyan**, *University of Cincinnati, Cincinnati, OH, United States*

Session Co-Chair: **Sudeshna Dasgupta**, *Meghnad Saha Institute of Technology, Kolkata, West Bengal, India*

Session Organizer: **Beibei Ren**, *Texas Tech University, Lubbock, TX, United States*

A MODIFIED ACTIVE ANTI-DISTURBANCE CONTROL FOR A NONLINEAR CSTR MODEL

Technical Paper Publication. DSCC2018-8917

Sudeshna Dasgupta, *Meghnad Saha Institute of Technology, Kolkata, West Bengal, India*, ***Smita Sadhu, T. K. Ghoshal***, *Jadavpur University, Kolkata, West Bengal, India*

EVENT TRIGGERED NEUROADAPTIVE CONTROLLER (ETNAC) DESIGN FOR UNCERTAIN AFFINE NONLINEAR SYSTEMS

Technical Paper Publication. DSCC2018-9103

Abdul Ghafoor, *Missouri University of Sciences and Technology, Rolla, Missouri, USA, Rolla, MO, United States*, ***Jie Yao***, *Mechanical Engineering, Missouri University of Sciences and Technology, Rolla, MO, United States*, ***S.N. Balakrishnan, Jagannathan Sarangapani***, *Missouri University of Sciences and Technology, Rolla, MO, United States*, ***Tansel Yucelen***, *University of South Florida, Tampa, FL, United States*

ADAPTIVE ROBUST CONTROL OF A 7-DOFS TELEOPERATION ROBOT SYSTEM WITH PAYLOAD VARIATIONS AND DISTURBANCES

Technical Paper Publication. DSCC2018-9168

Jinfei Hu, Mingxing Yuan, Zheng Chen, *Zhejiang University, hangzhou, zhejiang, China*, ***Bin Yao***, *Purdue University, West Lafayette, IN, United States*

COLLABORATIVE CONTROL OF MULTIPLE ROBOTS USING GENETIC FUZZY SYSTEMS APPROACH

Technical Paper Publication. DSCC2018-9027

Anoop Sathyan, Ou Ma, *University of Cincinnati, Cincinnati, OH, United States*

WA2 - CONTRIBUTED SESSION
MECHATRONICS II
KENNESAW 10:00AM - 12:00PM

Session Chair: **John Wagner**, *Clemson University, Clemson, SC, United States*

Session Co-Chair: **Kam K. Leang**, *University of Utah, Salt Lake City, UT, United States*

Session Organizer: **Mohammad Al Janaideh**, *Memorial University of Newfoundland, St. John's, NL, Canada*

AN ATMOSPHERIC ENERGY HARVESTER SYSTEM - LINEAR MODEL AND TEST

Technical Paper Publication. DSCC2018-9150

Sneha Ganesh, Todd Schweisinger, *Clemson University, Clemson, SC, United States*, ***John Wagner***, *Clemson University, Clemson, SC, United States*

LISSAJOUS-LIKE SCAN PATTERN FOR A NODDING MULTI-BEAM LIDAR

Technical Paper Publication. DSCC2018-9169

Michael Benson, Jonathan Nikolaidis, Garrett Clayton, *Villanova University, Villanova, PA, United States*

EDDY-CURRENT DYNAMIC MODEL FOR SIMULTANEOUS GEOMETRICAL AND MATERIAL PARAMETER MEASUREMENTS OF MAGNETIC MATERIALS

Technical Paper Publication. DSCC2018-9211

Bingjie Hao, *Huazhong Univ. of Sci. and Tech., Wuhan, China*, ***Kok Meng Lee***, *Georgia institute of technology, Atlanta, GA, United States*, ***Kun Bai***, *Huazhong Univ of Sci and Tech, Wuhan Hubei, China*

A DISTRIBUTED-PARAMETER CONTROL SYSTEM USING ELECTROMAGNETIC IMAGES STIMULATION FOR HUMAN-MACHINE PERCEPTION INTERFACE

Technical Paper Publication. DSCC2018-9217

Min Li, *Georgia Inst. of Tech., Norcross, GA, United States*, ***Kok Meng Lee***, *Georgia institute of technology, Atlanta, GA, United States*

DEVELOPMENT OF A 3-DOF TRIPEDAL STICK-SLIP MICROROBOTIC MOBILE PLATFORM FOR UNCONSTRAINED, OMNIDIRECTIONAL SAMPLE POSITIONING

Technical Paper Publication. DSCC2018-9229

Iman Adibnazari, William S. Nagel, Kam K. Leang, *University of Utah, Salt Lake City, UT, United States*

TOWARDS AUTOMATED BICYCLES: ACHIEVING SELF-BALANCE USING STEERING CONTROL

Technical Paper Publication. DSCC2018-9244

Wenhao Deng, Skyler Moore, Jonathan Bush, Miles Mabey, Wenlong Zhang, *Arizona State University, Mesa, AZ, United States*

WA3 - CONTRIBUTED SESSION
MANUFACTURING
PIEDMONT 10:00AM - 12:00PM

Session Chair: **Qian Wang**, *Penn State University, University Park, PA, United States*

Session Co-Chair: **Beshah Ayalew**, *Clemson University, Greenville, SC, United States*, **Lu Lu**, *New Jersey Institute of Technology, Newark, NJ, United States*

TOWARDS COMPUTATIONAL MODELING OF TEMPERATURE FIELD EVOLUTION IN DIRECTED ENERGY DEPOSITION PROCESSES

Technical Paper Publication. DSCC2018-8973

Jianyi Li, *Penn State University, University Park, PA, United States*, ***Qian Wang***, *Penn State University, University Park, PA, United States*, ***Panagiotis Michaleris***, *Autodesk, State College, PA, United States*

ILC WITH TIME-VARYING DELAY ESTIMATION: A CASE STUDY ON TWIN ROLL STRIP CASTING

Technical Paper Publication. DSCC2018-9028

Florian Browne, *Purdue University, West Lafayette, IN, United States*, ***Brad Rees***, *Nucor, Crawfordsville, IN, United States*, ***George Chiu, Neera Jain***, *Purdue University, West Lafayette, IN, United States*

BUILD HEIGHT CONTROL IN DIRECTED ENERGY DEPOSITION USING A MODEL-BASED FEED-FORWARD CONTROLLER

Technical Paper Publication. DSCC2018-9058

Qian Wang, *Penn State Univ, University Park, PA, United States*, ***Jianyi Li***, *Penn State University, University Park, PA, United States*, ***Abdalla R. Nassar, Edward W. Reutzel, Wesley Mitchell***, *ARL/Penn State, University Park, PA, United States*

OPTIMAL SWITCHING TIME CONTROL OF UV INDUCED CATIONIC CURING PROCESS

Technical Paper Publication. DSCC2018-9114

Shiferaw Beyene, *Clemson, greenville, SC, United States*, ***Beshah Ayalew, Srikanth Pilla***, *Clemson University, Greenville, SC, United States*

IMPROVED CROSS-COUPLED ITERATIVE LEARNING CONTROL FOR CONTOURING NURBS CURVES.

Technical Paper Publication. DSCC2018-9145

Ashley Armstrong, *University of Illinois, Urbana, IL, United States*, ***Amy Wagoner Johnson***, *University of Illinois At Urbana-Champaign, Urbana, IL, United States*, ***Andrew G. Alleyne***, *University Of Illinois, Urbana, IL, United States*

HUCOM: A MODEL FOR HUMAN COMFORT ESTIMATION IN PERSONALIZED HUMAN-ROBOT COLLABORATION

Technical Paper Publication. DSCC2018-9245

Weitian Wang, Na Liu, Rui Li, Yi Chen, Yunyi Jia, *Clemson University, Greenville, SC, United States*

WA4 - CONTRIBUTED SESSION
ESTIMATION AND IDENTIFICATION
LENOX 10:00AM - 12:00PM

Session Chair: **Subramanian Ramakrishnan**, *University of Minnesota at Duluth, Duluth, MN, United States*

Session Co-Chair: **Xin Wang**, *SIUE, Edwardsville, IL, United States*

Session Organizer: **Chang Duan**, *Prairie ViewA&M, Prairie View, TX, United States*

CRANE GUIDANCE GESTURE TRACKING AND RECOGNITION WITH NONLINEAR ESTIMATION AND FUZZY LOGIC

Technical Paper Publication. DSCC2018-8932

Xin Wang, *SIUE, Edwardsville, IL, United States*, ***Chris Gordon***, *Southern Illinois University Edwardsville, Edwardsville, IL, United States*, ***Edwin Yaz***, *Marquette University, Milwaukee, WI, United States*

STATE AND OUTPUT ESTIMATIONS FOR A CLASS OF NONLINEAR DYNAMIC SYSTEMS WITH HIGHLY CROSS-SENSITIVE OUTPUT MEASUREMENTS

Technical Paper Publication. DSCC2018-9136

Brandon Childress, Pingen Chen, *Tennessee Technological University, Cookeville, TN, United States*

VISION BASED SURFACE SLOPE ESTIMATION FOR UNMANNED AERIAL VEHICLE PERCHING

Technical Paper Publication. DSCC2018-9210

Haijie Zhang, Jianguo Zhao, *Colorado State University, Fort Collins, CO, United States*

BEHAVIOR INFERENCE FROM BIO-LOGGING SENSORS: A SYSTEMATIC APPROACH FOR FEATURE GENERATION, SELECTION AND STATE CLASSIFICATION

Technical Paper Publication. DSCC2018-9213

Ding Zhang, K. Alex Shorter, *University of Michigan, Ann Arbor, MI, United States*, ***Julie Rocho-Levine***, *Dolphin Quest Oahu, Honolulu, HI, United States*, ***Julie van der Hoop***, *Aarhus University, Aarhus C, Denmark*, ***Michael Moore***, *Woods Hole Oceanographic Institution, Woods Hole, MA, United States*, ***Kira Barton***, *University of Michigan, Ann Arbor, MI, United States*

STOCHASTIC STABILITY OF A PIEZOELECTRIC VIBRATION ENERGY HARVESTER AND STABILIZATION USING NOISE

Technical Paper Publication. DSCC2018-9216

Subramanian Ramakrishnan, *University of Minnesota at Duluth, Duluth, MN, United States*, ***Connor Edlund***, *University of Minnesota Duluth, Duluth, MN, United States*

A PASSIVITY-BASED REGRESSOR-FREE ADAPTIVE CONTROLLER FOR ROBOT MANIPULATORS WITH COMBINED REGRESSOR/PARAMETER ESTIMATION

Technical Paper Publication. DSCC2018-9010

Donald Ebeigbe, Daniel Simon, *Cleveland State University, Cleveland, OH, United States*

WA5 - CONTRIBUTED SESSION
TRACKING CONTROL SYSTEMS
TECHWOOD **10:00AM - 12:00PM**

Session Chair: **Jingang Yi**, *Rutgers State University, Piscataway, NJ, United States*

Session Co-Chair: **Ahmet AYDOGAN**, *University of Southampton, Southampton, United Kingdom*, **Xiaojun Ban**, *Harbin Institute of Technology, Harbin, Helongjiang, China*

DYNAMIC MODELING AND COMPUTED TORQUE CONTROL OF FLEXURE JOINTED TVC SYSTEMS

Technical Paper Publication. DSCC2018-8987

Ahmet AYDOGAN, *University of Southampton, Southampton, United Kingdom*, ***Ozgur Hasturk***, *Roketsan Missile Industries Inc., Ankara, Turkey*, ***Eric Rogers***, *University of Southampton, Southampton, United Kingdom*

APPLICATION OF MIXED H2/H-INFINITY DATA DRIVEN CONTROL DESIGN TO DUAL STAGE HARD DISK DRIVES

Technical Paper Publication. DSCC2018-9094

Omid Bagherieh, Prateek Shah, *University of California Berkeley,, Berkeley, CA, United States*, ***Roberto Horowitz***, *University Of California, Berkeley, CA, United States*

ROBUST FILTERED BASIS FUNCTIONS APPROACH FOR FEEDFORWARD TRACKING CONTROL

Technical Paper Publication. DSCC2018-9196

Keval Ramani, Chinedum Okwudire, *University of Michigan, Ann Arbor, MI, United States*

DISTURBANCE OBSERVER BASED MODEL PREDICTIVE CONTROL FOR ROV TRAJECTORY-TRACKING

Technical Paper Publication. DSCC2018-9200

Bingheng Wang, *Northwestern Polytechnical University, Xi?an, Shannxi, China*, ***Marko Mihalec***, *Rutgers University, Piscataway, NJ, United States*, ***Jingang Yi, Yongbin Gong***, *Rutgers University, Mechanical and Aerospace Engineering Dept, Piscataway, NJ, United States*, ***Dario Pompili***, *Rutgers University, Electrical and Computer Engineering, Piscataway, NJ, United States*

WA6 - CONTRIBUTED SESSION
DYNAMIC SYSTEMS AND CONTROL EDUCATION
SPRING **10:00AM - 12:00PM**

Session Chair: **Rebecca Reck**, *Kettering University, Flint, MI, United States*

Session Co-Chair: **Tomasz Piatkowski**, *UTP University of Science and Technology, Bydgoszcz, Poland*

Session Organizer: **Warren White**, *Kansas State University, Manhattan, KS, United States*

DYNAMICS, VIBRATIONS AND CONTROL LAB EQUIPMENT DESIGN

Technical Paper Publication. DSCC2018-8913

Ayse Tekes, Kevin Van Der Horn, Zach Marr, Chong Tian, *Kennesaw State University, Marietta, GA, United States*

METHOD OF FLEXIBLE FENCE GEOMETRY DETERMINATION IN THE CONTEXT OF THE SMALL-SIZED OBJECTS SORTING PROCESS

Technical Paper Publication. DSCC2018-8928

Tomasz Piatkowski, *UTP University of Science and Technology, Bydgoszcz, Poland*, ***Miroslaw Wolski***, *UTP University of Science and Technology in Bydgoszcz, Bydgoszcz, Select State/Province, Poland*

SIMULATION STUDY OF A SPHERICAL INVERTED PENDULUM ON AN OMNIDIRECTIONAL CART WITH HOLONOMIC CONSTRAINTS

Technical Paper Publication. DSCC2018-9102

SAYANI MAITY, *Iowa State University, Ames, IA, United States*, ***Greg R. Luecke***, *Iowa State University, Ames, IA, United States*

SELF-BALANCING BY DESIGN IN HYBRID ELECTROCHEMICAL BATTERY PACKS

Technical Paper Publication. DSCC2018-9106

Nur Adilah Aljunid, *The Pennsylvania State University, State College, PA, United States*, ***Michelle A. K. Denlinger***, *The Pennsylvania State University, Barto, PA, United States*, ***Hosam K. Fathy***, *The Pennsylvania State University, University Park, PA, United States*

VALIDATING DC MOTOR MODELS ON THE QUANSER QUBE SERVO.

Technical Paper Publication. DSCC2018-9158

Rebecca Reck, *Kettering University, Flint, MI, United States*

Session Organizers

SESSION #	NAME	COMPANY	ROLE
MA1	Zongxuan Sun	University Of Minnesota	Session Chair
MA1	Pingen Chen	Tennessee Technological University	Session Co-Chair
MA1	Carrie M. Hall	Illinois Institute of Technology	Session Organizer
MA2	Yue Wang	Clemson University	Session Chair
MA2	Zheng Chen	Zhejiang University	Session Organizer
MA2	Ardalan Vahidi	Clemson University	Session Co-Chair
MA3	Yunjun Xu	UCF	Session Chair
MA3	Stephanie Stockar	Penn State University	Session Organizer
MA3	Sean Brennan	PSU	Session Co-Chair
MA4	Xu Chen	University of Connecticut	Session Chair
MA4	Xiaojun Ban	Harbin Institute of Technology	Session Organizer
MA4	Jing Cheng	Tsinghua University	Session Co-Chair
MA5	Nicole Abaid	Virginia Tech	Session Chair
MA5	Wenlong Zhang	Arizona State University	Session Organizer
MA5	Santosh Devasia	Univ Of Washington	Session Co-Chair
MA6	Qingze Zou	Rutgers University	Session Chair
MA6	Chang Duan	Prairie ViewA&M	Session Organizer
MA6	Juan Ren	Iowa State University	Session Co-Chair
MM1	Yan Chen	Arizona State University	Session Chair
MM1	Hoseinali Borhan	Cummins Inc.	Session Organizer
MM1	Xiangrui Zeng	Ford Motor Company	Session Co-Chair
MM2	Phanindra Tallapragada	Clemson University	Session Chair
MM2	Shreekant Gayaka	Applied Materials Company	Session Organizer
MM2	Zhaojian Li	Michigan State University	Session Co-Chair
MM3	Garrett Clayton	Villanova University	Session Chair
MM3	Junfeng Zhao	General Motors	Session Organizer
MM3	Rumit Kumar	University of Cincinnati	Session Co-Chair
MM4	Shahin Nudehi	Valparaiso University	Session Chair
MM4	Minghui Zheng	UC Berkeley	Session Organizer
MM4	Yousef Sardahi	Marshall University	Session Co-Chair
MM5	Hanz Richter	Cleveland State Univ	Session Chair
MM5	Guodong Yin	Southeast University	Session Organizer
MM5	Alicia Keow	University of Houston	Session Co-Chair
MM6	Biswanath Samanta	Georgia Southern University	Session Chair
MM6	Jim Dabney	University of Houston-Clear Lake	Session Organizer
MM6	Manan Gandhi	Georgia Institute of Technology	Session Co-Chair
ME1	Junmin Wang	Ohio State University	Session Chair
ME1	Pingen Chen	Tennessee Technological University	Session Organizer
ME1	Baisravan Homchaudhuri	Illinois Institute of Technology	Session Co-Chair
ME2	Nader Jalili	Northeastern University	Session Chair
ME2	Punit Tulpule	The Ohio State University	Session Organizer
ME2	Ming Ding	Nara Institute of Science and Technology	Session Co-Chair
ME3	Mark W. Mueller	UC Berkeley	Session Chair

Session Organizers

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ME3	Manish Kumar	University of Cincinnati	Session Organizer
ME3	Wenlong Zhang	Arizona State University	Session Co-Chair
ME4	Aldo Ferri	Georgia Institute of Technology	Session Chair
ME4	Fariba Fateh	Kansas State University	Session Organizer
ME4	Aqeel Madhag	Michigan State University	Session Co-Chair
ME5	Pushparaj Mani Pathak	Indian Institute of Technology, Roorkee	Session Chair
ME5	Hui Zhang	Ohio State University	Session Organizer
ME5	Roberto Belotti	Free University of Bolzano-Bozen	Session Co-Chair
ME6	Jun Ueda	Georgia Institute of Technology	Session Chair
ME6	Anirban Mazumdar	Georgia Institute of Technology	Session Organizer
ME6	Wenlong Zhang	Arizona State University	Session Organizer
ME6	Edmond Richer	SMU	Session Co-Chair
TA1	Pingen Chen	Tennessee Technological University	Session Chair
TA1	Yan Chen	Arizona State University	Session Organizer
TA1	Rasoul Salehi	University of Michigan	Session Co-Chair
TA2	Ayse Tekes	Kennesaw State University	Session Chair
TA2	Meng (Rachel) Wang	Eaton Corporation	Session Organizer
TA2	Meghashyam Panyam	Clemson University Restoration Institute	Session Co-Chair
TA3	John Hall	University At Buffalo	Session Chair
TA3	Satadru Dey	University of Colorado Denver	Session Organizer
TA3	Fenglin Zhou	University of Texas at Dallas	Session Co-Chair
TA4	Mohammad Ali Ayoubi	Santa Clara University/ Dept of Mechanical Eng.	Session Chair
TA4	Cornel Sultan	Virginia Tech	Session Organizer
TA4	Yousef Sardahi	Marshall University	Session Co-Chair
TA5	Stephen Mascaro	Univ Of Utah	Session Chair
TA5	Xin Wang	SIUE	Session Organizer
TA5	Feitian Zhang	George Mason University	Session Co-Chair
TA6	Kenn Oldham	University of Michigan	Session Chair
TA6	Jin Oh Hahn	University of Maryland	Session Organizer
TA6	Xiaopeng Zhao	University of Tennessee	Session Co-Chair
TM1	Rasoul Salehi	University of Michigan	Session Chair
TM1	Jing Wang	Ford Motor Company	Session Co-Chair
TM2	Reza Tafreshi	Texas A&m University At Qatar	Session Chair
TM2	Chengzhi Yuan	University of Rhode Island	Session Organizer
TM2	Piyush Grover	Mitsubishi Electric Research Laboratories	Session Co-Chair
TM3	Verica Radisavljevic-Gajic	Villanova University	Session Chair
TM3	Tuhin Das	University of Central Florida	Session Organizer
TM3	Joseph Deese	University of North Carolina At Charlotte	Session Co-Chair
TM4	Dumitru Caruntu	University of Texas Rio Grande Valley	Session Chair
TM4	S. Nima Mahmoodi	The University of Alabama	Session Organizer
TM4	Weidong Zhu	Univ Of Maryland, Baltimore Ct	Session Co-Chair
TM5	Hakki Erhan Sevil	The University of Texas at Arlington Research Institute (UTARI)	Session Chair
TM5	Courtney Rouse	University of Florida	Session Co-Chair

Session Organizers

SESSION #	NAME	COMPANY	ROLE
TM5	Zheng Chen	University of Houston	Session Organizer
TM6	Yan Chen	Arizona State University	Session Chair
TM6	Christopher Vermillion	University of North Carolina At Charlotte	Session Organizer
TM6	Jason Siegel	Univ Of Michigan	Session Co-Chair
TE1	Amirhossein Ghasemi	University of North Carolina Charlotte	Session Chair
TE1	Zhaojian Li	Michigan State University	Session Organizer
TE1	Zongxuan Sun	University Of Minnesota	Session Co-Chair
TE2	Min Li	Georgia Inst. of Tech.	Session Chair
TE2	Gregory D. Buckner	North Carolina State University	Session Co-Chair
TE2	Huazhen Fang	University of Kansas	Session Organizer
TE3	Lei Zuo	Virginia Tech	Session Chair
TE3	Oumar Barry	Virginia Tech	Session Organizer
TE3	Xu Chen	University of Connecticut	Session Co-Chair
TE4	Mark Jankauski	Montana State University	Session Chair
TE4	Subramanian Ramakrishnan	University of Minnesota at Duluth	Session Co-Chair
TE4	Weidong Zhu	Univ Of Maryland, Baltimore Ct	Session Co-Chair
TE5	Manish Kumar	University of Cincinnati	Session Chair
TE5	Seok Chang Ryu	Texas A&M University	Session Organizer
TE5	Christian Cousin	University of Florida	Session Co-Chair
TE6	Pierluigi Pisu	Clemson University	Session Chair
TE6	Azad Ghaffari	UC San Diego	Session Organizer
TE6	Donald J. Docimo	University of Illinois at Urbana-Champaign	Session Co-Chair
WA1	Anoop Sathyan	University of Cincinnati	Session Chair
WA1	Beibei Ren	Texas Tech University	Session Organizer
WA1	Sudeshna Dasgupta	Meghnad Saha Institute of Technology	Session Co-Chair
WA2	John Wagner	Clemson Univ	Session Chair
WA2	Mohammad Al Janaideh	Memorial University of Newfoundland	Session Organizer
WA2	Kam K. Leang	University of Utah	Session Co-Chair
WA3	Qian Wang	Penn State Univ	Session Chair
WA3	Lu Lu	New Jersey Institute of Technology	Session Co-Chair
WA3	Beshah Ayalew	Clemson University	Session Co-Chair
WA4	Subramanian Ramakrishnan	University of Minnesota at Duluth	Session Chair
WA4	Chang Duan	Prairie ViewA&M	Session Organizer
WA4	Xin Wang	SIUE	Session Co-Chair
WA5	Jingang Yi	Rutgers State University	Session Chair
WA5	Xiaojun Ban	Harbin Institute of Technology	Session Co-Chair
WA5	Ahmet Aydogan	University of Southampton	Session Co-Chair
WA6	Rebecca Reck	Kettering University	Session Chair
WA6	Tomasz Piatkowski	UTP University of Science and Technology	Session Co-Chair
WA6	Warren White	Kansas State University	Session Organizer

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Yan	Chen	Tuesday, October 02, 2018	TM6	DSCC2018-9163
Yan	Chen	Tuesday, October 02, 2018	TE6	DSCC2018-9159
Yan	Chen	Monday, October 01, 2018	MM1	DSCC2018-9166
Yi	Chen	Wednesday, October 03, 2018	WA3	DSCC2018-9245
Yi	Chen	Monday, October 01, 2018	ME1	DSCC2018-9126
Yuanyan	Chen	Monday, October 01, 2018	WA3	DSCC2018-9148
Zhaobo	Chen	Tuesday, October 02, 2018	TM4	DSCC2018-9214
Zheng	Chen	Monday, October 01, 2018	MM5	DSCC2018-9064
Zheng	Chen	Monday, October 01, 2018	MM5	DSCC2018-9076
Zheng	Chen	Tuesday, October 02, 2018	TE1	DSCC2018-9162
Zheng	Chen	Wednesday, October 03, 2018	WA1	DSCC2018-9168
Bo	Cheng	Monday, October 01, 2018	MA6	DSCC2018-9118
Jing	Cheng	Monday, October 01, 2018	MA4	DSCC2018-9167
Ming	Cheng	Tuesday, October 02, 2018	TM4	DSCC2018-9214
Yuichi	Chida	Monday, October 01, 2018	MM4	DSCC2018-8956
Brandon	Childress	Wednesday, October 03, 2018	WA4	DSCC2018-9136
George	Chiu	Wednesday, October 03, 2018	WA3	DSCC2018-9028

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Joseph	Chobot	Monday, October 01, 2018	WA3	DSCC2018-9231
Abhijeet	Chodankar	Monday, October 01, 2018	ME4	DSCC2018-8902
Baxi	Chong	Monday, October 01, 2018	MA2	DSCC2018-9144
Howie	Choset	Monday, October 01, 2018	MA2	DSCC2018-9144
Howie	Choset	Tuesday, October 02, 2018	TA4	DSCC2018-9037
Dhrubajit	Chowdhury	Tuesday, October 02, 2018	TE2	DSCC2018-9082
William	Clark	Monday, October 01, 2018	ME2	DSCC2018-9048
Garrett	Clayton	Monday, October 01, 2018	MM3	DSCC2018-9053
Garrett	Clayton	Wednesday, October 03, 2018	WA2	DSCC2018-9169
Kelly	Cohen	Monday, October 01, 2018	MM3	DSCC2018-9199
Kelly	Cohen	Monday, October 01, 2018	MM3	DSCC2018-9197
Kelly	Cohen	Monday, October 01, 2018	ME3	DSCC2018-9137
Christian	Cousin	Tuesday, October 02, 2018	TM5	DSCC2018-8989
Christian	Cousin	Tuesday, October 02, 2018	TE5	DSCC2018-9083
Andong	Dai	Monday, October 01, 2018	ME2	DSCC2018-9040
Ankur Vipulkumar	Dalal	Tuesday, October 02, 2018	TM5	DSCC2018-9248
Fengying	Dang	Tuesday, October 02, 2018	TA5	DSCC2018-9113
Tuhin	Das	Tuesday, October 02, 2018	TM3	DSCC2018-9023
Sudeshna	Dasgupta	Wednesday, October 03, 2018	WA1	DSCC2018-8917
Joseph	Deese	Tuesday, October 02, 2018	TM3	DSCC2018-9190
Sinem	Defterli	Monday, October 01, 2018	MM2	DSCC2018-9042
Lyubomyr	Demkiv	Tuesday, October 02, 2018	TM1	DSCC2018-9026
Wenhao	Deng	Wednesday, October 03, 2018	WA2	DSCC2018-9244
Michelle A. K.	Denlinger	Wednesday, October 03, 2018	WA6	DSCC2018-9106
Patryk	Deptula	Tuesday, October 02, 2018	TM2	DSCC2018-8954
Santosh	Devasia	Monday, October 01, 2018	MA5	DSCC2018-9001
Umang	Dighe	Tuesday, October 02, 2018	TM6	DSCC2018-9055
Caiwu	Ding	Monday, October 01, 2018	ME3	DSCC2018-9133
Ming	Ding	Monday, October 01, 2018	ME2	DSCC2018-9022
Warren	Dixon	Tuesday, October 02, 2018	TM5	DSCC2018-8989
Warren	Dixon	Tuesday, October 02, 2018	TM2	DSCC2018-8954
Warren	Dixon	Tuesday, October 02, 2018	TE5	DSCC2018-9083
Donald J.	Docimo	Tuesday, October 02, 2018	TE6	DSCC2018-9215
Robert	Dollar	Monday, October 01, 2018	MM1	DSCC2018-9177
Xiaonan	Dong	Monday, October 01, 2018	MA5	DSCC2018-9003
Zachary	Dougherty	Monday, October 01, 2018	MM2	DSCC2018-9115
anis	drira	Tuesday, October 02, 2018	TE2	DSCC2018-8901
Victor	Duenas	Tuesday, October 02, 2018	TM5	DSCC2018-8989
Victor	Duenas	Tuesday, October 02, 2018	TE5	DSCC2018-9083
Donald	Ebeigbe	Wednesday, October 03, 2018	WA4	DSCC2018-9010
Connor	Edlund	Wednesday, October 03, 2018	WA4	DSCC2018-9216
Hamid	Emadi	Monday, October 01, 2018	MM2	DSCC2018-9096
Osama	Ennasr	Monday, October 01, 2018	MA2	DSCC2018-9179
Andrew	Erwin	Tuesday, October 02, 2018	TM5	DSCC2018-8963

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Aaron	Estes	Tuesday, October 02, 2018	TM3	DSCC2018-9233
Ethan	Evans	Monday, October 01, 2018	ME2	DSCC2018-8997
Alexandre	Falcoz	Monday, October 01, 2018	ME4	DSCC2018-8918
Navid	Fallahinia	Tuesday, October 02, 2018	TA5	DSCC2018-9097
Es'hagh	Farzaneh Joubaneh	Tuesday, October 02, 2018	TM4	DSCC2018-9015
Es'hagh	Farzaneh Joubaneh	Tuesday, October 02, 2018	TE3	DSCC2018-9187
Hosam K.	Fathy	Monday, October 01, 2018	MA6	DSCC2018-9118
Hosam K.	Fathy	Wednesday, October 03, 2018	WA6	DSCC2018-9106
Vitaliy	Fedonyuk	Monday, October 01, 2018	MM5	DSCC2018-9016
Vitaliy	Fedonyuk	Monday, October 01, 2018	MM2	DSCC2018-9013
Tianheng	Feng	Tuesday, October 02, 2018	TM3	DSCC2018-9020
Aldo	Ferri	Monday, October 01, 2018	ME4	DSCC2018-8967
Dimitar	Filev	Tuesday, October 02, 2018	TM1	DSCC2018-8957
Dimitar	Filev	Tuesday, October 02, 2018	TM1	DSCC2018-8980
Matthias	Foerth	Tuesday, October 02, 2018	TM1	DSCC2018-8965
Maziar	Fooladi Mahani	Monday, October 01, 2018	MA2	DSCC2018-9174
Maziar	Fooladi Mahani	Monday, October 01, 2018	ME5	DSCC2018-9170
Matthew	Franchek	Tuesday, October 02, 2018	TM2	DSCC2018-9038
Baskar	Ganapathysubramanian	Monday, October 01, 2018	MM2	DSCC2018-9096
Manan	Gandhi	Monday, October 01, 2018	MM6	DSCC2018-8968
Sneha	Ganesh	Wednesday, October 03, 2018	WA2	DSCC2018-9150
Tryambak	Gangopadhyay	Monday, October 01, 2018	MM6	DSCC2018-9208
Dalong	Gao	Monday, October 01, 2018	ME6	DSCC2018-9222
Tianshuang	Gao	Monday, October 01, 2018	MM2	DSCC2018-9127
Tianshuang	Gao	Monday, October 01, 2018	MM2	DSCC2018-9096
Gustavo Alfonso	Garcia Ricardez	Monday, October 01, 2018	ME2	DSCC2018-9022
Ajinkya Mahadeo	Ghadge	Tuesday, October 02, 2018	TM5	DSCC2018-9248
Abdul	Ghafoor	Wednesday, October 03, 2018	WA1	DSCC2018-9103
Mohammad	Ghanaatpishe	Monday, October 01, 2018	MA6	DSCC2018-9118
Amirhossein	Ghasemi	Monday, October 01, 2018	ME2	DSCC2018-9009
Amirhossein	Ghasemi	Tuesday, October 02, 2018	TE1	DSCC2018-9105
Amin	Ghorbanpour	Monday, October 01, 2018	ME5	DSCC2018-8972
T. K.	Ghoshal	Wednesday, October 03, 2018	WA1	DSCC2018-8917
Niko	Giannakakos	Tuesday, October 02, 2018	TM2	DSCC2018-8944
Anouck	Girard	Monday, October 01, 2018	MA4	DSCC2018-9045
Anouck	Girard	Tuesday, October 02, 2018	TM1	DSCC2018-8980
Ataollah	Gogani Khiabani	Monday, October 01, 2018	MM4	DSCC2018-8998
Chaohui	Gong	Monday, October 01, 2018	MA2	DSCC2018-9144
Yongbin	Gong	Wednesday, October 03, 2018	WA5	DSCC2018-9200
Chris	Gordon	Wednesday, October 03, 2018	WA4	DSCC2018-8932
Robert D.	Gregg	Monday, October 01, 2018	MA6	DSCC2018-9061
Karolos	Grigoriadis	Tuesday, October 02, 2018	TM2	DSCC2018-9038
Jaskaran Singh	Grover	Monday, October 01, 2018	MA2	DSCC2018-9144
Jaskaran Singh	Grover	Tuesday, October 02, 2018	TA4	DSCC2018-9037

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Piyush	Grover	Tuesday, October 02, 2018	TM2	DSCC2018-8926
Qiuying	Gu	Tuesday, October 02, 2018	TM3	DSCC2018-9020
Erivelton	Gualter Dos Santos	Tuesday, October 02, 2018	TE2	DSCC2018-9054
Valthor	Gudmundsson	Monday, October 01, 2018	ME3	DSCC2018-9123
Longxiang	Guo	Monday, October 01, 2018	MM3	DSCC2018-9095
Sijing	Guo	Tuesday, October 02, 2018	TM4	DSCC2018-9202
Sijing	Guo	Tuesday, October 02, 2018	TE3	DSCC2018-9157
Kwan-Woong	Gwak	Tuesday, October 02, 2018	TE2	DSCC2018-9033
Carrie M.	Hall	Monday, October 01, 2018	MA1	DSCC2018-8961
John	Hall	Tuesday, October 02, 2018	TM3	DSCC2018-9233
John	Hall	Tuesday, October 02, 2018	TA3	DSCC2018-9235
Bingjie	Hao	Wednesday, October 03, 2018	WA2	DSCC2018-9211
MD Rejwanul	Haque	Tuesday, October 02, 2018	TE5	DSCC2018-9242
Ryotaro	Hara	Monday, October 01, 2018	MM4	DSCC2018-8956
Elizabeth	Hardin	Tuesday, October 02, 2018	TE5	DSCC2018-9091
Sonoma	Harris	Tuesday, October 02, 2018	TA5	DSCC2018-9097
Agus	Hasan	Monday, October 01, 2018	ME3	DSCC2018-9123
Amanda	Hashimoto	Monday, October 01, 2018	MA5	DSCC2018-9139
Ibrahim	Haskara	Monday, October 01, 2018	MA4	DSCC2018-9045
Ozgur	Hasturk	Wednesday, October 03, 2018	WA5	DSCC2018-8987
Ali	Heydari	Monday, October 01, 2018	MM4	DSCC2018-8998
Baisravan	Homchaudhuri	Monday, October 01, 2018	MA1	DSCC2018-8961
Baisravan	Homchaudhuri	Monday, October 01, 2018	ME1	DSCC2018-9124
Julie van der	Hoop	Wednesday, October 03, 2018	WA4	DSCC2018-9213
Roberto	Horowitz	Wednesday, October 03, 2018	WA5	DSCC2018-9094
Roberto	Horowitz	Monday, October 01, 2018	ME1	DSCC2018-9125
John	House	Tuesday, October 02, 2018	TM6	DSCC2018-8916
Martin	Hromcik	Tuesday, October 02, 2018	TA4	DSCC2018-9052
Hsiang	Hsu	Monday, October 01, 2018	MM6	DSCC2018-9226
Hsiang	Hsu	Monday, October 01, 2018	ME6	DSCC2018-9198
Ai-Ping	Hu	Monday, October 01, 2018	MA2	DSCC2018-9176
Jinfei	Hu	Wednesday, October 03, 2018	WA1	DSCC2018-9168
Meng	Huang	Tuesday, October 02, 2018	TA2	DSCC2018-8947
Andinet	Hunde	Monday, October 01, 2018	ME1	DSCC2018-8930
Neera	Jain	Wednesday, October 03, 2018	WA3	DSCC2018-9028
Neera	Jain	Tuesday, October 02, 2018	TA3	DSCC2018-9056
Nader	Jalili	Monday, October 01, 2018	ME2	DSCC2018-9048
Nader	Jalili	Tuesday, October 02, 2018	TM4	DSCC2018-9050
Mark	Jankauski	Tuesday, October 02, 2018	TE4	DSCC2018-8942
Benjamin	Jantzen	Monday, October 01, 2018	MA5	DSCC2018-9139
Paramsothy	Jayakumar	Tuesday, October 02, 2018	TM1	DSCC2018-9189
Kwangwoo	Jeong	Tuesday, October 02, 2018	TM1	DSCC2018-8931
Yunyi	Jia	Monday, October 01, 2018	MM3	DSCC2018-9095
Yunyi	Jia	Wednesday, October 03, 2018	WA3	DSCC2018-9245

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Ruijin	Jiang	Tuesday, October 02, 2018	TM4	DSCC2018-9202
Tianyu	Jiang	Tuesday, October 02, 2018	TE3	DSCC2018-9089
Daniel	Jung	Monday, October 01, 2018	MA1	DSCC2018-9043
Krishna	Kalyanam	Monday, October 01, 2018	ME3	DSCC2018-8950
Vinay	Kamidi	Tuesday, October 02, 2018	TA2	DSCC2018-9000
Inseung	Kang	Monday, October 01, 2018	MM6	DSCC2018-9226
Inseung	Kang	Monday, October 01, 2018	ME6	DSCC2018-9198
Shahab	Karimi	Tuesday, October 02, 2018	TM1	DSCC2018-9189
Aditya	Katyayan	Tuesday, October 02, 2018	TE1	DSCC2018-9130
Brian	Keel	Tuesday, October 02, 2018	TM6	DSCC2018-9163
Brian	Keel	Tuesday, October 02, 2018	TE6	DSCC2018-9159
Scott D	Kelly	Tuesday, October 02, 2018	TA4	DSCC2018-9037
Alicia	Keow	Monday, October 01, 2018	MM5	DSCC2018-9076
Hamid	Khakpour Nejadkhaki	Tuesday, October 02, 2018	TM3	DSCC2018-9233
Hamid	Khakpour Nejadkhaki	Tuesday, October 02, 2018	TA3	DSCC2018-9235
Poya	Khalaf	Tuesday, October 02, 2018	TE5	DSCC2018-9091
Adeel	Khalid	Tuesday, October 02, 2018	TM2	DSCC2018-8944
Zurwa	Khan	Tuesday, October 02, 2018	TM2	DSCC2018-9038
Sital	Khatiwada	Monday, October 01, 2018	WA3	DSCC2018-9078
Mohammad Javad	Khodaei	Monday, October 01, 2018	ME2	DSCC2018-9048
Mohammad Javad	Khodaei	Tuesday, October 02, 2018	TM4	DSCC2018-9050
Euisun	Kim	Monday, October 01, 2018	MA4	DSCC2018-9155
Inho	Kim	Tuesday, October 02, 2018	TM3	DSCC2018-9020
Min-Cheol	Kim	Tuesday, October 02, 2018	TA6	DSCC2018-9164
Sejun	Kim	Tuesday, October 02, 2018	TM1	DSCC2018-8931
Sunghoon	Kim	Tuesday, October 02, 2018	TE2	DSCC2018-9033
Youngki	Kim	Monday, October 01, 2018	ME1	DSCC2018-9138
Sviatoslav	Klos	Tuesday, October 02, 2018	TM1	DSCC2018-9026
Shumon	Koga	Tuesday, October 02, 2018	TE1	DSCC2018-9239
Geza	Kogler	Tuesday, October 02, 2018	TE5	DSCC2018-9242
Ilya	Kolmanovsky	Monday, October 01, 2018	MA4	DSCC2018-9045
Ilya	Kolmanovsky	Tuesday, October 02, 2018	TM1	DSCC2018-8980
Xiangling	Kong	Monday, October 01, 2018	MM5	DSCC2018-9034
Svyatoslav	Korneev	Tuesday, October 02, 2018	TA1	DSCC2018-9160
Haukur	Kristinsson	Monday, October 01, 2018	ME3	DSCC2018-9123
Venkat N.	Krovi	Monday, October 01, 2018	ME1	DSCC2018-9126
Miroslav	Krstic	Tuesday, October 02, 2018	TA5	DSCC2018-9101
Miroslav	Krstic	Tuesday, October 02, 2018	TE1	DSCC2018-9239
Paul S.	Krueger	Monday, October 01, 2018	ME6	DSCC2018-9227
Ming	Kuang	Monday, October 01, 2018	MM1	DSCC2018-8995
James	Kuffuor	Monday, October 01, 2018	MM6	DSCC2018-9234
Anil	Kumar	Tuesday, October 02, 2018	TE5	DSCC2018-9007
Manish	Kumar	Monday, October 01, 2018	MM3	DSCC2018-9199
Manish	Kumar	Monday, October 01, 2018	MM3	DSCC2018-9197

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Manish	Kumar	Monday, October 01, 2018	ME3	DSCC2018-9137
Mrinal	Kumar	Tuesday, October 02, 2018	TA2	DSCC2018-8947
Rumit	Kumar	Monday, October 01, 2018	MM3	DSCC2018-9199
Rumit	Kumar	Monday, October 01, 2018	MM3	DSCC2018-9197
Matej	Kure	Tuesday, October 02, 2018	TA4	DSCC2018-9052
Alex A.	Kurzhanskiy	Monday, October 01, 2018	ME1	DSCC2018-9125
Robert G.	Landers	Monday, October 01, 2018	MA4	DSCC2018-9069
Reza	Langari	Monday, October 01, 2018	ME4	DSCC2018-8970
Kam K.	Leang	Wednesday, October 03, 2018	WA2	DSCC2018-9229
Robert	Leary	Monday, October 01, 2018	MM3	DSCC2018-9228
Byungho	Lee	Tuesday, October 02, 2018	TM1	DSCC2018-8931
Chang-Hwan	Lee	Tuesday, October 02, 2018	TE2	DSCC2018-9033
Hoon	Lee	Tuesday, October 02, 2018	TM1	DSCC2018-8931
Jaihyun	Lee	Tuesday, October 02, 2018	TM1	DSCC2018-8931
Jang-Woo	Lee	Tuesday, October 02, 2018	TM6	DSCC2018-9014
Kok Meng	Lee	Tuesday, October 02, 2018	TE2	DSCC2018-9175
Kok Meng	Lee	Wednesday, October 03, 2018	WA2	DSCC2018-9211
Kok Meng	Lee	Wednesday, October 03, 2018	WA2	DSCC2018-9217
Suhak	Lee	Tuesday, October 02, 2018	TM6	DSCC2018-9014
Tae-Kyung	Lee	Tuesday, October 02, 2018	TM6	DSCC2018-9014
Charlsie	Lemons	Monday, October 01, 2018	MA6	DSCC2018-9044
He	Li	Monday, October 01, 2018	MA4	DSCC2018-9069
Jianyi	Li	Wednesday, October 03, 2018	WA3	DSCC2018-8973
Jianyi	Li	Wednesday, October 03, 2018	WA3	DSCC2018-9058
Junwei	Li	Tuesday, October 02, 2018	TE2	DSCC2018-9175
Min	Li	Wednesday, October 03, 2018	WA2	DSCC2018-9217
Qiang	Li	Monday, October 01, 2018	WA3	DSCC2018-9039
Rui	Li	Wednesday, October 03, 2018	WA3	DSCC2018-9245
Rui	Li	Monday, October 01, 2018	ME1	DSCC2018-9126
Ruixue Christine	LI	Monday, October 01, 2018	MA1	DSCC2018-8988
Suyi	Li	Monday, October 01, 2018	ME5	DSCC2018-8969
Xiaofan	Li	Tuesday, October 02, 2018	TE3	DSCC2018-9157
Yaoyu	Li	Tuesday, October 02, 2018	TE4	DSCC2018-9084
Yaoyu	Li	Tuesday, October 02, 2018	TA3	DSCC2018-9240
Yuanchun	Li	Monday, October 01, 2018	ME4	DSCC2018-8970
Jianxun	Liang	Monday, October 01, 2018	MA4	DSCC2018-9167
Zhanrui	Liao	Monday, October 01, 2018	MA5	DSCC2018-9161
Zhanrui	Liao	Monday, October 01, 2018	ME5	DSCC2018-9170
Markus	Lienkamp	Tuesday, October 02, 2018	TM1	DSCC2018-8965
Letian	Lin	Monday, October 01, 2018	MA2	DSCC2018-9195
Qinghua	Lin	Tuesday, October 02, 2018	TA1	DSCC2018-9241
Qinghua	Lin	Tuesday, October 02, 2018	TA1	DSCC2018-9243
Kuan	Liu	Monday, October 01, 2018	MA4	DSCC2018-9045
Mao	Liu	Tuesday, October 02, 2018	TE4	DSCC2018-8933

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Mingyi	Liu	Tuesday, October 02, 2018	TE3	DSCC2018-9152
Na	Liu	Wednesday, October 03, 2018	WA3	DSCC2018-9245
Shuyang	Liu	Monday, October 01, 2018	ME4	DSCC2018-8970
YI	LIU	Monday, October 01, 2018	MA6	DSCC2018-9180
Anthony	Locurto	Monday, October 01, 2018	MM6	DSCC2018-9208
Alec	Lofquist	Monday, October 01, 2018	MM2	DSCC2018-9096
Frank K	Lu	Tuesday, October 02, 2018	TM6	DSCC2018-9055
Lu	Lu	Monday, October 01, 2018	ME3	DSCC2018-9133
Greg R.	Luecke	Wednesday, October 03, 2018	WA6	DSCC2018-9102
Cody Lee	Lundberg	Tuesday, October 02, 2018	TM5	DSCC2018-9248
Guoqi	Ma	Monday, October 01, 2018	MA5	DSCC2018-9146
Ou	Ma	Wednesday, October 03, 2018	WA1	DSCC2018-9027
Wei	Ma	Monday, October 01, 2018	MA4	DSCC2018-9167
Miles	Mabey	Wednesday, October 03, 2018	WA2	DSCC2018-9244
Aqeel	Madhag	Monday, October 01, 2018	ME4	DSCC2018-8992
Mukesh	Madhewar	Monday, October 01, 2018	MM6	DSCC2018-8939
S. Nima	Mahmoodi	Tuesday, October 02, 2018	TM4	DSCC2018-9214
Anson	Maitland	Monday, October 01, 2018	MA2	DSCC2018-9224
SAYANI	MAITY	Wednesday, October 03, 2018	WA6	DSCC2018-9102
Giorgos	Mamakoukas	Monday, October 01, 2018	MA2	DSCC2018-9179
Satyanarayana Gupta	Manyam	Monday, October 01, 2018	ME3	DSCC2018-8950
Mohammad	Maroufi	Tuesday, October 02, 2018	TA4	DSCC2018-9049
Zach	Marr	Wednesday, October 03, 2018	WA6	DSCC2018-8913
Dillon	Martin	Tuesday, October 02, 2018	TE3	DSCC2018-9157
Stephen	Mascaro	Tuesday, October 02, 2018	TA5	DSCC2018-9097
Stephen	Mascaro	Tuesday, October 02, 2018	TA5	DSCC2018-9122
Frank	Mathis	Monday, October 01, 2018	MM5	DSCC2018-8975
Dimitri	Mavris	Monday, October 01, 2018	ME2	DSCC2018-8997
Michaelle	Mayalu	Tuesday, October 02, 2018	TA6	DSCC2018-9164
Anirban	Mazumdar	Monday, October 01, 2018	ME6	DSCC2018-9141
John	McCormack	Monday, October 01, 2018	WA3	DSCC2018-9078
Craig G.	McDonald	Tuesday, October 02, 2018	TM5	DSCC2018-8963
Kevin	McFall	Tuesday, October 02, 2018	TA2	DSCC2018-8943
John	McPhee	Monday, October 01, 2018	MA2	DSCC2018-9224
Julien	Meaud	Monday, October 01, 2018	MA6	DSCC2018-9044
Amin	Mehrvarz	Monday, October 01, 2018	ME2	DSCC2018-9048
Amin	Mehrvarz	Tuesday, October 02, 2018	TM4	DSCC2018-9050
Waiman	Meinhold	Tuesday, October 02, 2018	TA6	DSCC2018-9246
Yifan	Men	Monday, October 01, 2018	MA1	DSCC2018-9134
Sayed	Metwalli	Tuesday, October 02, 2018	TA3	DSCC2018-9032
Patrick	Meyer	Monday, October 01, 2018	ME2	DSCC2018-8997
Pierre-Jean	Meyer	Tuesday, October 02, 2018	TM5	DSCC2018-9066
James B.	Michael	Monday, October 01, 2018	MM6	DSCC2018-9208
Panagiotis	Michaleris	Wednesday, October 03, 2018	WA3	DSCC2018-8973

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Marko	Mihalec	Wednesday, October 03, 2018	WA5	DSCC2018-9200
Marko	Mihalec	Monday, October 01, 2018	ME6	DSCC2018-9203
Milos	Milacic	Monday, October 01, 2018	MM1	DSCC2018-8995
Milos	Milanovic	Tuesday, October 02, 2018	TM3	DSCC2018-9225
Samuel	Miller	Tuesday, October 02, 2018	TE2	DSCC2018-9074
Shatadal	Mishra	Monday, October 01, 2018	ME3	DSCC2018-9107
Wesley	Mitchell	Wednesday, October 03, 2018	WA3	DSCC2018-9058
Saleh	Mobayen	Monday, October 01, 2018	MM5	DSCC2018-8945
Alireza	Mohammadi	Monday, October 01, 2018	MA6	DSCC2018-9061
Amit	Mohanty	Monday, October 01, 2018	MM1	DSCC2018-8974
S. O. Reza	Moheimani	Tuesday, October 02, 2018	TA4	DSCC2018-9049
Suhas	Mohite	Monday, October 01, 2018	MM6	DSCC2018-8939
Suhas	Mohite	Tuesday, October 02, 2018	TE4	DSCC2018-8964
Jason	Moore	Monday, October 01, 2018	MM3	DSCC2018-9228
Michael	Moore	Wednesday, October 03, 2018	WA4	DSCC2018-9213
Skyler	Moore	Wednesday, October 03, 2018	WA2	DSCC2018-9244
Nick	Moser	Tuesday, October 02, 2018	TM5	DSCC2018-8963
Fuzhao	Mou	Tuesday, October 02, 2018	TM3	DSCC2018-9233
Mark W.	Mueller	Monday, October 01, 2018	ME3	DSCC2018-9079
Michael	Muglia	Tuesday, October 02, 2018	TM3	DSCC2018-9190
Ranjan	Mukherjee	Monday, October 01, 2018	MM5	DSCC2018-8975
Ranjan	Mukherjee	Monday, October 01, 2018	MM4	DSCC2018-8994
Keerthana	Murali	Monday, October 01, 2018	ME6	DSCC2018-9222
Todd	Murphey	Monday, October 01, 2018	MA2	DSCC2018-9179
Ayman A.	Nada	Monday, October 01, 2018	MM2	DSCC2018-9108
William S.	Nagel	Wednesday, October 03, 2018	WA2	DSCC2018-9229
Mark	Nagurka	Monday, October 01, 2018	MM6	DSCC2018-9186
Kayvan	Najarian	Tuesday, October 02, 2018	TA6	DSCC2018-9063
Octavio	Narvaez-Aroche	Tuesday, October 02, 2018	TM5	DSCC2018-9066
Peiman	Naseradinmousavi	Tuesday, October 02, 2018	TA5	DSCC2018-9101
Peiman	Naseradinmousavi	Tuesday, October 02, 2018	TA4	DSCC2018-9093
Austin	Nash	Tuesday, October 02, 2018	TA3	DSCC2018-9056
Abdalla R.	Nassar	Wednesday, October 03, 2018	WA3	DSCC2018-9058
Ryan	Newendyke	Monday, October 01, 2018	MM4	DSCC2018-8953
Jonathan	Nikolaidis	Wednesday, October 03, 2018	WA2	DSCC2018-9169
Nastaran	Nikooienejad	Tuesday, October 02, 2018	TA4	DSCC2018-9049
Shahin	Nudehi	Monday, October 01, 2018	MM4	DSCC2018-8953
Tsukasa	Ogasawara	Monday, October 01, 2018	ME2	DSCC2018-9022
Donatus	Oguamanam	Tuesday, October 02, 2018	TM4	DSCC2018-9015
Atsushi	Okabe	Monday, October 01, 2018	ME6	DSCC2018-9222
Chinedum	Okwudire	Wednesday, October 03, 2018	WA5	DSCC2018-9196
Kenn	Oldham	Tuesday, October 02, 2018	TM6	DSCC2018-9060
Kenn	Oldham	Tuesday, October 02, 2018	TA6	DSCC2018-9063
Matt	Olson	Monday, October 01, 2018	MM6	DSCC2018-8968

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Marcia K.	O'Malley	Tuesday, October 02, 2018	TM5	DSCC2018-8963
Simona	Onori	Tuesday, October 02, 2018	TA1	DSCC2018-9160
Saeed	Onsorynezhad	Tuesday, October 02, 2018	TE3	DSCC2018-9173
Pradeep Sharma	Oruganti	Monday, October 01, 2018	MA1	DSCC2018-9043
Junya	Ota	Tuesday, October 02, 2018	TM1	DSCC2018-8965
Andrew	Packard	Tuesday, October 02, 2018	TM5	DSCC2018-9066
Prabhakar R.	Pagilla	Monday, October 01, 2018	MA5	DSCC2018-9146
Yu	Pan	Tuesday, October 02, 2018	TM4	DSCC2018-9202
Yunpeng	Pan	Monday, October 01, 2018	MM6	DSCC2018-8968
Herschel C.	Pangborn	Tuesday, October 02, 2018	TE6	DSCC2018-9215
Saroj Kumar	Panigrahi	Monday, October 01, 2018	ME5	DSCC2018-9181
Meghashyam	Panyam	Tuesday, October 02, 2018	TA2	DSCC2018-9100
James	Parks	Tuesday, October 02, 2018	TA1	DSCC2018-9241
James	Parks	Monday, October 01, 2018	MA1	DSCC2018-9062
Pushparaj Mani	Pathak	Monday, October 01, 2018	ME5	DSCC2018-9181
Cheng	Peng	Monday, October 01, 2018	MM3	DSCC2018-9249
S°ren	Petersen	Monday, October 01, 2018	ME3	DSCC2018-9123
Tomasz	Piatkowski	Wednesday, October 03, 2018	WA6	DSCC2018-8928
Srikanth	Pilla	Wednesday, October 03, 2018	WA3	DSCC2018-9114
Pierluigi	Pisu	Tuesday, October 02, 2018	TE6	DSCC2018-9119
Beau	Pollard	Monday, October 01, 2018	MM5	DSCC2018-9016
Panagiotis	Polygerinos	Monday, October 01, 2018	ME3	DSCC2018-9107
ValΘrie	Pommier-Budinger	Monday, October 01, 2018	ME4	DSCC2018-8918
Dario	Pompili	Wednesday, October 03, 2018	WA5	DSCC2018-9200
Dan O.	Popa	Tuesday, October 02, 2018	TM5	DSCC2018-9248
Daniel A.	Porter	Monday, October 01, 2018	ME6	DSCC2018-9227
Roshan	Pradhan	Tuesday, October 02, 2018	TE1	DSCC2018-9130
Vitaly Y.,	Prikhodko	Tuesday, October 02, 2018	TA1	DSCC2018-9241
Vitaly Y.,	Prikhodko	Monday, October 01, 2018	MA1	DSCC2018-9062
Yingxin	Qiu	Monday, October 01, 2018	ME6	DSCC2018-9222
Verica	Radisavljevic-Gajic	Tuesday, October 02, 2018	TM3	DSCC2018-9225
Mohammadreza	Radmanesh	Monday, October 01, 2018	ME3	DSCC2018-9137
Sunil Kumar	Rajendran	Monday, October 01, 2018	ME5	DSCC2018-8977
Sunil Kumar	Rajendran	Tuesday, October 02, 2018	TA5	DSCC2018-9209
Pongsathorn	Raksincharoensak	Tuesday, October 02, 2018	TE1	DSCC2018-8907
Subramanian	Ramakrishnan	Wednesday, October 03, 2018	WA4	DSCC2018-9216
Keval	Ramani	Wednesday, October 03, 2018	WA5	DSCC2018-9196
Praveen	Ramaprabhu	Tuesday, October 02, 2018	TM3	DSCC2018-9190
Hossein	Rastgoftar	Monday, October 01, 2018	ME2	DSCC2018-9009
Sivakumar	Rathinam	Monday, October 01, 2018	ME2	DSCC2018-8949
Peyman	Razi	Tuesday, October 02, 2018	TM3	DSCC2018-9190
Meysam	Razmara	Tuesday, October 02, 2018	TA3	DSCC2018-9131
Rebecca	Reck	Wednesday, October 03, 2018	WA6	DSCC2018-9158
Chethan	Reddy	Tuesday, October 02, 2018	TA3	DSCC2018-9131

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Brad	Rees	Wednesday, October 03, 2018	WA3	DSCC2018-9028
Hailin	Ren	Tuesday, October 02, 2018	TE5	DSCC2018-9007
Juan	Ren	Monday, October 01, 2018	MA6	DSCC2018-9180
Zhongqiang	Ren	Monday, October 01, 2018	MA2	DSCC2018-9144
Edward W.	Reutzel	Wednesday, October 03, 2018	WA3	DSCC2018-9058
Christopher	Reyes	Tuesday, October 02, 2018	TM4	DSCC2018-9012
Edmond	Richer	Monday, October 01, 2018	ME6	DSCC2018-9227
Hanz	Richter	Monday, October 01, 2018	MM5	DSCC2018-8945
Hanz	Richter	Monday, October 01, 2018	ME5	DSCC2018-8972
Hanz	Richter	Tuesday, October 02, 2018	TE2	DSCC2018-9054
Hanz	Richter	Tuesday, October 02, 2018	TE5	DSCC2018-9091
Denise	Rizzo	Monday, October 01, 2018	ME1	DSCC2018-9138
Giorgio	Rizzoni	Monday, October 01, 2018	MA1	DSCC2018-9043
Giorgio	Rizzoni	Monday, October 01, 2018	MM1	DSCC2018-9116
Sam	Roach	Tuesday, October 02, 2018	TA2	DSCC2018-9100
Rush	Robinett III	Tuesday, October 02, 2018	TA3	DSCC2018-9131
Julie	Rocho-Levine	Wednesday, October 03, 2018	WA4	DSCC2018-9213
Eric	Rogers	Wednesday, October 03, 2018	WA5	DSCC2018-8987
Courtney	Rouse	Tuesday, October 02, 2018	TM5	DSCC2018-8989
Courtney	Rouse	Tuesday, October 02, 2018	TE5	DSCC2018-9083
Subhradeep	Roy	Monday, October 01, 2018	MA5	DSCC2018-9139
Caleb	Rucker	Tuesday, October 02, 2018	TA5	DSCC2018-9112
Nader	Sadegh	Monday, October 01, 2018	MA2	DSCC2018-9176
Sahand	Sadeghi	Monday, October 01, 2018	ME5	DSCC2018-8969
Smita	Sadhu	Wednesday, October 03, 2018	WA1	DSCC2018-8917
Behzad	Sadrfaridpour	Monday, October 01, 2018	ME5	DSCC2018-9170
Homagni	Saha	Monday, October 01, 2018	MM2	DSCC2018-9096
Rasoul	Salehi	Tuesday, October 02, 2018	TA1	DSCC2018-9178
Timothy	Salsbury	Tuesday, October 02, 2018	TM6	DSCC2018-8916
Biswanath	Samanta	Monday, October 01, 2018	MM6	DSCC2018-9234
Sean	Sanchez	Monday, October 01, 2018	WA3	DSCC2018-9140
John W.	Sanders	Tuesday, October 02, 2018	TE4	DSCC2018-8906
Francesco	Sanfedino	Monday, October 01, 2018	ME4	DSCC2018-8918
Jagannathan	Sarangapani	Wednesday, October 03, 2018	WA1	DSCC2018-9103
Yousef	Sardahi	Monday, October 01, 2018	MM4	DSCC2018-8935
Yousef	Sardahi	Tuesday, October 02, 2018	TA4	DSCC2018-9011
Soumik	Sarkar	Monday, October 01, 2018	MM6	DSCC2018-9208
Soumik	Sarkar	Monday, October 01, 2018	MM2	DSCC2018-9096
Anoop	Sathyan	Wednesday, October 03, 2018	WA1	DSCC2018-9027
Vishram	Sawant	Monday, October 01, 2018	MM6	DSCC2018-8939
David	Schoenwald	Tuesday, October 02, 2018	TE6	DSCC2018-9119
Todd	Schweisinger	Wednesday, October 03, 2018	WA2	DSCC2018-9150
Bijo	Sebastian	Tuesday, October 02, 2018	TM5	DSCC2018-9004
Pierre	Sebastian	Monday, October 01, 2018	MM6	DSCC2018-8968

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Abdennour	Seibi	Monday, October 01, 2018	ME4	DSCC2018-8902
Samuel	Seifert	Monday, October 01, 2018	ME2	DSCC2018-8997
Jinwoo	Seok	Tuesday, October 02, 2018	TM1	DSCC2018-8980
Hakki Erhan	Sevil	Tuesday, October 02, 2018	TM5	DSCC2018-9248
Prateek	Shah	Wednesday, October 03, 2018	WA5	DSCC2018-9094
Mahdi	Shahbakhti	Tuesday, October 02, 2018	TA3	DSCC2018-9131
Mohamed	Shaltout	Tuesday, October 02, 2018	TA3	DSCC2018-9032
Yunli	Shao	Tuesday, October 02, 2018	TE1	DSCC2018-9059
Rajnikant	Sharma	Monday, October 01, 2018	ME2	DSCC2018-8949
Ryan	Shaw	Monday, October 01, 2018	WA3	DSCC2018-9080
Yu	She	Tuesday, October 02, 2018	TM4	DSCC2018-9006
Colin	Shea-Blymyer	Monday, October 01, 2018	MA5	DSCC2018-9139
Tao	Shen	Tuesday, October 02, 2018	TE5	DSCC2018-9223
Xiangrong	Shen	Tuesday, October 02, 2018	TE5	DSCC2018-9223
Xiangrong	Shen	Tuesday, October 02, 2018	TE5	DSCC2018-9242
Jeongsik	Shin	Tuesday, October 02, 2018	TM5	DSCC2018-9248
Masoud Jahromi	Shirazi	Monday, October 01, 2018	MA5	DSCC2018-9232
K. Alex	Shorter	Wednesday, October 03, 2018	WA4	DSCC2018-9213
Amit	Shukla	Tuesday, October 02, 2018	TA6	DSCC2018-9111
Jason	Siegel	Tuesday, October 02, 2018	TM6	DSCC2018-9014
Jason	Siegel	Monday, October 01, 2018	ME1	DSCC2018-9138
Jason	Siegel	Tuesday, October 02, 2018	TA3	DSCC2018-9086
Daniel	Simon	Monday, October 01, 2018	MM5	DSCC2018-8945
Daniel	Simon	Tuesday, October 02, 2018	TE5	DSCC2018-9091
Daniel	Simon	Wednesday, October 03, 2018	WA4	DSCC2018-9010
Arti	Singh	Monday, October 01, 2018	MM2	DSCC2018-9096
Asheesh	Singh	Monday, October 01, 2018	MM2	DSCC2018-9096
William	Singhose	Monday, October 01, 2018	ME4	DSCC2018-8967
John R.	Singler	Tuesday, October 02, 2018	TM2	DSCC2018-8959
Jonathon	Slightam	Monday, October 01, 2018	MM6	DSCC2018-9186
Siyang	Song	Tuesday, October 02, 2018	TM4	DSCC2018-9006
Steven	Spencer	Monday, October 01, 2018	ME6	DSCC2018-9141
Siddharth	Sridhar	Monday, October 01, 2018	MM3	DSCC2018-9199
Siddharth	Sridhar	Monday, October 01, 2018	MM3	DSCC2018-9197
Srivatsan	Srinivasan	Monday, October 01, 2018	ME1	DSCC2018-9126
Anna	Stefanopoulou	Tuesday, October 02, 2018	TA1	DSCC2018-9178
Anna	Stefanopoulou	Tuesday, October 02, 2018	TM6	DSCC2018-9014
Anna	Stefanopoulou	Tuesday, October 02, 2018	TA3	DSCC2018-9086
Gabor	Stepan	Tuesday, October 02, 2018	TA2	DSCC2018-9030
Dakota	Strange	Monday, October 01, 2018	MA1	DSCC2018-9062
Hai-Jun	Su	Tuesday, October 02, 2018	TM4	DSCC2018-9006
Senbagaraman	Sudarsanam	Monday, October 01, 2018	MM2	DSCC2018-9013
Jing	Sun	Monday, October 01, 2018	MM1	DSCC2018-8995
Liting	Sun	Monday, October 01, 2018	MM3	DSCC2018-9249

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Zongxuan	Sun	Tuesday, October 02, 2018	TA1	DSCC2018-9184
Zongxuan	Sun	Tuesday, October 02, 2018	TE1	DSCC2018-9059
Zongxuan	Sun	Monday, October 01, 2018	MA1	DSCC2018-9057
Kaarthik	Sundar	Monday, October 01, 2018	ME2	DSCC2018-8949
Reza	Tafreshi	Tuesday, October 02, 2018	TM2	DSCC2018-9038
Wei Che	Tai	Tuesday, October 02, 2018	TE3	DSCC2018-9152
Jun	Takamatsu	Monday, October 01, 2018	ME2	DSCC2018-9022
Kentaro	Takemura	Monday, October 01, 2018	MA4	DSCC2018-9155
Phanindra	Tallapragada	Monday, October 01, 2018	MM5	DSCC2018-9016
Phanindra	Tallapragada	Monday, October 01, 2018	MM2	DSCC2018-9013
Phanindra	Tallapragada	Monday, October 01, 2018	ME5	DSCC2018-8969
Xiaobo	Tan	Monday, October 01, 2018	MA2	DSCC2018-9179
Xiaobo	Tan	Tuesday, October 02, 2018	TE2	DSCC2018-9082
Jiong	Tang	Tuesday, October 02, 2018	TE3	DSCC2018-9089
Pamela	Tannous	Tuesday, October 02, 2018	TE6	DSCC2018-9132
Kendall	Teichert	Tuesday, October 02, 2018	TM6	DSCC2018-9060
Ayse	Tekes	Tuesday, October 02, 2018	TA2	DSCC2018-8943
Ayse	Tekes	Tuesday, October 02, 2018	TM2	DSCC2018-8944
Ayse	Tekes	Wednesday, October 03, 2018	WA6	DSCC2018-8913
Ozan	Temiz	Monday, October 01, 2018	MM1	DSCC2018-8976
Carly	Thalman	Monday, October 01, 2018	ME3	DSCC2018-9107
Saroj	Thapa	Tuesday, October 02, 2018	TE5	DSCC2018-9242
May-Win	Thein	Monday, October 01, 2018	WA3	DSCC2018-9078
Evangelos	Theodorou	Monday, October 01, 2018	MM6	DSCC2018-8968
Evangelos A.	Theodorou	Monday, October 01, 2018	ME2	DSCC2018-8997
Chong	Tian	Wednesday, October 03, 2018	WA6	DSCC2018-8913
Elena	Tolkacheva	Tuesday, October 02, 2018	TA6	DSCC2018-9071
Masayoshi	Tomizuka	Monday, October 01, 2018	MM3	DSCC2018-9249
Mohamed	Toub	Tuesday, October 02, 2018	TA3	DSCC2018-9131
Matthew	Travers	Tuesday, October 02, 2018	TA4	DSCC2018-9037
Abhinav	Tripathi	Tuesday, October 02, 2018	TA1	DSCC2018-9184
Zhiwen	Tu	Tuesday, October 02, 2018	TM4	DSCC2018-9202
Rajat	Tyagi	Tuesday, October 02, 2018	TA5	DSCC2018-9122
Jun	Ueda	Monday, October 01, 2018	MA4	DSCC2018-9155
Jun	Ueda	Monday, October 01, 2018	ME6	DSCC2018-9222
Jun	Ueda	Tuesday, October 02, 2018	TA6	DSCC2018-9246
Heshan	Unamboowe	Tuesday, October 02, 2018	TA6	DSCC2018-9111
Devesh	Upadhyay	Monday, October 01, 2018	MA1	DSCC2018-9134
Ardalan	Vahidi	Tuesday, October 02, 2018	TM1	DSCC2018-9189
Ardalan	Vahidi	Monday, October 01, 2018	MM1	DSCC2018-9177
Kevin	Van Der Horn	Wednesday, October 03, 2018	WA6	DSCC2018-8913
Teja	Vanteddu	Tuesday, October 02, 2018	TM5	DSCC2018-9004
Vladimir	Vantsevich	Tuesday, October 02, 2018	TM1	DSCC2018-9026
Christopher	Vermillion	Tuesday, October 02, 2018	TM3	DSCC2018-9190

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Mate Benjamin	Vizi	Tuesday, October 02, 2018	TA2	DSCC2018-9030
Karl D.	von Ellenrieder	Monday, October 01, 2018	ME5	DSCC2018-9194
Alexander	Von Moll	Monday, October 01, 2018	ME3	DSCC2018-8950
Tomas	Vyhlidal	Tuesday, October 02, 2018	TA4	DSCC2018-9052
John	Wagner	Wednesday, October 03, 2018	WA2	DSCC2018-9150
Amy	Wagoner Johnson	Wednesday, October 03, 2018	WA3	DSCC2018-9145
Bingheng	Wang	Wednesday, October 03, 2018	WA5	DSCC2018-9200
Bingyu	Wang	Monday, October 01, 2018	ME2	DSCC2018-8949
Cong	Wang	Monday, October 01, 2018	ME3	DSCC2018-9133
Fengchen	Wang	Monday, October 01, 2018	MM1	DSCC2018-9166
Fengxia	Wang	Tuesday, October 02, 2018	TE3	DSCC2018-9173
Jiamin	Wang	Tuesday, October 02, 2018	TA2	DSCC2018-9000
Jing	Wang	Tuesday, October 02, 2018	TM1	DSCC2018-8957
Jingren	Wang	Monday, October 01, 2018	MA6	DSCC2018-9156
Junmin	Wang	Monday, October 01, 2018	ME1	DSCC2018-9129
Junmin	Wang	Tuesday, October 02, 2018	TM4	DSCC2018-9006
Lu	Wang	Tuesday, October 02, 2018	TA6	DSCC2018-9063
Qian	Wang	Wednesday, October 03, 2018	WA3	DSCC2018-8973
Qian	Wang	Wednesday, October 03, 2018	WA3	DSCC2018-9058
Shenghai	Wang	Monday, October 01, 2018	ME4	DSCC2018-8967
Weitian	Wang	Wednesday, October 03, 2018	WA3	DSCC2018-9245
Weitian	Wang	Monday, October 01, 2018	ME1	DSCC2018-9126
Wenyi	Wang	Tuesday, October 02, 2018	TA3	DSCC2018-9240
Xiaorui	Wang	Monday, October 01, 2018	ME1	DSCC2018-9129
Xin	Wang	Monday, October 01, 2018	MM3	DSCC2018-9095
Xin	Wang	Wednesday, October 03, 2018	WA4	DSCC2018-8932
Xinran	Wang	Tuesday, October 02, 2018	TE5	DSCC2018-9007
Xuefeng	Wang	Tuesday, October 02, 2018	TE4	DSCC2018-8933
Yan	Wang	Tuesday, October 02, 2018	TM1	DSCC2018-8957
Yan	Wang	Tuesday, October 02, 2018	TM1	DSCC2018-8980
Yingxu	Wang	Monday, October 01, 2018	MM4	DSCC2018-8994
Yue	Wang	Monday, October 01, 2018	MA2	DSCC2018-9174
Yue	Wang	Monday, October 01, 2018	MA5	DSCC2018-9161
Yue	Wang	Monday, October 01, 2018	ME5	DSCC2018-9170
Yue Yun	Wang	Monday, October 01, 2018	MA4	DSCC2018-9045
Zejiang	Wang	Monday, October 01, 2018	ME1	DSCC2018-9129
Kevin	Ward	Tuesday, October 02, 2018	TA6	DSCC2018-9063
Holly	Warner	Tuesday, October 02, 2018	TE5	DSCC2018-9091
Qi	Wei	Tuesday, October 02, 2018	TA5	DSCC2018-9209
Nathan	Weir	Monday, October 01, 2018	MA4	DSCC2018-9182
Alan	Whitman	Monday, October 01, 2018	MM3	DSCC2018-9053
Julian	Whitman	Monday, October 01, 2018	MA2	DSCC2018-9144
Ryder	Winck	Monday, October 01, 2018	MM2	DSCC2018-9115
Kelilah	Wolkowicz	Monday, October 01, 2018	WA3	DSCC2018-9231

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Kelilah	Wolkowicz	Monday, October 01, 2018	MM3	DSCC2018-9228
Miroslaw	Wolski	Wednesday, October 03, 2018	WA6	DSCC2018-8928
Franklin	Woods	Tuesday, October 02, 2018	TA2	DSCC2018-8943
Matthew A.	Wright	Monday, October 01, 2018	ME1	DSCC2018-9125
Fen	Wu	Monday, October 01, 2018	MA5	DSCC2018-9003
Fen	Wu	Monday, October 01, 2018	MM4	DSCC2018-8996
Kai	Wu	Monday, October 01, 2018	MM1	DSCC2018-8995
Teng	Wu	Tuesday, October 02, 2018	TA3	DSCC2018-9235
Zhongyou	Wu	Tuesday, October 02, 2018	TE4	DSCC2018-9084
Hui	Xiao	Monday, October 01, 2018	MA4	DSCC2018-9088
Qiuchi	Xiong	Tuesday, October 02, 2018	TE3	DSCC2018-9157
Hongru	Xu	Tuesday, October 02, 2018	TM6	DSCC2018-9163
Xiaotian	Xu	Tuesday, October 02, 2018	TA4	DSCC2018-9011
Yong	Xu	Tuesday, October 02, 2018	TM4	DSCC2018-9202
Yunjun	Xu	Monday, October 01, 2018	WA3	DSCC2018-9039
Yunjun	Xu	Monday, October 01, 2018	MM5	DSCC2018-9034
Yunjun	Xu	Monday, October 01, 2018	MM2	DSCC2018-9042
Yunjun	Xu	Monday, October 01, 2018	ME2	DSCC2018-9040
Manisha	Yadav	Tuesday, October 02, 2018	TE4	DSCC2018-8964
Dangli	Yang	Monday, October 01, 2018	ME3	DSCC2018-9107
Kuo	Yang	Tuesday, October 02, 2018	TA1	DSCC2018-9072
Yujia	Yang	Monday, October 01, 2018	ME4	DSCC2018-8967
Demetri	Yannopoulos	Monday, October 01, 2018	MM6	DSCC2018-8968
Bin	Yao	Wednesday, October 03, 2018	WA1	DSCC2018-9168
Jie	Yao	Wednesday, October 03, 2018	WA1	DSCC2018-9103
Edwin	Yaz	Wednesday, October 03, 2018	WA4	DSCC2018-8932
Cang	Ye	Tuesday, October 02, 2018	TE5	DSCC2018-9223
Jingang	Yi	Wednesday, October 03, 2018	WA5	DSCC2018-9200
Jingang	Yi	Monday, October 01, 2018	ME6	DSCC2018-9203
Xiongfeng	Yi	Tuesday, October 02, 2018	TE1	DSCC2018-9162
Yildiray	Yildiz	Monday, October 01, 2018	MM1	DSCC2018-8976
Atsushi	Yokoyama	Tuesday, October 02, 2018	TE1	DSCC2018-8907
Sanghoon	Yoo	Tuesday, October 02, 2018	TM1	DSCC2018-8931
Naoto	Yoshikawa	Tuesday, October 02, 2018	TE1	DSCC2018-8907
Daiki	Yoshioka	Monday, October 01, 2018	ME2	DSCC2018-9022
Aaron J.	Young	Monday, October 01, 2018	MM6	DSCC2018-9226
Aaron J.	Young	Tuesday, October 02, 2018	TA2	DSCC2018-9206
Aaron J.	Young	Monday, October 01, 2018	ME6	DSCC2018-9198
Aaron J.	Young	Monday, October 01, 2018	ME6	DSCC2018-9218
Louay S.	Yousuf	Tuesday, October 02, 2018	TE2	DSCC2018-8901
Huan	Yu	Tuesday, October 02, 2018	TE1	DSCC2018-9239
Chengzhi	Yuan	Monday, October 01, 2018	MA5	DSCC2018-9003
Mingxing	Yuan	Wednesday, October 03, 2018	WA1	DSCC2018-9168
Tansel	Yucelen	Tuesday, October 02, 2018	TM2	DSCC2018-8959

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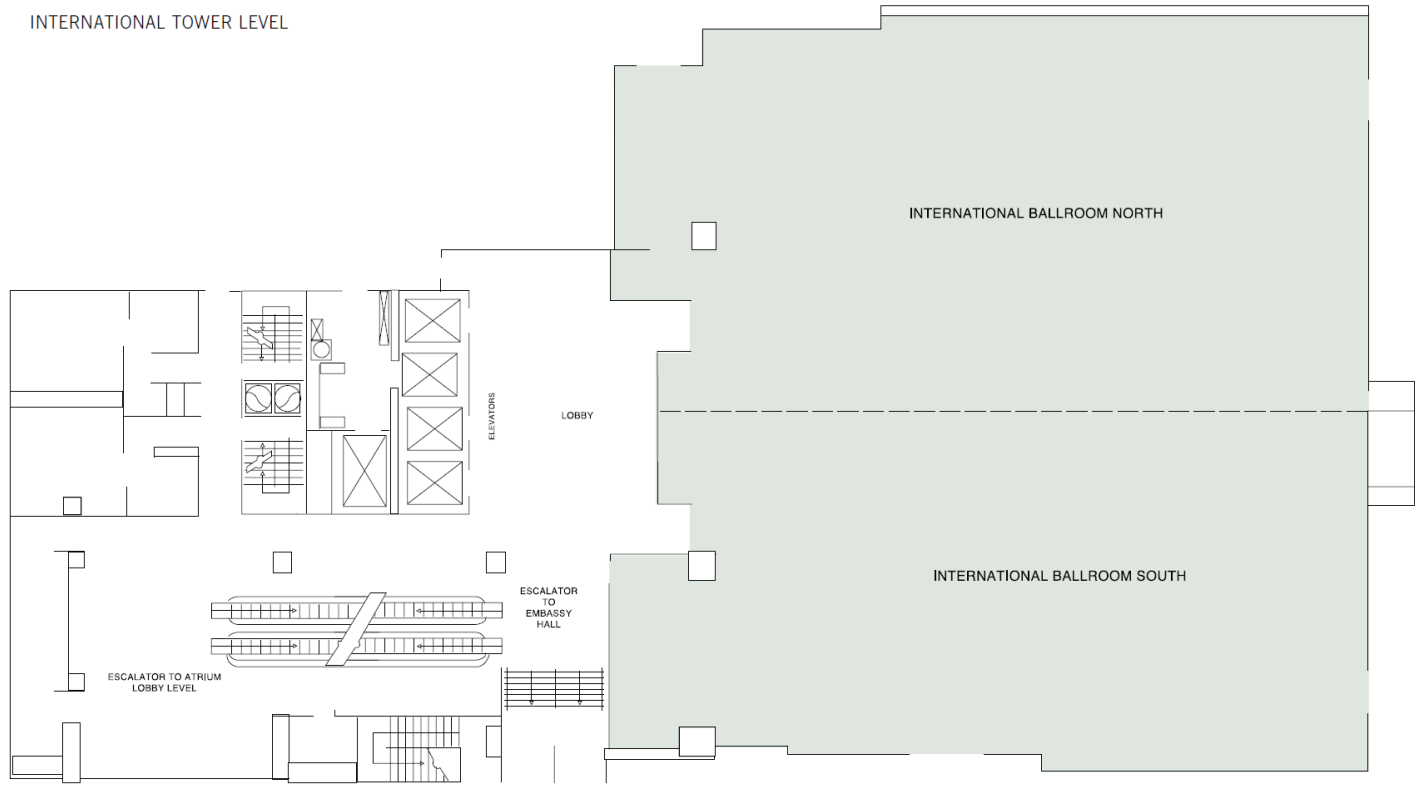
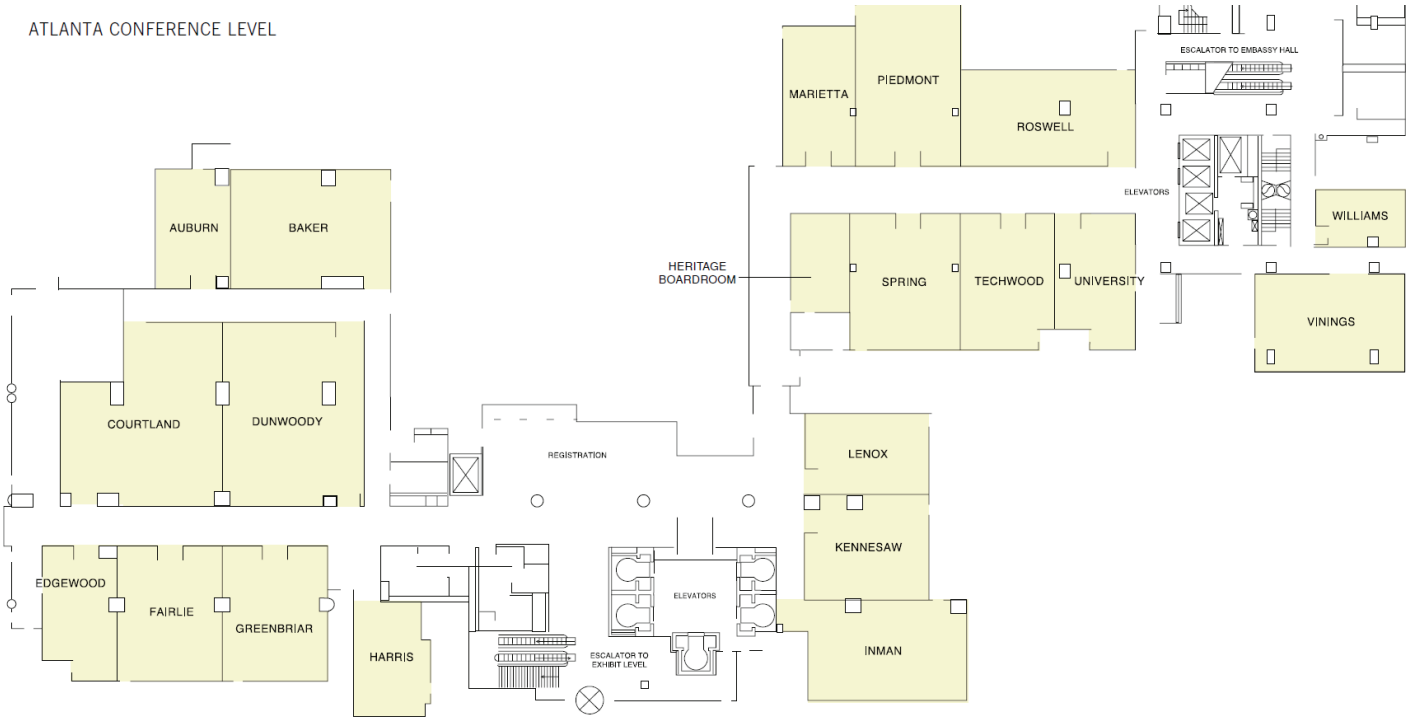
Tansel	Yucelen	Wednesday, October 03, 2018	WA1	DSCC2018-9103
Amir Hosein	Zamanian	Monday, October 01, 2018	ME6	DSCC2018-9227
Timothy	Zange	Monday, October 01, 2018	MM4	DSCC2018-8953
Federico	Zegers	Tuesday, October 02, 2018	TM2	DSCC2018-8954
Tao	Zeng	Monday, October 01, 2018	MA1	DSCC2018-9134
Xiangrui	Zeng	Monday, October 01, 2018	MM1	DSCC2018-8974
Wei	Zhan	Monday, October 01, 2018	MM3	DSCC2018-9249
Chen	Zhang	Tuesday, October 02, 2018	TA1	DSCC2018-9184
Chen	Zhang	Monday, October 01, 2018	MA1	DSCC2018-9057
Ding	Zhang	Wednesday, October 03, 2018	WA4	DSCC2018-9213
Feitian	Zhang	Monday, October 01, 2018	ME5	DSCC2018-8977
Feitian	Zhang	Tuesday, October 02, 2018	TA5	DSCC2018-9209
Feitian	Zhang	Tuesday, October 02, 2018	TA5	DSCC2018-9113
Haijie	Zhang	Wednesday, October 03, 2018	WA4	DSCC2018-9210
He	Zhang	Tuesday, October 02, 2018	TE5	DSCC2018-9223
Hongyang	Zhang	Monday, October 01, 2018	MM4	DSCC2018-8996
Jiaoping	Zhang	Monday, October 01, 2018	MM2	DSCC2018-9096
Wenlong	Zhang	Wednesday, October 03, 2018	WA2	DSCC2018-9244
Wenlong	Zhang	Monday, October 01, 2018	ME3	DSCC2018-9107
Jianguo	Zhao	Wednesday, October 03, 2018	WA4	DSCC2018-9210
Xiaopeng	Zhao	Tuesday, October 02, 2018	TA6	DSCC2018-9071
Yue	Zhao	Tuesday, October 02, 2018	TE6	DSCC2018-9159
Chenyu	Zheng	Tuesday, October 02, 2018	TA4	DSCC2018-9011
Hao	Zheng	Tuesday, October 02, 2018	TE5	DSCC2018-9242
Huanfei	Zheng	Monday, October 01, 2018	MA5	DSCC2018-9161
Minghui	Zheng	Tuesday, October 02, 2018	TA3	DSCC2018-9235
Fenglin	Zhou	Tuesday, October 02, 2018	TA3	DSCC2018-9240
Guoming	Zhu	Monday, October 01, 2018	MM4	DSCC2018-8994
Guoming	Zhu	Monday, October 01, 2018	ME4	DSCC2018-8992
Guoming	Zhu	Monday, October 01, 2018	MA1	DSCC2018-8988
Guoming	Zhu	Monday, October 01, 2018	MA1	DSCC2018-9134
J.Jim	Zhu	Monday, October 01, 2018	MA2	DSCC2018-9195
J.Jim	Zhu	Monday, October 01, 2018	WA3	DSCC2018-9148
Weidong	Zhu	Tuesday, October 02, 2018	TE4	DSCC2018-8933
Qingze	Zou	Monday, October 01, 2018	MA6	DSCC2018-9156
Rui	Zou	Monday, October 01, 2018	MM2	DSCC2018-9127
Lei	Zuo	Tuesday, October 02, 2018	TM4	DSCC2018-9202
Lei	Zuo	Tuesday, October 02, 2018	TE3	DSCC2018-9152
Lei	Zuo	Tuesday, October 02, 2018	TE3	DSCC2018-9187
Lei	Zuo	Tuesday, October 02, 2018	TE3	DSCC2018-9157
Wenyu	Zuo	Monday, October 01, 2018	MM5	DSCC2018-9064

LOWER LEVEL 1



LOWER LEVEL 3



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2019 DSCC

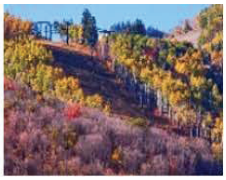
The ASME 2019 Dynamic Systems and Control Conference

(https://www.asme.org/events/dscc)

October 9-11, 2019, Grand Summit Park City, Utah (USA)



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Conference Toolbox Coordinator **Stacey Cooper**, *toolboxhelp@asme.org* **ASME**

The 2019 Dynamic Systems and Control (DSC) Conference will be held on October 9-11, 2019 at the Grand Summit Hotel in Park City, Utah. Park City is a world-class resort town, famous for hosting the Sundance Film Festival and the 2002 Winter Olympics. October is a nice time to visit Park City because it is considered a shoulder season, with temperatures similar to those in the spring and the venue offers very competitive room rates. On behalf of the 2019 DSCC Organization Committee and the Dynamics Systems and Control Division (DSCD) of ASME, we cordinally invite you to enjoy an exciting technical program and a unique opportunity to network.

The DSC conference is the showcase technical forum of the ASME Dynamic Systems and Control Division. It provides a focused and intimate setting for dissemination and discussion of the state of the art in dynamic systems and control research, with a mechanical engineering focus. The 2019 DSC Conference Technical Program will consist of sessions in all of the usual areas of interest to the Division that include, but are not limited to, automotive and transportation systems, bio-systems and health care, energy systems, mechatronics, modeling, identification, intelligent systems, robotics, vibrations, and smart structures. Highlights of the 2019 DSCC will include:

- Four plenary talks given by distinguished scholars, including the Oldenburger Lecture and the Nyquist Lecture.

- Workshops and tutorials that are focused on emerging topics.

- Invited and special sessions on technical tracks and funding programs that are of interest to the DSC community.

- Student programs including Best Student Paper competition, networking with faculty recruiters, and networking with industry.

- Exhibits by industry and academia.

- Extensive networking opportunities during the opening reception, continental breakfasts, the banquet, and the farewell lunch.

All accepted papers must be presented on-site at the conference by an author of the paper. Papers which are not presented (no-shows) will be removed from the official conference proceedings and will not be indexed through the ASME Digital Collection.

Online access to conference papers will be given to all registered attendees at the start of the conference. Following the event, the official proceedings of the conference are published in the ASME Digital Collection, and will be submitted to all major indexers including EI Complex, Scopus, and the ISI Conference Proceedings Citation Index.

ASME
SETTING THE STANDARD

Important Dates (Tentative)

- Submission of contributed and invited papers **- April 1, 2019**
- Notification of acceptance/rejection **- May 27, 2019**
- Submission of final papers **- July 1, 2019**

ASME® 2018 DSCC
Dynamic Systems and Control Conference

See you in 2019!

ASME Dynamic Systems and Control Conference
October 9-11, 2019, Grand Summit Hotel
Park City, Utah

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