

CASE 2022

August 20-24, 2022
Mexico City, Mexico



18th IEEE International Conference on
Automation Science and Engineering

[2022 IEEE 18th International Conference on Automation Science and Engineering.\(CASE\)](#)

August 20-24, 2022, Mexico City, Mexico and Chengdu, China

[Program at a Glance](#) [Saturday](#) [Sunday](#) [Monday](#) [Tuesday](#) [Author Index](#) [Keyword Index](#) [My Program](#)

Last updated on August 27, 2022. This conference program is tentative and subject to change

Technical Program for Monday August 22, 2022

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MoSA Plenary Session, Room T9	Add to My Program <input type="checkbox"/>
Student Activities (Chengdu)	
MoBaC_Br Plenary Session, Ballroom Laska	Add to My Program <input type="checkbox"/>
Conference Banquet (Chengdu)	
MoP1L Plenary Session, Salon Fiestas	Add to My Program <input type="checkbox"/>
Plenary IV	
Chair: Yi, Jingang	Rutgers University
08:00-09:00, Paper MoP1L.1	Add to My Program <input type="checkbox"/>
Evolvable Field-Level Automation Architectures to Leverage AI for Physical Manufacturing and Logistics Systems	
Vogel-Heuser, Birgit	Technical University Munich
MoCo1_Br Plenary Session, Foyer 2nd Floor	Add to My Program <input type="checkbox"/>
Coffee Break 3	
MoIP11 Plenary Session, Imperio A	Add to My Program <input type="checkbox"/>
Industrial Panel 1	
Chair: Ramirez, Antonio	Cinvestav
09:10-10:10, Paper MoIP11.1	Add to My Program <input type="checkbox"/>
Panel Discussion on Artificial Intelligence in the Mexican Industry	
Ramirez, Antonio	Cinvestav
MoAw1H Special Session, Salon Fiestas	Add to My Program <input type="checkbox"/>
Best Healthcare Automation Paper Award Session	
Chair: Li, Jingshan	Tsinghua University
09:10-10:10, Paper MoAw1H.1	Add to My Program <input type="checkbox"/>
A Physiological Status Diagnosis Method Using Tensor-Based Regularization (I)	
An, Yu	Peking University
Chen, Shanen	Peking University
Zhang, Xi	College of Engineering, Peking University
09:10-10:10, Paper MoAw1H.2	Add to My Program <input type="checkbox"/>
Prediction of Diabetic Retinopathy Using Longitudinal Electronic Health Records	
Chen, Suhao	Oklahoma State University
Wang, Zekai	Oklahoma State University
Yao, Bing	Oklahoma State University
Liu, Tieming	Oklahoma State University
09:10-10:10, Paper MoAw1H.3	Add to My Program <input type="checkbox"/>
Generating Counterfactual Explanations for Causal Inference in Breast Cancer Treatment Response (I)	
Zhou, Siqiong	Arizona State University

Pfeiffer, Nicholas	Mayo Clinic Arizona
Islam, Upala	Arizona State University
Banerjee, Imon	Mayo Clinic Arizona
Patel, Bhavika	Mayo Clinic Arizona
Iqbal, Ashif	Arizona State University

MoIP22 Plenary Session, Imperio A Add to My Program

[Industrial Panel 2](#)

Chair: [Burnstein, Jeff](#) Association for Advancing Automation

10:10-11:10, Paper MoIP22.1 Add to My Program

[Trends in Industrial Automation](#)

[Burnstein, Jeff](#) Association for Advancing Automation

MoAw2S Special Session, Salon Fiestas Add to My Program

[Best Student Paper Award Session](#)

Chair: [Dotoli, Mariagrazia](#) Politecnico Di Bari

10:10-10:30, Paper MoAw2S.1 Add to My Program

[Towards Object Agnostic and Robust 4-DoF Table-Top Grasping](#)

Raj, Prem	IIT KANPUR
Kumar, Ashish	Indian Institute of Technology, Kanpur
Sanap, Vipul	TCS
Sandhan, Tushar	Indian Institute of Technology Kanpur
Behera, Laxmidhar	IIT Kanpur

10:30-10:50, Paper MoAw2S.2 Add to My Program

[Robust Physics Guided Data-Driven Fleet Battery Pack Fault Detection under Dynamic Operating Conditions](#)

Peng, Xiaomeng	Northeastern University
Jin, Xiaoning	Northeastern University
Shiming, Duan	General Motors
Sankavaram, Chaitanya	General Motors

10:50-11:10, Paper MoAw2S.3 Add to My Program

[A4T: Hierarchical Affordance Detection for Transparent Objects Depth Reconstruction and Manipulation](#)

Jiang, Jiaqi	King's College London
Cao, Guanqun	University of Liverpool
Do, Thanh-Toan	Monash University
Luo, Shan	King's College London

11:10-11:30, Paper MoAw2S.4 Add to My Program

[3D Pose Identification of Moving Micro and Nanowires in Fluid Suspensions under Bright-Field Microscopy](#)

Song, Jiaxu	Binghamton University
Wu, Juan	Binghamton University
Yu, Kaiyan	Binghamton University

11:30-11:50, Paper MoAw2S.5 Add to My Program

[Optimal Shelf Arrangement to Minimize Robot Retrieval Time](#)

Chen, Lawrence Yunliang	UC Berkeley
Huang, Huang	University of California at Berkeley
Danielczuk, Michael	UC Berkeley
Ichnowski, Jeffrey	UC Berkeley
Goldberg, Ken	UC Berkeley

MoLuM_Br Plenary Session, Bugambillas Add to My Program

[Lunch Break 3](#)

MoAM1 Regular Session, Constitucion A Add to My Program

[Motion and Robot Control 1](#)

Chair: [Dotoli, Mariagrazia](#) Politecnico Di Bari
Co-Chair: [Hajieghrary, Hadi](#) Chalmers University of Technology

13:30-13:50, Paper MoAM1.1	Add to My Program <input type="checkbox"/>
<i>Dual Constraint-Based Controllers for Wheeled Mobile Manipulators</i>	
Caliskan, Umut	Flanders Make
Ulloa Rios, Federico	KU Leuven
Decré, Wilm	Katholieke Universiteit Leuven
Aertbellen, Erwin	KU Leuven
13:50-14:10, Paper MoAM1.2	Add to My Program <input type="checkbox"/>
<i>Bayesian Optimization Based Nonlinear Adaptive PID Design for Robust Control of the Joints at Mobile Manipulators</i>	
Hajieghrary, Hadi	Chalmers University of Technology
Deisenroth, Marc Peter	University College London
Bekiroglu, Yasemin	Chalmers University of Technology
14:10-14:30, Paper MoAM1.3	Add to My Program <input type="checkbox"/>
<i>Observer-Free Output Feedback Tracking Control for Collaborative Robotics</i>	
Alqatamin, Moath	University of Louisville
Taghavi, Nazita	Louisville Automation and Robotics Research Institute, Universit
Das, Sumit Kumar	University of Louisville
Popa, Dan	University of Louisville
14:30-14:50, Paper MoAM1.4	Add to My Program <input type="checkbox"/>
<i>Active Disturbance Rejection Control of a Strongly Nonlinear and Disturbed Piezoelectric Actuator Devoted to Robotic Hand</i>	
Khadraoui, Sofiane	University of Sharjah
Rakotondrabe, Micky	Laboratoire Génie De Production (LGP)
Flores, Gerardo	Center for Research in Optics
14:50-15:10, Paper MoAM1.5	Add to My Program <input type="checkbox"/>
<i>An Adaptive Model Predictive Control Approach for Position Tracking and Force Control of a Hydraulic Actuator</i>	
Bozza, Augusto	Polytechnic of Bari
Askari, Bahman	Politecnico Di Bari
Cavone, Graziana	University of Roma Tre
Carli, Raffaele	Politecnico Di Bari
Dotoli, Mariagrazia	Politecnico Di Bari
15:10-15:30, Paper MoAM1.6	Add to My Program <input type="checkbox"/>
<i>A Detection Strategy for Setpoint Attacks against Differential-Drive Robots (I)</i>	
Cersullo, Mattia	University of Calabria
Tiriolo, Cristian	Concordia University
Franzè, Giuseppe	University of Calabria
Lucia, Walter	Concordia University
MoAM2 Regular Session, Constitution B	Add to My Program <input type="checkbox"/>
Cyber-Physical Production Systems and Industry 4.0 2	
Chair: Chang, Qing	University of Virginia
Co-Chair: Zhou, MengChu	New Jersey Institute of Technology
13:30-13:50, Paper MoAM2.1	Add to My Program <input type="checkbox"/>
<i>A Dynamic Cascading Failure Model in Power Grid with Renewable Energy Generation</i>	
Yang, Yujie	Xi'an Jiaotong University
Zhou, Yadong	Xi'an Jiaotong University
Wu, Jiang	Xian Jiaotong University
Liu, Ting	Xi'an Jiaotong University
Xu, Zhanbo	Xi'an Jiaotong University
Guan, Xiaohong	Xi'an Jiaotong University
13:50-14:10, Paper MoAM2.2	Add to My Program <input type="checkbox"/>
<i>Robust Constraints-Based Supply-Demand Coordination with Storage Systems of Enterprise Microgrid</i>	
Liu, Kun	Xi'an Jiaotong University
Gao, Feng	Xi'an Jiaotong University

Xu, Zhanbo	Xi'an Jiaotong University
Wu, Jiang	Xian Jiaotong University
Dai, Shihao	Xi'an Jiaotong University
Guan, Xiaohong	Xi'an Jiaotong University

14:10-14:30, Paper MoAM2.3 Add to My Program

[Cost-Minimized User Association and Partial Offloading for Dependent Tasks in Hybrid Cloud-Edge Systems](#)

Yuan, Haitao	Beihang University
Hu, Qinglong	Beihang University
Meijia, Wang	Beihang University
Bi, Jing	Beijing University of Technology, Beijing 100124, China
Zhou, MengChu	New Jersey Institute of Technology

14:30-14:50, Paper MoAM2.4 Add to My Program

[A Voltage Deviation Threat Via Distributed Load Perturbation in Distribution Network](#)

Huang, Hao	Department of Cyber Security, Guangdong Power Dispatching and Co
Yang, Chenyang	Xi'an Jiaotong University
Tang, Yi	Department of Cyber Security, Guangdong Power Dispatching and Co
Wu, Qingjin	Department of Cyber Security, Guangdong Power Dispatching and Co
Mei, Famao	Department of Cyber Security, Guangdong Power Dispatching and Co
Gu, Zhenwei	Department of Cyber Security, Guangdong Power Dispatching and Co
Zhou, Yadong	Xi'an Jiaotong University

14:50-15:10, Paper MoAM2.5 Add to My Program

[Energy Saving Control in Multistage Production Systems Using a State-Based Method](#)

Li, Yang	Northwestern Polytechnical University
Cui, Peng-Hao	Northwestern Polytechnical University
Wang, Jun-Qiang	Northwestern Polytechnical University
Chang, Qing	University of Virginia

15:10-15:30, Paper MoAM2.6 Add to My Program

[A Bi-Level Optimization Method for Integrated Production Scheduling between Continuous Casting and Hot Rolling Processes](#)

Tang, Wei	ChongQing University
Cao, Lingling	Chongqing University
Wen, Yao min	Chong Qing University
Jiang, Sheng-long	Chongqing University

MoAM3 Regular Session, Constitution C Add to My Program

[Deep Learning in Robotics and Automation 1](#)

Chair: [Ding, Yu](#) Texas A&M University
Co-Chair: [Sabas, Juan Francisco](#) CINVESTAV

13:30-13:50, Paper MoAM3.1 Add to My Program

[GUM: A Guided Undersampling Method to Preprocess Imbalanced Datasets for Classification](#)

Sung, Kisuk	Samsung Life Insurance
Brown, W. Eric	Texas Tech University
Moreno-Centeno, Erick	Texas A&M University
Ding, Yu	Texas A&M University

13:50-14:10, Paper MoAM3.2 Add to My Program

[Object Goal Navigation Using Data Regularized Q-Learning](#)

Nandiraju, Gireesh	IIIT Hyderabad
Dharmala, Amarthya Sasi Kiran	International Institute of Information Technology, Hyderabad
Banerjee, Snehasis	Tata Consultancy Services
Sridharan, Mohan	University of Birmingham
Bhowmick, Brojeshwar	Tata Consultancy Services
Krishna, Madhava	IIIT Hyderabad

14:10-14:30, Paper MoAM3.3 Add to My Program

[MultiROS: ROS Based Robot Simulation Environment for Concurrent Deep Reinforcement Learning](#)

Kapukotuwa, Jayasekara	Technological University of the Shannon: Midlands Midwest
Lee, Brian	Technological University of the Shannon
Devine, Declan	Technological University of the Shannon: Midlands Midwest
Qiao, Yuansong	Technological University of the Shannon: Midlands Midwest

14:30-14:50, Paper MoAM3.4

Add to My Program [FRobs_RL: A Flexible Robotics Reinforcement Learning Library](#)

Fajardo, Jose Manuel	National University of Colombia
Gonzalez, Felipe	Universidad Nacional De Colombia
Realpe, Sebastian	Universidad Nacional De Colombia
Hernández, Juan David	Cardiff University
Ji, Ze	Cardiff University
Cardenas, Pedro	UNIVERSIDAD Nacional De Colombia

14:50-15:10, Paper MoAM3.5

Add to My Program [Multimodal Motion Prediction Based on Adaptive and Swarm Sampling Loss Functions for Reactive Mobile Robots](#)

Zhang, Ze	Chalmers University of Technology
Dean, Emmanuel	Chalmers University of Technology
Karayiannidis, Yiannis	Lund University
Akesson, Knut	Chalmers University of Technology

15:10-15:30, Paper MoAM3.6

Add to My Program [Learning Switching Criteria for Sim2Real Transfer of Robotic Fabric Manipulation Policies](#)

Sharma, Satvik	University of California, Berkeley
Novoseller, Ellen	University of California, Berkeley
Viswanath, Vainavi	University of California, Berkeley
Javed, Zaynah	University of California, Berkeley
Parikh, Rishi	University of California Berkeley
Hoque, Ryan	University of California, Berkeley
Brown, Daniel	University of Utah
Balakrishna, Ashwin	University of California, Berkeley
Goldberg, Ken	UC Berkeley

MoAM4 Regular Session, Imperio AAdd to My Program [Computer Vision for Manufacturing and Transportation 2](#)

Chair: [Hashemi, Ehsan](#) University of Alberta
 Co-Chair: [Yu, Wen](#) CINVESTAV-IPN

13:30-13:50, Paper MoAM4.1

Add to My Program [Augmented Visual Localization Using a Monocular Camera for Autonomous Mobile Robots](#)

Salimzadeh, Ali	University of Alberta
Bhatt, Neel P.	University of Waterloo
Hashemi, Ehsan	University of Alberta

13:50-14:10, Paper MoAM4.2

Add to My Program [Efficient WiFi LiDAR SLAM for Autonomous Robots in Large Environments](#)

Ismail, Khairuldaniai	Singapore University of Technology and Design
Liu, Ran	Southwest University of Science and Technology
Qin, Zhenghong	Southwest University of Science and Technology
Athukorala, Achala	Zone 24x7 Pvt Ltd
Lau, Billy Pik Lik	Singapore University of Technology and Design
Bin Othman, Muhammad Shalihhan	Singapore University of Technology and Design
Yuen, Chau	Singapore University of Technology and Design
Tan, U-Xuan	Singapore University of Techonlogy and Design

14:10-14:30, Paper MoAM4.3

Add to My Program [Dynamical Scene Representation and Control with Keypoint-Conditioned Neural Radiance Field](#)

Wang, Weiyao	The Johns Hopkins University
Morgan, Andrew	Yale University
Dollar, Aaron	Yale University
Hager, Gregory	Johns Hopkins University

14:30-14:50, Paper MoAM4.4	Add to My Program <input type="checkbox"/>
Extremal Point Tracking on Smooth Surfaces	
Madsen, Steffen	The University of Southern Denmark
Jami, Milad	Novo Nordisk A/S
Petersen, Henrik Gordon	University of Southern Denmark
14:50-15:10, Paper MoAM4.5	Add to My Program <input type="checkbox"/>
Penetration State Identification from Stereo Image Pair of Weld Pool in GMAW Process by Deep Learning.(I)	
Liang, Zhimin	Hebei University of Science and Technology
Gao, Xu	Hebei University of Science & Technology
Zhang, Kun	Hebei University of Science & Technology
Wang, Dianlong	Hebei University of Science and Technology
Wang, Liwei	Hebei University of Science and Technology
15:10-15:30, Paper MoAM4.6	Add to My Program <input type="checkbox"/>
Directed Data Association for Single Object Tracking in Point Clouds	
Zhang, Yongchang	Institute of Automation, Chinese Academy of Sciences, Beijing, C
Guo, Yue	Chinese Academy of Sciences
Niu, Hanbing	University of Electronic Science and Technology of China
He, Wenhao	University of Chinese Academy of Sciences
MoAM5 Regular Session, Imperio B	Add to My Program <input type="checkbox"/>
Planning, Scheduling and Coordination 2	
Chair: Carpin, Stefano	University of California, Merced
Co-Chair: Mehta, Ishaan	Toronto Metropolitan University
13:30-13:50, Paper MoAM5.1	Add to My Program <input type="checkbox"/>
Deadlock Avoidance Algorithm for AGVs on a Tessellated Layout	
Fransen, Karlijn	Eindhoven University of Technology
Reniers, Michel	Eindhoven University of Technology
van Eekelen, Joost	Eindhoven University of Technology
13:50-14:10, Paper MoAM5.2	Add to My Program <input type="checkbox"/>
Solving Stochastic Orienteering Problems with Chance Constraints Using Monte Carlo Tree Search	
Thayer, Thomas C.	University of California, Merced
Carpin, Stefano	University of California, Merced
14:10-14:30, Paper MoAM5.3	Add to My Program <input type="checkbox"/>
An Innovative Formulation Tightening Approach for Job-Shop Scheduling	
Yan, Bing	Rochester Institute of Technology
Bragin, Mikhail	University of Connecticut
Luh, Peter	University of Connecticut
14:30-14:50, Paper MoAM5.4	Add to My Program <input type="checkbox"/>
Rendezvous Scheduling for Charging Coordination between Aerial Robot - Mobile Ground Robot	
Eker, Ahmet Harun	Bogazici University
Öncü, Ahmet	Bogazici University
Bozma, H. Isil	Bogazici University
14:50-15:10, Paper MoAM5.5	Add to My Program <input type="checkbox"/>
Pareto Frontier Approximation Network (PA-Net) to Solve Bi-Objective TSP	
Mehta, Ishaan	Toronto Metropolitan University
Taghipour, Sharareh	Toronto Metropolitan University
Saeedi, Sajad	Toronto Metropolitan University
15:10-15:30, Paper MoAM5.6	Add to My Program <input type="checkbox"/>
On Controlling Battery Degradation in Vehicle-To-Grid Energy Markets	
Scarabaggio, Paolo	Politecnico Di Bari
Carli, Raffaele	Politecnico Di Bari
Parisio, Alessandra	The University of Manchester

[Dotoli, Mariagrazia](#)

Politecnico Di Bari

MoAM6 Regular Session, Imperio CAdd to My Program **[Agricultural Automation 2](#)**Chair: [Karydis, Konstantinos](#)

University of California, Riverside

Co-Chair: [Begovich, Ofelia](#)

CINVESTAV - Gdl

13:30-13:50, Paper MoAM6.1

Add to My Program [Towards Infield Navigation: Leveraging Simulated Data for Crop Row Detection](#)[de Silva, Rajitha](#)

University of Lincoln

[Cielniak, Grzegorz](#)

University of Lincoln

[Gao, Junfeng](#)

University of Lincoln

13:50-14:10, Paper MoAM6.2

Add to My Program [Introducing Multispectral-Depth \(MS-D\): Sensor Fusion for Close Range Multispectral Imaging](#)[Vuletic, Jelena](#)

University of Zagreb, Faculty of Electrical Engineering and Comp

[Polic, Marsela](#)

University of Zagreb

[Orsag, Matko](#)

University of Zagreb, Faculty of Electrical Engineering and Comp

14:10-14:30, Paper MoAM6.3

Add to My Program [Distributed Mission Planning of Complex Tasks for Heterogeneous Multi-Robot Systems](#)[Arbanas Ferreira, Barbara](#)

University of Zagreb, Faculty of Electrical Engineering and Comp

[Petrovic, Tamara](#)

Univ. of Zagreb

[Bogdan, Stjepan](#)

University of Zagreb

14:30-14:50, Paper MoAM6.4

Add to My Program [Automatic Lighting Control and IoT Monitoring on an Indoor-Greenhouse](#)[Contreras, Cuauhtemoc](#)

Cinvestav Guadalajara

[Begovich, Ofelia](#)

CINVESTAV - Gdl

14:50-15:10, Paper MoAM6.5

Add to My Program [Development and Testing of a Smart Bin Toward Automated Rearing of Black Soldier Fly Larvae](#)[Urrutia Avila, Kevin](#)

University of California, Riverside

[Campbell, Merrick](#)

University of California, Riverside

[Mauck, Kerry](#)

University of California, Riverside

[Gebiola, Marco](#)

University of California, Riverside

[Karydis, Konstantinos](#)

University of California, Riverside

15:10-15:30, Paper MoAM6.6

Add to My Program [Wearable Inertial Sensor-Based Limb Lameness Detection and Pose Estimation for Horses](#)[Yigit, Tarik](#)

Rutgers University

[Han, Feng](#)

Rutgers University

[Rankins, Ellen](#)

Rutgers University

[Yi, Jingang](#)

Rutgers University

[McKeever, Kenneth](#)

Rutgers University

[Malinowski, Karyn](#)

Rutgers University

MoAM7 Regular Session, ColoniaAdd to My Program **[Automation in Construction and Production](#)**Chair: [Ferrarini, Luca](#)

Politecnico Di Milano

Co-Chair: [Yi, Jingang](#)

Rutgers University

13:30-13:50, Paper MoAM7.1

Add to My Program [Automated Hammering Inspection System with Multi-Copter Type Mobile Robot for Concrete Structures](#)[Nishimura, Yuki](#)

University of Tsukuba

[Takahashi, Shuki](#)University of Tsukuba, Intelligent and Mechanical
Interaction Sy[Mochiyama, Hiromi](#)

University of Tsukuba

[Yamaguchi, Tomoyuki](#)

University of Tsukuba

13:50-14:10, Paper MoAM7.2

Add to My Program [Digital Twin-Based Collision Avoidance System for Autonomous Excavator with Automatic 3D LiDAR Sensor Calibration](#)

Satoh, Mineto	NEC Corporation
14:10-14:30, Paper MoAM7.3	Add to My Program <input type="checkbox"/>
<i>Neural Network Predictive Schemes for Building Temperature Control: A Comparative Study</i>	
Ferrarini, Luca	Politecnico Di Milano
Rastegarpour, Soroush	Politecnico Di Milano
14:30-14:50, Paper MoAM7.4	Add to My Program <input type="checkbox"/>
<i>Smartphone-Based Real-Time Indoor Positioning Using BLE Beacons</i>	
Rieseboos, Robert	University of Groningen
Degeler, Viktoriya	University of Groningen
Tello, Andrés	Bernoulli Institute for Mathematics, Computer Science, and Artif
14:50-15:10, Paper MoAM7.5	Add to My Program <input type="checkbox"/>
<i>Analysis of Process Data for Remote Health Prediction in Distributed Automation Systems</i>	
Hsieh, Yu-Ming	National Cheng Kung University, Institute of Manufacturing Infor
Wilch, Jan	Technical University of Munich
Lin, Chin-Yi	National Cheng Kung University
Vogel-Heuser, Birgit	Technical University Munich
Cheng, Fan-Tien	National Cheng Kung University
15:10-15:30, Paper MoAM7.6	Add to My Program <input type="checkbox"/>
<i>Energy-Efficient Control in a Two-Stage Production Line with Parallel Machines (I)</i>	
Loffredo, Alberto	Politecnico Di Milano
Frigerio, Nicla	Politecnico Di Milano
Lanzarone, Ettore	National Research Council of Italy
Matta, Andrea	Politecnico Di Milano
Keywords: Sustainable Production and Service Automation , Energy and Environment-aware Automation	
Abstract: The energy saving topic is becoming increasingly important in industry: environmental impact and sustainability of processes are, nowadays, considered critical factors for this field. Manufacturing processes sustainability can be improved by controlling machine state with energy-efficient control policies that switch off/on the device. This approach can be also applied to a workstation composed of parallel and identical machines. This work is focused on this type of configuration, presenting a novel model to identify energy-efficient control policies for two-stage production line with parallel and identical machines. The proposed model reduces energy consumption while assuring a target level on production performance indicators. Numerical results confirm model effectiveness and benefits when implemented on general cases of production systems.	
MoCo2_Br Plenary Session, Foyer 2nd Floor	Add to My Program <input type="checkbox"/>
Coffee Break 4	
MoBM1 Regular Session, Constitution A	Add to My Program <input type="checkbox"/>
Industrial Robots	
Chair: D'Avella, Salvatore	Scuola Superiore Sant'Anna
Co-Chair: Liu, Yugang	Royal Military College of Canada
15:45-16:05, Paper MoBM1.1	Add to My Program <input type="checkbox"/>
<i>A Laser Intensity Based Autonomous Docking Approach with Application to Mobile Robot Recharging in Unstructured Environments</i>	
Liu, Yugang	Royal Military College of Canada
16:05-16:25, Paper MoBM1.2	Add to My Program <input type="checkbox"/>
<i>Handling-Design Method by Multi-Primitive Recognition of Object Shape</i>	
Watanabe, Kosuke	University of Tsukuba
Sato, Shunsuke	University of Tsukuba
Aiyama, Yasumichi	University of Tsukuba
16:25-16:45, Paper MoBM1.3	Add to My Program <input type="checkbox"/>
<i>Towards Autonomous Soft Grasping of Deformable Objects Using Flexible Thin-Film Electro-Adhesive Gripper</i>	
D'Avella, Salvatore	Scuola Superiore Sant'Anna
Fontana, Marco	Scuola Superiore Sant'Anna
Vertechy, Rocco	University of Bologna
Tripicchio, Paolo	Scuola Superiore Sant'Anna

16:45-17:05, Paper MoBM1.4	Add to My Program <input type="checkbox"/>
<i>Robust Position Regulation of a Seesaw Actuated by a Humanoid</i>	
Santos Miguel, Orozco Soto	Consorzio CREATE
Ibarra Zannatha, Juan Manuel	CINVESTAV
Kheddar, Abderrahmane	CNRS-AIST
17:05-17:25, Paper MoBM1.5	Add to My Program <input type="checkbox"/>
<i>Instrument Remote Centre of Motion Estimation for Robot-Assisted Vitreoretinal Surgery</i>	
Birch, Jeremy	King's College London
Nousias, Sotirios	NTUA
Da Cruz, Lyndon	Moorfields Eye Hospital
Rhode, Kawal	King's College London
Bergeles, Christos	King's College London
17:25-17:45, Paper MoBM1.6	Add to My Program <input type="checkbox"/>
<i>A Digital Twin Framework for Telesurgery in the Presence of Varying Network Quality of Service</i>	
Bonne, Sophea	UC Berkeley
Panitch, William	University of California, Berkeley
Dharmarajan, Karthik	UC Berkeley
Srinivas, Kishore	UC Berkeley
Kincade, Jerri-Lynn	UC Berkeley
Low, Thomas	SRI International
Knoth, Bruce	SRI International
Cowan, Cregg	SRI International
Fer, Danyal	University of California, San Francisco East Bay
Thananjeyan, Brijen	UC Berkeley
Kerr, Justin	University of California, Berkeley
Ichnowski, Jeffrey	UC Berkeley
Goldberg, Ken	UC Berkeley
MoBM2 Regular Session, Constitucion B	Add to My Program <input type="checkbox"/>
Computer Vision in Automation 2	
Chair: Yu, Kaiyan	Binghamton University
Co-Chair: Sabas, Juan Francisco	CINVESTAV
15:45-16:05, Paper MoBM2.1	Add to My Program <input type="checkbox"/>
<i>Ellipsoid SLAM with Novel Object Initialization</i>	
Meng, Yongqi	Karlsruhe Institute of Technology, KIT, Germany
Zhou, Benchun	Karlsruhe Institute of Technology, KIT, Germany
16:05-16:25, Paper MoBM2.2	Add to My Program <input type="checkbox"/>
<i>Flow Synthesis Based Visual Servoing Frameworks for Monocular Obstacle Avoidance Amidst High-Rises</i>	
Sankhla, Harshit Kumar	International Institute of Information Technology (IIIT), Hydera
Qureshi, Mohammad Nomaan	International Institute of Information Technology (IIIT), Hydera
Vaidyanathan, Shankara Narayanan	International Institute of Information Technology (IIIT), Hydera
Mittal, Vedansh	International Institute of Information Technology (IIIT), Hydera
Gupta, Gunjan	International Institute of Information Technology (IIIT), Hydera
Pandya, Harit	Cambridge Research Laboratory, Toshiba Europe, Cambridge, UK
Krishna, Madhava	IIIT Hyderabad
16:25-16:45, Paper MoBM2.3	Add to My Program <input type="checkbox"/>
<i>Object-Based Loop Closure with Directional Histogram Descriptor</i>	
Zhou, Benchun	Karlsruhe Institute of Technology, KIT, Germany
Meng, Yongqi	Karlsruhe Institute of Technology, KIT, Germany
16:45-17:05, Paper MoBM2.4	Add to My Program <input type="checkbox"/>
<i>Deep Learning Based Sustainable Material Attribution for Apparels</i>	
Nicherala, Yaswanth Kumar	ITC Infotech
Sadula, Srikrishna	ITC Infotech
Venkataraman, Prasanna Shrinivas	ITC Infotech
17:05-17:25, Paper MoBM2.5	Add to My Program <input type="checkbox"/>

Detection of Camera Model Inconsistency and the Existence of Optical Image Stabilization System

[Yeh, Shu-Hao](#) Texas A&M University
[Wang, Di](#) Texas A&M University
[Yan, Wei](#) Texas A&M University
[Song, Dezhen](#) Texas A&M University

17:25-17:45, Paper MoBM2.6 Add to My Program

Rotated Bounding Box Detector without Annotation of Object Orientation by Rotating Images

[Sakai, Ryo](#) Hitachi, Ltd
[Yano, Taiki](#) Hitachi, Ltd
[Kimura, Nobutaka](#) Hitachi, Ltd
[Ito, Kiyoto](#) Research and Development Group, Hitachi, Ltd

MoBM3 Regular Session, Constitucion C Add to My Program

Deep Learning in Robotics and Automation 2

Chair: [Higa, Ryota](#) NEC Corporation, National Institute of Advanced Industrial Science and Technology

Co-Chair: [Wang, Haiyan](#) Hitachi America, Ltd

15:45-16:05, Paper MoBM3.1 Add to My Program

NILOS Ranging Mitigation with Neural Network Model for UWB Localization

[Bin Othman, Muhammad Shalihan](#) Singapore University of Technology and Design
[Liu, Ran](#) Southwest University of Science and Technology
[Yuen, Chau](#) Singapore University of Technology and Design

16:05-16:25, Paper MoBM3.2 Add to My Program

Non-Parametric Stochastic Policy Gradient with Strategic Retreat for Non-Stationary Environment

[Dastider, Apan](#) University of Central Florida
[Mingjie, Lin](#) University of Central Florida

16:25-16:45, Paper MoBM3.3 Add to My Program

Deep Reinforcement Learning Toward Robust Multi-Echelon Supply Chain Inventory Optimization

[El Shar, Ibrahim](#) University of Pittsburgh
[Sun, Wenhuan](#) Carnegie Mellon University
[Wang, Haiyan](#) Hitachi America, Ltd
[Chetan, Gupta](#) Hitachi America Ltd

16:45-17:05, Paper MoBM3.4 Add to My Program

Spatial Relation Graph and Graph Convolutional Network for Object Goal Navigation

[Dharmala, Amarthya Sasi Kiran](#) International Institute of Information Technology, Hyderabad
[Anand, Kritika](#) TCS Innovation Labs
[Kharyal, Chaitanya](#) IIIT Hyderabad
[Kumar, Gulshan](#) International Institute of Information Technology, Hyderabad
[Nandiraju, Gireesh](#) IIIT Hyderabad
[Banerjee, Snehasis](#) Tata Consultancy Services
[Roychoudhury, Ruddra dev](#) TCS Research & Innovation
[Sridharan, Mohan](#) University of Birmingham
[Bhowmick, Brojeshwar](#) Tata Consultancy Services
[Krishna, Madhava](#) IIIT Hyderabad

17:05-17:25, Paper MoBM3.5 Add to My Program

High-Level Reward Deep Reinforcement Learning Approach for a Novel Physical-Logical Hybrid Factory Line Robot Vehicle Simulation

[Higa, Ryota](#) NEC Corporation, National Institute of Advanced Industrial Science
[Nakadai, Shinji](#) NEC Corporation

17:25-17:45, Paper MoBM3.6 Add to My Program

Expert Initialized Reinforcement Learning with Application to Robotic Assembly

[Langaa, Jeppe](#) University of Southern Denmark
[Sloth, Christoffer](#) University of Southern Denmark

MoBM4 Regular Session, Imperio A Add to My Program

Motion and Path Planning and Control 2Chair: [Shan, Jinjun](#) York UniversityCo-Chair: [Roy, Dibyendu](#) Tata Consultancy Services Limited15:45-16:05, Paper MoBM4.1 Add to My Program[Kinematically-Constrained Continuous-Path Polynomial Trajectories for Quadrotors](#)[Alkomy, Hassan](#) York University[Shan, Jinjun](#) York University16:05-16:25, Paper MoBM4.2 Add to My Program[Smooth Spline-Based Trajectory Planning for Semi-Rigid Multi-Robot Formations](#)[Recker, Tobias](#) Leibniz University Hanover[Raatz, Annika](#) Leibniz Universität Hannover[Lurz, Henrik](#) Leibniz University Hanover16:25-16:45, Paper MoBM4.3 Add to My Program[Real-Time OF-Based Trajectory Control of a UAS Rotorcraft Based on Integral Extended-State LQG](#)[Zioud, Tariq](#) Université De Limoges XLIM UMR CNRS 7252[Escareno, Juan-Antonio](#) University of Limoges, ENSIL-ENSCI, XLIM Research Institute UMR[Labrani-Igbida, Ouidad](#) University of Limoges -- ENSIL Engineering School -- XLIM Insti16:45-17:05, Paper MoBM4.4 Add to My Program[Complete Decomposition-Free Coverage Path Planning](#)[Kusnur, Tushar](#) Carnegie Mellon University[Likhachev, Maxim](#) Carnegie Mellon University17:05-17:25, Paper MoBM4.5 Add to My Program[Exploration of Multiple Unknown Areas by Swarm of Robots Utilizing Virtual-Region Based Splitting and Merging Technique](#)[Roy, Dibyendu](#) Tata Consultancy Services Limited[Maitra, Madhubanti](#) JADAVPUR UNIVERSITY[Bhattacharya, Samar](#) Jadavpur University17:25-17:45, Paper MoBM4.6 Add to My Program[Deterministic Path Optimization in 2D](#)[Khazaei Pool, Maryam](#) University of California Merced[Diaz Alvarenga, Carlos](#) University of California at Merced[Kallmann, Marcelo](#) University of California, Merced**MoBM5 Regular Session, Imperio B** Add to My Program**Intelligent and Flexible Manufacturing 1**Chair: [Nemec, Bojan](#) Jozef Stefan InstituteCo-Chair: [Kovalenko, Ilya](#) Pennsylvania State University15:45-16:05, Paper MoBM5.1 Add to My Program[Cooperative Product Agents to Improve Manufacturing System Flexibility: A Model-Based Decision Framework](#)[Kovalenko, Ilya](#) Pennsylvania State University[Balta, Efe](#) University of Michigan[Tilbury, Dawn](#) University of Michigan[Barton, Kira](#) University of Michigan at Ann Arbor16:05-16:25, Paper MoBM5.2 Add to My Program[An Adaptive, Repeatable and Rapid Auto-Reconfiguration Process in a Smart Manufacturing System for Small Box Assembly](#)[Wang, Zi](#) University of Nottingham[Kendall, Peter](#) University of Nottingham[Gumma, Kevin](#) University of Nottingham[Turner, Alison](#) University of Nottingham[Ratchev, Svetan](#) The University of Nottingham16:25-16:45, Paper MoBM5.3 Add to My Program[The AGV Battery Swapping Policy Based on Reinforcement Learning](#)

Lee, Min Seok	Korea Advanced Institute of Science and Technology
Jang, Young Jae	Korea Advanced Institute of Science and Technology
16:45-17:05, Paper MoBM5.4	Add to My Program <input type="checkbox"/>
<i>Learning Skill-Based Industrial Robot Tasks with User Priors</i>	
Mayr, Matthias	Lund University
Hvarfner, Carl	Lund University
Chatzilygeroudis, Konstantinos	University of Patras
Nardi, Luigi	Stanford
Krueger, Volker	Lund University
17:05-17:25, Paper MoBM5.5	Add to My Program <input type="checkbox"/>
<i>A Virtual Mechanism Approach for Exploiting Functional Redundancy in Finishing Operations</i>	
Nemec, Bojan	Jozef Stefan Institute
Yasuda, Ken'ichi	Yaskawa Electric Co
Ude, Ales	Jozef Stefan Institute
17:25-17:45, Paper MoBM5.6	Add to My Program <input type="checkbox"/>
<i>UV Grid Generation on 3D Freeform Surfaces for Constrained Robotic Coverage Path Planning</i>	
McGovern, Sean	Worcester Polytechnic Institute
Xiao, Jing	Worcester Polytechnic Institute (WPI)
MoBM6 Regular Session, Imperio C	Add to My Program <input type="checkbox"/>
Machine Learning and Its Application	
Chair: Liu, Chenang	Oklahoma State University
Co-Chair: Si, Bing	State University of New York at Binghamton
15:45-16:05, Paper MoBM6.1	Add to My Program <input type="checkbox"/>
<i>Collaborative Discrimination-Enabled Generative Adversarial Network (CoD-GAN) for the Data Augmentation in Imbalanced Classification</i>	
Zhang, Ziyang	Oklahoma State University
Li, Yuxuan	Oklahoma State University
Liu, Chenang	Oklahoma State University
16:05-16:25, Paper MoBM6.2	Add to My Program <input type="checkbox"/>
<i>Robotic Control of the Deformation of Soft Linear Objects Using Deep Reinforcement Learning</i>	
Hani Daniel Zakaria, Mélodie	Institut Pascal - Université Clermont Auvergne
Aranda, Miguel	Universidad De Zaragoza
Lequievre, Laurent	Université Clermont Auvergne - CNRS
Lengagne, Sebastien	Institut Pascal CNRS UMR 6602 / Université Blaise Pascal / IFMA
Corrales Ramon, Juan Antonio	Universidade De Santiago De Compostela
Mezouar, Youcef	Clermont Auvergne INP - SIGMA Clermont
16:25-16:45, Paper MoBM6.3	Add to My Program <input type="checkbox"/>
<i>Restricted Relevance Vector Machine for Missing Data and Application to Virtual Metrology</i>	
Choi, Jeongsub	West Virginia University
Son, Youngdoo	Dongguk University
Jeong, Myong K.	Rutgers University
16:45-17:05, Paper MoBM6.4	Add to My Program <input type="checkbox"/>
<i>Transfer Learning-Based Independent Component Analysis</i>	
Zheng, Ziqian	University of Wisconsin-Madison
Liu, Kaibo	University of Wisconsin - Madison
17:05-17:25, Paper MoBM6.5	Add to My Program <input type="checkbox"/>
<i>An Efficient Surrogate Assisted Inference for Patient-Reported Outcome with Complex Missing Mechanisms (I)</i>	
Park, Jaeyoung	University of Florida
Liang, Muxuan	University of Florida
Zhong, Xiang	University of Florida
17:25-17:45, Paper MoBM6.6	Add to My Program <input type="checkbox"/>

Multi-Level Multi-Channel Bio-Signal Analysis for Health Telemonitoring[Aramadeen, Wesam](#)

University of Binghamton

[Rababa, Salahaldeen](#)

Binghamton University

[Costa, Carlos](#)

IBM Research

[Si, Bing](#)

State University of New York at Binghamton

MoBM7 Regular Session, ColoniaAdd to My Program Learning and Adaptive SystemsChair: [Tang, Ying](#)

Rowan University

Co-Chair: [Perrusquia, Adolfo](#)

Cranfield University

15:45-16:05, Paper MoBM7.1

Add to My Program Performance Objective Extraction of Optimal Controllers: A Hippocampal Learning Approach[Perrusquia, Adolfo](#)

Cranfield University

[Guo, Weisi](#)

Cranfield University

16:05-16:25, Paper MoBM7.2

Add to My Program Improved Representations for Continual Learning of Novel Motor Health Conditions through Few-Shot Prototypical Networks[Russell, Matthew](#)

University of Kentucky

[Wang, Peng](#)

University of Kentucky

16:25-16:45, Paper MoBM7.3

Add to My Program A Reinforcement Learning Decentralized Multi-Agent Control Approach Exploiting Cognitive Cooperation on Continuous Environments[Camacho Gonzalez, Gerardo Jesus](#)

Scuola Superiore Sant'Anna

[D'Avella, Salvatore](#)

Scuola Superiore Sant'Anna

[Avizzano, Carlo Alberto](#)

Scuola Superiore Sant'Anna

[Tripicchio, Paolo](#)

Scuola Superiore Sant'Anna

16:45-17:05, Paper MoBM7.4

Add to My Program Learn Proportional Derivative Controllable Latent Space from Pixels[Wang, Weiyao](#)

The Johns Hopkins University

[Kobilarov, Marin](#)

Johns Hopkins University

[Hager, Gregory](#)

Johns Hopkins University

17:05-17:25, Paper MoBM7.5

Add to My Program FastATDC: Fast Anomalous Trajectory Detection and Classification[Ni, Tianle](#)

Technical University of Munich

[Wang, Jingwei](#)

Tongji University

[Ma, Yunlong](#)

Tongji University

[Wang, Shuang](#)

Shanghai Police College

[Liu, Min](#)

Tongji University

[Shen, Weiming](#)

Huazhong University of Science and Technology

17:25-17:45, Paper MoBM7.6

Add to My Program Modeling and Optimization of Student Learning in an Adaptive Serious Game[Hare, Ryan](#)

Rowan University

[Tang, Ying](#)

Rowan University

MoBaM_Br Plenary Session, Salon FiestasAdd to My Program Conference Banquet**MoCC1** Special Session, Aries 1 & 2Add to My Program Simulation and AI (Chengdu)Chair: [Peng, Yijie](#)

Peking University

Co-Chair: [Xia, Li](#)

Sun Yat-Sen University

Organizer: [Peng, Yijie](#)

Peking University

19:00-19:20, Paper MoCC1.1

Add to My Program Deep Reinforcement Learning-Based Dynamic Bandwidth Allocation in Weighted Fair Queues of Routers (I)

Pan, Jinyan	Sun Yat-Sen University
Chen, Gang	Guangzhou University
Wu, Haoran	Sun Yat-Sen University
Peng, Xi	Huawei Technologies Co. Ltd
Xia, Li	Sun Yat-Sen University

19:20-19:40, Paper MoCC1.2 Add to My Program

[*Efficiency Analysis of a High-Bay Container Storage System -- BoxBay \(I\)*](#)

Alexandri, Ioanna O	Northwestern Polytechnical University, School of Management
Yuan, Mengxue	Northwestern Polytechnical University, School of Management
Zhou, Chenhao	Northwestern Polytechnical University
Xue, Li	Northwestern Polytechnical University, School of Management

19:40-20:00, Paper MoCC1.3 Add to My Program

[*Noise Optimization in Artificial Neural Networks \(I\)*](#)

Xiao, Li	Chinese Academy of Science
Zeliang, Zhang	Huazhong University of Science and Technology
Jiang, Jinyang	Peking University
Peng, Yijie	Peking University

20:00-20:20, Paper MoCC1.4 Add to My Program

[*Integrated Inventory Placement and Transportation Vehicle Selection Using Neural Network \(I\)*](#)

Qiu, Junyan	Shanghai Jiao Tong University
Xia, Jun	Shanghai Jiao Tong University
Luo, Jun	Shanghai Jiao Tong University Antai College of Economics & Manag
Liu, Yang	Alibaba (China) Co., Ltd, Hangzhou, People's Republic of China
Liu, Yuxin	Alibaba (China) Co., Ltd, Hangzhou, People's Republic of China

20:20-20:40, Paper MoCC1.5 Add to My Program

[*A Feature Selection Algorithm Based on Genetic Algorithm and Ordinal Optimization for Regression Problems \(I\)*](#)

Wang, Zhaojie	China Ship Research and Development Academy
Shen, Zhen	Institute of Automation, Chinese Academy of Sciences
Gao, Feng	Xi'an Jiaotong University
Sun, Mu	China Ship Research and Development Academy
Li, Junda	China Ship Research and Development Academy
Zhou, Qian	China Ship Research and Development Academy

20:40-21:00, Paper MoCC1.6 Add to My Program

[*Safety-Critical Components Analysis Using Knowledge Graph for CNC Machine \(I\)*](#)

Duan, XuHai	浙江工业大学
Chen, Yong	Zhejiang University of Technology
Ji, Zuzhen	Zhejiang University of Technology
Pei, Zhi	Zhejiang University of Technology
Yi, Wenchao	Zhejiang University of Technology

MoCC2 Special Session, Aries 3 Add to My Program

[Modeling, Control, and Scheduling of Robotized Manufacturing Systems \(Chengdu\)](#)

Chair: Wu, Naiqi	Guangdong University of Technology
Co-Chair: Qiao, Yan	Macau University of Science and Technology
Organizer: Qiao, Yan	Macau University of Science and Technology
Organizer: Kim, Hyun-Jung	Korea Advanced Institute of Science and Technology

19:00-19:20, Paper MoCC2.1 Add to My Program

[*Design of Petri Net Supervisors for Discrete Event Systems with Two Control Specifications \(I\)*](#)

Li, Chengzong	Macau University of Science and Technology
Chen, Yufeng	Macau University of Science and Technology
Li, Zhiwu	Xidian University
Yin, Li	Macau University of Science and Technology

19:20-19:40, Paper MoCC2.2 Add to My Program [A Novel Cyclic Scheduling Approach to Time-Constrained Single-Arm-Robot Multi-Cluster Tools \(I\)](#)

[Wang, Jipeng](#) Hubei University of Technology
[Xue, Huan](#) Hubei University of Technology
[Yang, Qibiao](#) Hubei University of Technology
[Pan, Chunrong](#) Jiangxi University of Science and Technology

19:40-20:00, Paper MoCC2.3 Add to My Program [Efficient Approach to Scheduling of High Throughput Screening Systems: A Case Study \(I\)](#)

[Wu, Naigi](#) Guangdong University of Technology
[Qiao, Yan](#) Macau University of Science and Technology
[Li, Zhiwu](#) Xidian University

20:00-20:20, Paper MoCC2.4 Add to My Program [Design of Robust Optimization Petri Net Controller for Automated Manufacturing Systems with Unreliable Resources \(I\)](#)

[Zhang, Ziliang](#) Xidian University
[Liu, Gaiyun](#) Xidian University
[Sun, Yu](#) Xidian University

20:20-20:40, Paper MoCC2.5 Add to My Program [Optimal Scheduling of Flexible Manufacturing Systems with a Timed Petri Net \(I\)](#)

[Ahn, Jeongsun](#) KAIST
[Kim, Hyun-Jung](#) Korea Advanced Institute of Science and Technology

20:40-21:00, Paper MoCC2.6 Add to My Program [Integrated Scheduling of Machines and Transport Robots in Dynamic Job Shops with a Timed Petri Net \(I\)](#)

[Kim, Duyeon](#) Korea Advanced Institute of Science and Technology
[Kim, Hyun-Jung](#) Korea Advanced Institute of Science and Technology

MoCC3 Regular Session, Taurus Add to My Program **[Deep Learning in Robotics and Automation 3 \(Chengdu\)](#)**

Chair: [Peng, Tao](#) Zhejiang University
 Co-Chair: [Shen, Zhen](#) Institute of Automation, Chinese Academy of Sciences

19:00-19:20, Paper MoCC3.1 Add to My Program [Fusing Panoptic Segmentation and Geometry Information for Robust Visual SLAM in Dynamic Environments](#)

[Zhu, Hu](#) Southern University of Science and Technology
[Yao, Chen](#) SUSTech
[Zhu, Zheng](#) Southern University of Science and Technology
[Liu, Zhengtao](#) SUSTech
[Jia, Zhenzhong](#) Southern University of Science and Technology

19:20-19:40, Paper MoCC3.2 Add to My Program [Online Learning for Queues with Unknown Demand \(I\)](#)

[Chen, Xinyun](#) Chinese University of Hong Kong, Shenzhen
[Hong, Guiyu](#) Chinese University of Hong Kong, Shenzhen
[Liu, Yunan](#) North Carolina State University

19:40-20:00, Paper MoCC3.3 Add to My Program [A Point-Based Neural Network for Real-Scenario Deformation Prediction in Additive Manufacturing](#)

[Zhao, Meihua](#) Institute of Automation, Chinese Academy of Sciences
[Xiong, Gang](#) Institute of Automation, Chinese Academy of Sciences
[Wang, Weixing](#) CASIA
[Fang, Qihang](#) Institute of Automation, Chinese Academy of Sciences
[Shen, Zhen](#) Institute of Automation, Chinese Academy of Sciences
[Wan, Li](#) Beijing Ten Dimensions Technology Co.Ltd
[Fenghua, Zhu](#) Chinese Academy of Sciences, Beijing

20:00-20:20, Paper MoCC3.4	Add to My Program <input type="checkbox"/>
Anchor-Based Detection and Height Estimation Framework for Particle Defects on Cathodic Copper Plate Surface	
Sun, Chen	Huazhong University of Science and Technology
Wan, Qian	Huazhong University of Science and Technology
Li, Zhaofu	Huazhong University of Science and Technology
Gao, Liang	Huazhong Univ. of Sci. & Tech
Li, Xinyu	Huazhong University of Science and Technology
Gao, Yiping	Huazhong University of Science and Technology
20:20-20:40, Paper MoCC3.5	Add to My Program <input type="checkbox"/>
An Activity Management System for Office Workers Using Multimodal Data	
Zhang, Xiangying	Zhejiang University
Zheng, Pai	The Hong Kong Polytechnic University
He, Qiqi	Zhejiang University
Peng, Tao	Zhejiang University
Tang, Wangchujun	University of Cambridge
Ye, Hongling	Zhejiang University
Tang, Renzhong	Zhejiang University
MoCo3_Br Plenary Session, Room T8	Add to My Program <input type="checkbox"/>
Coffee Break 3 (Chengdu)	
MoDC1 Special Session, Aries 1 & 2	Add to My Program <input type="checkbox"/>
Smart Healthcare Services and Systems (Chengdu)	
Chair: Song, Jie	Peking University
Co-Chair: Xie, Xiaolei	Tsinghua University
Organizer: Chen, Nan	Shanghai University
Organizer: Fei, Hongying	Shanghai University
Organizer: Ji, Ying	Shanghai University
Organizer: Song, Jie	Peking University
Organizer: Xie, Xiaolei	Tsinghua University
Organizer: Zhong, Xiang	University of Florida
21:15-21:35, Paper MoDC1.1	Add to My Program <input type="checkbox"/>
Disease Representation Learning for Expanding Doctor Retrieval in Online Medical Platform (I)	
Han, Xinming	Peking University
Song, Jie	Peking University
21:35-21:55, Paper MoDC1.2	Add to My Program <input type="checkbox"/>
What Drives Patients to Choose a Physician Online? a Study Based on Tree Models and SHAP Values (I)	
Wang, Yanzhi	Peking University
Zhao, Yue	Peking University
Song, Jie	Peking University
Liu, Hongju	Peking University
21:55-22:15, Paper MoDC1.3	Add to My Program <input type="checkbox"/>
The Physician Scheduling of Fever Clinic in the Covid-19 Pandemic (I)	
Liu, Ran	Shanghai JiaoTong University
Fan, Xiaoyu	Shanghai Jiaotong University
Wu, Zerui	Shanghai Jiao Tong University
Pang, Bowen	Tsinghua University
Xie, Xiaolei	Tsinghua University
22:15-22:35, Paper MoDC1.4	Add to My Program <input type="checkbox"/>
Appointment Scheduling of Multiple Operating Rooms Via Sampling Based Optimization (I)	
Wei, Jinxiang	Tongji University
Hu, Zhaolin	Tongji University
22:35-22:55, Paper MoDC1.5	Add to My Program <input type="checkbox"/>
Optimal Budget Allocation Rule for the Expected Opportunity Cost Using the Regression Metamodel (I)	
Cao, Minhao	Southwestern University of Finance and Economics

Xiao, Hui	Southwestern University of Finance and Economics
22:55-23:15, Paper MoDC1.6	Add to My Program <input type="checkbox"/>
<i>Modeling and Analysis of Operating Room Workflow in a Tertiary a Hospital</i>	
Zheng, Hanyi	Tsinghua University
Wang, Qing	Tsinghua University
Shen, Jiyong	Beijing Tsinghua Changgung Hospital
Kong, Yiyong	Beijing Tsinghua Changgung Hospital
Li, Jingshan	Tsinghua University
MoDC2 Special Session, Aries 3	Add to My Program <input type="checkbox"/>
Manufacturing and Service Systems in the New Era 1 (Chengdu)	
Chair: Pei, Zhi	Zhejiang University of Technology
Co-Chair: Wang, Junfeng	Huazhong University of Science and Technology
Organizer: Zhang, Liang	University of Connecticut
Organizer: Yan, Chao-Bo	Xi'an Jiaotong University
Organizer: Pei, Zhi	Zhejiang University of Technology
Organizer: Wang, Jun-Qiang	Northwestern Polytechnical University
Organizer: Wang, Junfeng	Huazhong University of Science and Technology
Organizer: Ju, Feng	Arizona State University
Organizer: Li, Yang	Northwestern Polytechnical University
Organizer: Jia, Zhiyang	Beijing Institute of Technology
21:15-21:35, Paper MoDC2.1	Add to My Program <input type="checkbox"/>
<i>Assembly State Detection Based on Deep Learning and Object Matching (I)</i>	
Zhao, Shiwen	Huazhong University of Science and Technology
Wang, Junfeng	Huazhong University of Science and Technology
Li, Wang	Huazhong University of Science and Technology
Liu, Maoding	Huazhong University of Science and Technology
21:35-21:55, Paper MoDC2.2	Add to My Program <input type="checkbox"/>
<i>Analysis and Improvement of Batch-Batch Production Systems (I)</i>	
Liu, Lingchen	Xi'an Jiaotong University
Yan, Chao-Bo	Xi'an Jiaotong University
21:55-22:15, Paper MoDC2.3	Add to My Program <input type="checkbox"/>
<i>Efficient and Accurate Simulation of Origin-Destination Flow in Telecommunication Systems (I)</i>	
Ma, Mingsheng	Xi'an Jiaotong University
Li, Shuaipeng	Xi'an Jiaotong University
Chang, Yuanlin	Xi'an Jiaotong University
Zhang, Sheng	Xi'an Jiaotong University
Li, Chenhong	Xi'an Jiaotong University
Gong, Xu	Huawei Technologies
Huiying, Xu	Huawei Technologies Co.LTD
Feng, Gao, Feng	Xi'an Jiaotong University
Cao, Xiaoyu	Xi'an Jiaotong University
Yan, Chao-Bo	Xi'an Jiaotong University
22:15-22:35, Paper MoDC2.4	Add to My Program <input type="checkbox"/>
<i>A Branch and Price Based Algorithm for the Valet Charging of Electric Vehicles (I)</i>	
Zhang, Lei	Zhejiang University of Technology
Pei, Zhi	Zhejiang University of Technology
22:35-22:55, Paper MoDC2.5	Add to My Program <input type="checkbox"/>
<i>A Multi-Stage Algorithm for the Capacitated Vehicle Routing Problem with Two-Dimensional Loading and Time Windows (I)</i>	
Zhou, Shunqian	Xi'an Jiaotong University
Wei, Junhu	Xi'an Jiaotong University
Yan, Chao-Bo	Xi'an Jiaotong University

22:55-23:15, Paper MoDC2.6	Add to My Program <input type="checkbox"/>
<u>Energy and Productivity Analysis in Serial Production Lines with Setups</u>	
<hr/>	
<u>Dong, Heng</u>	Tsinghua University
<u>Li, Jingshan</u>	Tsinghua University
MoLuC2_Br Plenary Session, MIX (first floor)	Add to My Program <input type="checkbox"/>
<u>Lunch Break 3 (Chengdu)</u>	

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