Eighth International Conference on Electromechanical Control Technology and Transportation (ICECTT 2023)

Said Easa Wei Wei Editors

19–21 May 2023 Hangzhou, China

Organized by Chongqing Jiaotong University (China) Xi'an University of Technology (China) Fujian University of Technology (China)

Sponsored by AEIC-Academic Exchange Information Centre (China)

Published by SPIE

> Volume 12790 Part One of Two Parts

Proceedings of SPIE 0277-786X, V. 12790

SPIE is an international society advancing an interdisciplinary approach to the science and application of light.

Eighth International Conference on Electromechanical Control Technology and Transportation (ICECTT 2023), edited by Said Easa, Wei Wei, Proc. of SPIE Vol. 12790, 1279001 · © 2023 SPIE 0277-786X · doi: 10.1117/12.3007499 The papers in this volume were part of the technical conference cited on the cover and title page. Papers were selected and subject to review by the editors and conference program committee. Some conference presentations may not be available for publication. Additional papers and presentation recordings may be available online in the SPIE Digital Library at SPIEDigitalLibrary.org.

The papers reflect the work and thoughts of the authors and are published herein as submitted. The publisher is not responsible for the validity of the information or for any outcomes resulting from reliance thereon.

Please use the following format to cite material from these proceedings: Author(s), "Title of Paper," in *Eighth International Conference on Electromechanical Control Technology and Transportation (ICECTT 2023)*, edited by Said Easa, Wei Wei, Proc. of SPIE 12790, Seven-digit Article CID Number (DD/MM/YYYY); (DOI URL).

ISSN: 0277-786X ISSN: 1996-756X (electronic)

ISBN: 9781510668331 ISBN: 9781510668348 (electronic)

Published by **SPIE** P.O. Box 10, Bellingham, Washington 98227-0010 USA Telephone +1 360 676 3290 (Pacific Time) SPIE.org Copyright © 2023 Society of Photo-Optical Instrumentation Engineers (SPIE).

Copying of material in this book for internal or personal use, or for the internal or personal use of specific clients, beyond the fair use provisions granted by the U.S. Copyright Law is authorized by SPIE subject to payment of fees. To obtain permission to use and share articles in this volume, visit Copyright Clearance Center at copyright.com. Other copying for republication, resale, advertising or promotion, or any form of systematic or multiple reproduction of any material in this book is prohibited except with permission in writing from the publisher.

Printed in the United States of America by Curran Associates, Inc., under license from SPIE.

Publication of record for individual papers is online in the SPIE Digital Library.



Paper Numbering: A unique citation identifier (CID) number is assigned to each article in the Proceedings of SPIE at the time of publication. Utilization of CIDs allows articles to be fully citable as soon as they are published online, and connects the same identifier to all online and print versions of the publication. SPIE uses a seven-digit CID article numbering system structured as follows:

• The first five digits correspond to the SPIE volume number.

• The last two digits indicate publication order within the volume using a Base 36 numbering system employing both numerals and letters. These two-number sets start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B ... 0Z, followed by 10-1Z, 20-2Z, etc. The CID Number appears on each page of the manuscript.

Contents

xvii Conference Committee

Part One

	MACHINE BUILDING SYSTEM AND STRUCTURE OPTIMIZATION
12790 02	Modeling and analysis on in-line four-cylinder vehicle engine system [12790-314]
12790 03	SMA trigger hood pop-up mechanism and driving performance [12790-5]
12790 04	Study on improving purification flow during the overhaul of the RCV system of CPR1000 unit [12790-303]
12790 05	Transportation structure monitoring technology in a steel company based on intelligent identification [12790-185]
12790 06	Buckling modal analysis of a rotary steering drilling tool [12790-328]
12790 07	Design of the electric machine emulator system with interface parameters based on multi-disciplinary cooperative optimization [12790-79]
12790 08	Research on unitized loading of outfitting pallets for large ocean-going passenger ships [12790-111]
12790 09	A multi-constrained takeaway navigation system based on ant colony algorithm [12790-240]
12790 0A	Early warning obstacle avoidance system for delivery vehicles [12790-298]
12790 OB	Research on model-based development tools of electrical/electronic architecture [12790-12]
12790 OC	Research on backup mode switching of train control system based on vehicle-train communication [12790-69]
12790 OD	Collaborative passenger flow control model and linearization operator considering platform capacity constraints in metro system [12790-85]
12790 OE	Research on AUTOSAR software architecture technology for intelligent and connected vehicles [12790-3]
12790 OF	Research on evaluation system of simulation test based on driving scenarios for L1-L2 autonomous driving [12790-2]
12790 0G	A dynamic wheel load measurement system for the formula student race car [12790-102]

12790 OH	Research on combined driving assistant system based on pedestrian crossing scene [12790-288]
12790 01	Rutting mechanism of road intersections under the influence of autonomous truck platoon [12790-236]
12790 OJ	Dynamic scheduling optimization of AGVs in automated container terminals under uncertainty [12790-218]
12790 OK	Safety fusion design of cab modeling structure based on finite element analysis [12790-251]
12790 OL	Design of digital twin system for creep-fatigue life management [12790-89]
12790 OM	Continuous scenarios automatic generation method for high-level automatic driving simulation test [12790-228]
12790 ON	Research on electromagnetic immunity testing scheme for passenger car anti-lock braking system [12790-221]
12790 00	Mean sensitization of discrete dynamical systems governed by linear operators [12790-7]
12790 OP	Designing of intelligent medical track vehicle scheduling system [12790-249]
12790 0Q	Actual passing capacity calculation-simulation verification framework and operation diagram structure analysis of high-speed railway [12790-244]
12790 OR	Structural optimization design of LNG unloading arm based on finite element analysis [12790-153]
12790 OS	Nonlinear dynamic performance model of mixed-flow turbofan engine in steady state based on characteristic diagram correction [12790-320]
12790 OT	Vehicle-in-loop simulation test research for autonomous vehicle [12790-302]
12790 OU	Research on the framework of automatic evaluation system for test results of high-level automated driving system [12790-278]
12790 OV	Production risk of shipping enterprise recognition and assessment based on the improvement of work breakdown structure-risk breakdown structure method [12790-259]
12790 OW	Matching and simulation of EV power system based on customer demands [12790-290]
12790 OX	A method for automatic classification of railway dispatching commands based on deep learning [12790-192]
12790 OY	A cyber-physical system based strategy for collaborative mixed traffic flow in bottleneck sections inside motorway tunnels [12790-183]
12790 OZ	Modeling and analyzing of radio communication in shunting protection system [12790-30]

12790 10	The research on implementation of dual-channel synopsys design constraints (SDC) in embedded systems [12790-253]
12790 11	Design of trajectory tracking control system for deep-sea polymetallic sulfide mining vehicle [12790-109]
12790 12	Structural analysis and climbing mechanism test of integrated intelligent tower building machine for Lingdingyang Bridge on Shenzhong-Zhongshan Link [12790-17]
12790 13	Design and simulation of control strategy of linear switched reluctance motor for automatic translation door [12790-152]
12790 14	Optimisation of container space allocation in automated terminal yards [12790-295]
12790 15	Mechanical structure design of a fast and stable tracking servo system [12790-213]
12790 16	Narrow-band scrambling technique with adjustable frequency [12790-199]
12790 17	Fatigue performance of orthotropic steel bridge deck based on measured fatigue load model [12790-323]
12790 18	Proportional pressure control system for static load hydraulic cylinder based on electrically controlled one-way valve [12790-97]
12790 19	Analysis of the safety production situation of Yangtze River based on gray system theory [12790-286]
12790 1A	Simulation analysis of influencing factors on vehicle engine cooling system [12790-172]
12790 1B	Optimal pressure prediction of R744 heat pump system based on PSO-BP-ANN model [12790-219]
12790 1C	Research and implementation of the blockchain-based supply chain information system [12790-306]
	SIGNAL PROCESSING AND METHOD ADAPTIVE RESEARCH

- 12790 1D A deep learning short-term load forecasting method for extreme scenarios [12790-227]
- 12790 1E Parking curve optimization for oblique slots in multi-obstacle environment [12790-177]
- 12790 1F Shift strategy optimization of pure electric MPV based on multi island genetic algorithm [12790-112]
- 12790 1G An improved TSBP scheme for RUL estimation using migratory linear regression model and Beta-KDE method [12790-257]

12790 1H	Research on the application of advanced vehicle in loop simulation test approach for evaluating ACC [12790-117]
12790 11	Optimization of test methods for complex scenarios of urban rail on-board equipment [12790-67]
12790 1J	Construction of contingency estimation method for overseas oil and gas acquisition evaluation based on risk quantification [12790-52]
12790 1K	Research on evaluation method of coupling between transport capacity and passenger flow of urban rail transit line based on passenger flow characteristics [12790-175]
12790 1L	A method for evaluating the passing capacity of the block post in the hub with multiple rail lines [12790-239]
12790 1M	Fault diagnosis method of point machine based on vibration signal [12790-188]
12790 1N	Research on abnormal detection method of rail fastener based on YOLOV5 [12790-105]
12790 10	General-purpose FPSO acceleration load calculation error correction [12790-165]
12790 1P	Research on deep learning-based instruction action recognition method for assistant duty officers [12790-64]
12790 1Q	Design of radiator optimization method with component position parameters based on thermal-fluid coupling [12790-220]
12790 1R	Research on vehicle-cargo matching problem based on deep Q-network [12790-198]
12790 15	A two-stage heuristic algorithm for high-quality initial solution generation in MTVRPTW [12790-86]
12790 IT	Research on order selection method of ship outfitting parts production [12790-147]
12790 IU	Research on wheel polygon order recognition technology based on spatial spectrum [12790-106]
12790 1V	Research on tracking interval of urban rail train based on vehicle-vehicle communication [12790-73]
12790 1W	Wireless resource multiplexing allocation algorithm for vehicle-vehicle communication in 5G network [12790-81]
12790 1X	Dynamic location of muti-facility with curved demand [12790-160]
12790 IY	Factors affecting compensated capacitor faults based on nonparametric test methods [12790-282]
12790 1Z	Comparative analysis of division method of traffic accident black spots in highway off-ramp area [12790-289]

12790 20	Improved traffic flow estimation based on integrated learning methods [12790-243]
12790 21	Research on selective activation of transit signal priority and signal timing optimization [12790-88]
12790 22	Study on APS aerodynamic numerical calculation method based on market [12790-203]
12790 23	Analysis and prediction of bus stop loss time under rainfall conditions [12790-309]
12790 24	Multi-objective task offloading strategy based on partial computing resource optimization in edge computing of internet of vehicles [12790-41]
12790 25	Metamorphic dexterous hand based on joint coupling drive [12790-66]
12790 26	Study on urban road network travel time reliability and its model [12790-310]
12790 27	The benefit and design method of reduced thrust takeoff for civil aircraft [12790-58]
12790 28	Multi-objective optimization study of driver's airbag parameters [12790-55]
12790 29	District-oriented traffic signal timing optimization algorithm: a study in smart town transportation [12790-180]
12790 2A	Simulation and analysis of personnel evacuation in fully enclosed sound barrier road sections [12790-94]
12790 2B	Road blind area analysis technique based on image convolution processing signal [12790-258]
12790 2C	Research on intelligent driving technology based on acoustic vision fusion [12790-15]
12790 2D	Study on crew scheduling considering duration balance for high-speed railway: an approach based on ant colony optimization [12790-294]
12790 2E	Design and application research of airborne LVDS digital video signal conversion [12790-312]
12790 2F	A study on electric vehicle routing problem with time windows and multiple types of charging stations [12790-170]
12790 2G	Evolution characteristics of precipitation phase in winter and its application in expressway weather forecast [12790-33]
12790 2H	Connected autonomous vehicle driving path optimization method for unsignalized intersections [12790-22]
12790 21	Experimental study on lateral transmission characteristics of vibration wave under the operation of dynamic track stabilizer [12790-229]

12790 2J	Research and evaluation of tractor and semi-trailer low-speed turning [12790-150]
12790 2K	Installation and debugging supervision for signal system renovation of urban rail transit [12790-299]
12790 2L	Simulation analysis and construction optimization measures of underground excavation method in subway station in Loess geological region [12790-25]
12790 2M	Research on the warning effect of human-machine takeover signal of intelligent vehicle based on driving simulator [12790-158]
12790 2N	Dynamic simulation and improved non-destructive testing method for vertical vibratory compaction of large thickness water-stabilized layers [12790-46]
12790 20	Prediction of dynamic navigation information of unmanned surface vehicles based on Bayesian optimization LSTM [12790-201]
12790 2P	Research on hardware in the loop simulation error based on driver assistance function testing [12790-207]
12790 2Q	Research on high speed magnetic levitation tracking time calculation model and auxiliary stop area location setting [12790-131]
12790 2R	Design of upper limb posture detection and trajectory matching based on motion capture [12790-256]

MACHINE SIMULATION AND ARTIFICIAL INTELLIGENCE MEASUREMENT AND CONTROL

- 12790 2S Integrated optimization of passenger flow control and bus-bridging on oversaturated urban rail transit lines [12790-114]
- 12790 2T Simulation of pedestrian lane changing behavior in asymmetric OD scenario [12790-277]
- 12790 2U Location and capacity determination model of electric vehicle charging station based on charging demand forecast [12790-16]
- Experimental study and dynamic performance analysis of a metro vehicle [12790-19] 12790 2V
- 12790 2X Multi-objective planning of electric vehicle charging pile considering photovoltaic power **uncertainty** [12790-59]
- 12790 2Y Coordinated control of multi node loads in full scale wind turbine blade static test [12790-80]
- 12790 2Z A modified artificial fish swarm algorithm for unit commitment optimization [12790-26]
- 12790 30 Simulation of metro vehicle wheel dynamic damage under the combined action of shock wave and fragments [12790-28]

12790 31	Rail surface anomaly detection based on deep learning [12790-101]
12790 32	Research on dynamic characteristic modeling and fault simulation of solenoid directional valve [12790-269]
12790 33	Distribution model of retail store based on computer simulation optimization [12790-123]
12790 34	Ride comfort analysis and optimization of 8×8 wheeled armored vehicle based on ADAMS/car software [12790-78]
12790 35	Energy management strategy for plug-in hybrid electric vehicles based on improved annealing algorithm [12790-36]
12790 36	Research on dynamic load emulation algorithm for electric vehicle driving motor test bench [12790-181]
12790 37	Iterative learning control of train internal pressure under extreme tunnel conditions [12790-182]
12790 38	Research on model predictive control of metro train based on input blocking strategy [12790-161]
12790 39	Coordinated arterial control at roundabout and adjacent intersections based on delays [12790-209]
12790 3A	Bearing fault diagnosis optimization of probabilistic neural network based on artificial jellyfish search algorithm [12790-9]
12790 3B	Research on vehicle ESP algorithm testing based on driving simulator [12790-301]
12790 3C	Study on the influence of speed limit sign on driver's speed choice [12790-35]
12790 3D	Study on load invariance control of four-link constant support hanger [12790-247]
12790 3E	Dynamics analysis of higher speed bogie with inner axle box bogie [12790-128]
12790 3F	Research of the motor pump unit's vibration [12790-317]
Part Two	

12790 3G	Meshing stiffness analysis of gear reducer for shield machine considering temperature effect [12790-91]
12790 3H	Electric vehicle path optimization study considering electricity and goods distribution [12790-291]
12790 31	Vibration characteristics analysis of loader gearbox [12790-296]

12790 3J	A control framework for turboshaft engine based on thermo-gas-dynamic model [12790-127]
12790 3K	Delay compensation integrated distributed model predictive platooning control for intelligent trucks [12790-173]
12790 3L	Evaluation of energy management for a hybrid vehicle [12790-237]
12790 3M	Internal pressure iterative learning control for high-speed trains based on condition and performance matching under morphologically-similar tunnel pressure waves [12790-211]
12790 3N	Simulation on turning blind area early warning control model for large vehicle based on PC- crash [12790-134]
12790 30	Adams-based performance optimization of mining dump trucks [12790-223]
12790 3P	Dynamics simulation of crawler excavator over obstacle based on Recurdyn [12790-222]
12790 3Q	Research on dynamic positioning PID controller of rake suction dredger based on improved particle swarm optimization algorithm [12790-77]
12790 3R	The simulation and optimization of passenger flow organization in Lanzhou West hub based on AnyLogic [12790-191]
12790 3S	Research on equivalent capacitance model of couplings of EMU [12790-202]
12790 3T	Study on the thermal environment evolution mechanism of a key part of a vehicle under fuel tank fire [12790-205]
12790 3U	Prediction for geometric degradation of track on machine learning [12790-60]
12790 3V	Research status and prospect of pulsating active control of hydraulic pipeline [12790-119]
12790 3W	Study of the spacing of anti-slip piles on the force characteristics of tunnels under landslide loading [12790-155]
12790 3X	Predictive current control based on dual vector permanent magnet synchronous motor model [12790-11]
12790 3Y	Analysis of safety performance of guardrail after paving on expressway pavement [12790-63]
12790 3Z	Evaluation of individual ecological driving behavior based on vehicle specific power distribution [12790-53]
12790 40	A multi-target flexible workshop scheduling algorithm for shipbuilding [12790-297]
12790 41	Fault diagnosis of rolling bearing based on convolutional neural network and transfer learning [12790-27]
12790 42	Vibration response analysis of overlapped tunnels [12790-29]

12790 43	Strength analysis of side frame end for single-side bulk carrier [12790-214]
12790 44	Study on controllable suspension force of AC coupled maglev [12790-96]
12790 45	Analysis of the causes of collision damage for electric two-wheeled vehicle riders based on heterogeneity and nonlinear models [12790-300]
12790 46	Design and analysis of telescopic cylinder of special-shaped watertight device [12790-156]
12790 47	Backstepping sliding mode control for flight attitude of quadrotor UAVs [12790-194]
12790 48	Application of fuzzy PI algorithm in voltage-mode pulse width modulation rectifier [12790-246]

INTELLIGENT SENSING AND DATA ACQUISITION MEASUREMENT

- 12790 49 Consistency check of power fault multi-source heterogeneous big data under common factor structure [12790-329]
- 12790 4A Identifying and analyzing heavy truck stops from GPS data by grid processing [12790-115]
- 12790 4B Research on distribution rules of geohazards along a transmission line in Ganzi Prefecture, Sichuan Province [12790-271]
- 12790 4C Experimental study on lateral resistance of ballast bed under the operation of dynamic track stabilizer with different parameters [12790-116]
- 12790 4D A practical optimization model for maintenance scheduling in power grid [12790-331]
- 12790 4E Research on the electricity market clearing model with CCUS constraints [12790-316]
- 12790 4F Identification and optimization of vehicle vibration and noise [12790-196]
- 12790 4G Reliability of distribution network based on entity extraction model of characteristic spectrum [12790-276]
- 12790 4H Power load forecasting based on double mapping improved frog leaping algorithm [12790-13]
- 12790 41 Optical resolution requirements for effective deep learning-based ship recognition [12790-313]
- 12790 4J Research on the design and optimal operation strategy of a wind-solar-storage complementary coupling system for chemical industry parks [12790-250]
- 12790 4K Research on simulation in loop test platform based on monocular camera [12790-56]

12790 4M	Experimental study and numerical modeling of the ballast track subsidence variation under dynamic track stabilizer operation [12790-193]
12790 4N	Key node identification of container transport network based on muti-layer complex network theory [12790-14]
12790 40	Improved transcenter vehicle tracking algorithm based on attention mechanism feature fusion [12790-113]
12790 4P	Research on the ratio of drop and pull vehicles between container port area and inland warehouse [12790-76]
12790 4Q	25HZ phase-sensitive rail circuit principle and troubleshooting analysis [12790-70]
12790 4R	Research on speech recognition technology for railway dispatching [12790-83]
12790 4S	Research on the status quo OD matrix of Lanzhou City based on situation data [12790-263]
12790 4T	Modeling and analysis of public transportation trip-chain based on multi-source big data [12790-132]
12790 4U	Characteristics and influence factors exploration of conventional bus stop ridership in Beijing using multi-source data [12790-49]
12790 4V	Behavior trajectory prediction research of adjacent vehicles based on LSTM [12790-215]
12790 4W	Numerical simulation analysis of the shrinking fit of ultra-high pressure tubular reactor [12790-307]
12790 4X	Sound detection based highway accident detection and warning device [12790-87]
12790 4Y	Container-based low-delay microservice data offloading and processing for distribution substation area gateway [12790-216]
12790 4Z	Container load prediction algorithm based on convolution neural network and self-attention [12790-270]
12790 50	Hydraulic pump fault diagnosis based on improved empirical wavelet transform and kernel extreme learning machine [12790-174]
12790 51	Research on vehicle attitude detection method based on inertial sensor [12790-45]
12790 52	Design on regional medium and long-term electricity market mechanism for flexible allocation [12790-32]
12790 53	Autoencoder-based feature extraction for power time series data considering social information [12790-321]

Route planning for chemical ships that takes into account marine rescue resources [12790-124]

12790 4L

12790 54	Transfer passenger flow analysis of Chongqing rail transit based on smart card data [12790-40]
12790 55	Research on right turn merging conflicts at intersection based on vehicle trajectory data [12790-38]
12790 56	Named entity recognition of railway dispatching command based on BiLSTM-CRF [12790-232]
12790 57	Truck speed prediction with a simple two-stage neural network using GPS data and Monte Carlo (MC) dropout [12790-138]
12790 58	Pressure sensor failure simulation [12790-242]
12790 59	Research on snow cover distance model for tunnel entrance/exit section in cold region under multi-parameter coupling conditions [12790-186]
12790 5A	Sensitivity analysis of steam turbine unit real-time data based on energy consumption characteristics [12790-311]
12790 5B	Driver distraction recognition with pose-aware two-stream convolutional neural network [12790-21]
12790 5C	Correlation between driver visual characteristics and lane change parameters in urban long- term work zone [12790-103]
12790 5D	A mixed-integer linear optimization problem for highway emergency vehicle routing [12790-318]
12790 5E	Research on low frequency sound absorption characteristics based on combined coiled acoustic metamaterials [12790-281]
12790 5F	Research on the collaborative search problem of unmanned surface vehicles [12790-137]
12790 5G	Research on the identification of modal parameters of ship structure based on fiber Bragg grating sensor [12790-275]
12790 5H	Non-visual effects of CCT and illuminance and driving task on driver's mood: evidence from an EEG study [12790-260]
12790 51	Stability studies of grid with voltage-source converters [12790-287]
12790 5J	Modified one-dimensional model for mixed oil prediction of refined oil pipeline [12790-57]

TRANSPORTATION AND ROAD PLANNING DEVELOPMENT

- 12790 5K Research on parallel parking path planning based on the G-PSOA [12790-248]
- 12790 5L Capacity optimization of highway charging station considering charging guidance mechanism [12790-34]

12790 5M	Research on optimization of urban public transport network based on ant colony algorithm [12790-18]
12790 5N	Study on layout optimization of logistics facilities based on hybrid algorithm [12790-184]
12790 50	Research on reverse logistics network planning of large ocean going passenger ship under uncertain conditions [12790-157]
12790 5P	Risk assessment of navigational safety of coast guard vessels based on analytic hierarchy cloud model theory [12790-235]
12790 5Q	Multi-modal traffic flow assignment in hypergraph network [12790-231]
12790 5R	Study on time-sharing pricing of rail transit for peak traffic mitigation [12790-74]
12790 55	Path planning for obstacle avoidance of unmanned vehicles based on Frenet coordinates and B-spline curves [12790-154]
12790 5T	Ship routing problem for steel enterprises alongside the Yangtze River considering carbon emissions [12790-176]
12790 5U	Optimization of logistics terminal distribution under the background of intelligent logistics [12790-65]
12790 5V	Optimization of lane configuration of highway toll stations considering short-time traffic flow [12790-267]
12790 5W	Study on optimization of aviation cold chain logistics process in post-epidemic era [12790-44]
12790 5X	Ant colony optimization-based multi-objective dispatching strategy for forklifts in 2D warehouses [12790-305]
12790 5Y	Flexible hybrid scheduling optimization study of railroad container hubs under sea-rail intermodal transport [12790-68]
12790 5Z	Research on air-centric hybrid hub-spoke express network design based on multiple transportation modes [12790-71]
12790 60	Optimization of container allocation in sea-rail combined transport based on NSGA II [12790-197]
12790 61	Improved LSTM model for short-term traffic flow prediction with weather consideration [12790-322]
12790 62	Construction and evaluation of urban logistics network system model in Guangdong Province based on complex network theory [12790-293]
12790 63	Warehouse AGV path planning based on Improved A* algorithm [12790-61]
12790 64	Quay crane scheduling under time-of-use electricity price [12790-200]

12790 65	Research on safety level evaluation of crew in distress after setting up marine emergency rescue stations with different intervals based on entropy weight cloud matter element model [12790-159]
12790 66	Research on segment speed optimization of ocean-going ship routes and its intelligent algorithm [12790-50]
12790 67	Choice behaviors of travelers with risk aversion under stochastic capacity [12790-208]
12790 68	Calibration of freeway car-following models under rain-fog environments [12790-31]
12790 69	Research on modeling and simulation of smart agriculture supply chain based on game theory [12790-233]
12790 6A	Shape optimization of 3D hydrofoil based on proxy model [12790-268]
12790 6B	Evaluation of navigation environment of northeast waterway based on extension cloud model [12790-93]
12790 6C	Coupling analysis of ship collision risk factors based on N-K model [12790-308]
12790 6D	Research on comprehensive optimization of high-speed railway timetabling and EMU operation scheduling [12790-168]
12790 6E	Passenger arrival distribution prediction model based on flight superposition [12790-217]
12790 6F	Path optimization of multi-type vehicle mixed distribution [12790-98]
12790 6G	Study on the efficiency of ship paddle wheel propeller [12790-210]
12790 6H	GUROBI-based modeling optimization of railway containerized transportation for passengers [12790-225]
12790 61	Rapid prediction of brake disc temperature of high-speed train based on back propagation neural network [12790-48]
12790 6J	Green vehicle routing problem of multi-depot and multi-vehicle cold chain logistics under time-varying road network [12790-272]
12790 6K	Prediction of road traffic accident severity based on multi-model fusion [12790-226]
12790 6L	Public transportation optimal dispatching strategy based on gray passenger flow forecasting [12790-99]
12790 6M	Research on emergency disposal technology and equipment for accident in highway tunnels [12790-304]
12790 6N	Optimization of a preceding vehicle collision risk prediction model based on SSA-LSTM [12790-37]

- 12790 60 Analysis of the causes of ship collision accidents [12790-195]
- 12790 6P Research on the deduction of urban railway network passenger flow based on train timetable [12790-212]
- 12790 6Q Suitable for loading and distributing modular containers [12790-285]
- 12790 6R Airport ground operation optimization based on two region macroscopic fundamental diagrams [12790-187]
- 12790 6S Research on logistics unmanned aerial vehicle (UAV) delivery system based on heuristic algorithm [12790-245]
- 12790 6T Robust optimization strategy of airport gate allocation for large busy airport [12790-179]
- 12790 6U The operation impact analysis of the new urban rail transit line access [12790-125]
- 12790 6V Research on the optimization of dynamic departure scheduling of single-route bus based on genetic algorithm [12790-54]
- 12790 6W Research on dynamic path planning based on future travel route planning using online maps [12790-6]
- 12790 6X BP neural network based on Qingdao City air logistics demand forecast [12790-315]

Conference Committee

Conference Chair

Said Easa, Ryerson University (Canada)

Conference Vice Chair

Wei Wei, Xi'an University of Technology (China)

Organizing Committee Chair

Qizhou Hu, Nanjing University of Science and Technology (China)

Technical Program Committee Chair

Qingsheng Zeng, Nanjing University of Aeronautics and Astronautics (China)

Organizing Committees Members

Shaojiang Dong, Chongqing Jiaotong University (China)
Jinlu Sheng, Chongqing Jiaotong University (China)
Hui Liu, Central South University (China)
Zhang Xiao, Safety Technology Development Department (China)
Yongkang Xing, Chongqing University (China)
Tianhuan Huang, South China University of Technology (China)
Shaohua Luo, Guizhou University (China)
Junxing Zhang, Guizhou University (China)
Jianbo Yang, Henan Academy of Sciences Institute of Geography (China)
Weili Zhang, Henan University of Economics and Law (China)
Xijun Yao, Inner Mongolia Land Surveying and Planning Institute (China)
Wei Luo, Hohai University (China)

Technical Program Committees Members

Yaoku Guo, Southeast University (China)
Ahmad Baharuddin Abdullah, Universiti Sains Malaysia (Malaysia)
Norhaliza Abdul Wahab, Universiti Teknologi Malaysia (Malaysia)
Keishi Matsuda, Matsuyama University (Japan)
Ikuo Ihara, Nagaoka University of Technology (Japan)
Wen-Tsai Sung, National Chin-Yi University of Technology, Taiwan (China) Luigi Fortuna, Università degli Studi di Catania

Marcello De Falco, Università Campus Bio-Medico di Roma (Italy) Laurent Ruhlmann, Université de Strasbourg (France) Haining Wang, Jiangxi University of Science and Technology (China) Qizhou Hu, Nanjing University of Science and Technology (China) Shaojiang Dong, Chongqing Jiaotong University (China)

Honghai Zhang, Nanjing University of Aeronautics and Astronautics (China)

Lei Zhang, Southeast University (China)

Yan Su, Nanjing University of Aeronautics and Astronautics (China) Xinsha Fu, South China University of Technology (China)

Zhiyu Zhu, Jiangsu University of Science and Technology (China) **Jinghua Guo**, Xiamen University (China)

Xiaoguang Huang, Guangzhou Baiyunshan Pharmaceutical Co. Ltd. (China)

Abdul Latif Bin Mohd Tobi, Universiti Tun Hussein Onn Malaysia (Malaysia)

Yanhui Huang, Rensselaer Polytechnic Institute (United States) Narottam Das, University of Southern Queensland (Australia)