

Session	#	Title	Authors
Oral Session A Navigation and Localization Systems 8 papers	A.1	Single Antenna Precise Angle Estimation by Exploiting Doppler Shift and its Application in Pedestrian Positioning	W. Komamiya; Suhua Tang; Sadao Obana
	A.2	A tightly coupled LIDAR-IMU SLAM in off-road environment	Zehua Zhang; Haiou Liu; Jianyong Qi; Kaijin Ji; Guangming Xiong; Jianwei Gong
	A.3	Intelligent Vehicles Localization Approaches between Estimation and Information: A Review	Mostafa Osman; Ahmed Hussein; Abdulla Al-Kaff
	A.4	Hypergrid: A Hyper-Fast ROS-Based Framework for Local Map Generation	Francisco Miguel Moreno; Omar EL-Sobky; Fernando Garcia; José María Armingol
	A.5	Mobility and Energy Aware Data Routing for UAV-Assisted VANETs	Hakim Ghazzai; Ahmed Khattab; Yehia Massoud
	A.6	Autonomous Car-Following Approach Based on Real-time Video Frames Processing	Mehdi Masmoudi; Hakim Ghazzai; Mounir Frikha; Yehia Massoud
	A.7	Analysis of Microstructures in Traffic Jams on Highways Based on Drone Observations	Yildirim Dülger; Michael Menth; Hubert Rehborn; Micha Koller
	A.8	Advanced Mapping and Localization for Autonomous Vehicles using OSM	Mustafa Ismail Ismail; Ahmed Tarek; Pablo Marin Plaza; David Martin Gomez; José María Armingol; Mohamed Abdelaziz
Oral Session B Active and Passive Safety Systems 8 papers	B.1	TCP and HTTP Flood DDOS Attack Analysis and Detection for space ground Network	Ahmed Ramzy; Essam Abdelwaness; Mohamed Hussein
	B.2	Pre-Crash Vehicle Control and Manoeuvre Planning: A Step Towards Minimizing Collision Severity for Highly Automated Vehicles	Masoumeh Parseh; Fredrik Asplund; Mikael Nybacka; Lars Svensson; Martin Törngren
	B.3	Forward Collision Prediction with Online Visual Tracking	Mohamed El-Sharkawy; Surya Kollazhi Manghat
	B.4	Extreme Gradient Boosting Machine Learning Algorithm For Safe Auto Insurance Operations	Najmeddine Dhieb; Hakim Ghazzai; Hichem Besbes; Yehia Massoud
	B.5	Fail-Operational Steer-By-Wire System for Autonomous Vehicles	Minglu Li; Lutz Eckstein
	B.6	Uncertainty-adaptive, risk based motion planning in automated driving	Clemens Markus Hruschka; Michael Schmidt; Daniel Töpfer; Sebastian Zug
	B.7	Design and development of an autonomous in-seat passenger state identification in a modern vigilance enabled public transportation system	Pranav Kedia; Pranav Aggarwal; Madhav Rao
	B.8	LiDAR based prediction and contact based validation of crash parameters for a preemptive restraint strategy	Gerald Joy Alphonso Sequeira; Robert Lugner; Shahabaz Afraj; Thomas Brandmeier
Oral Session C Telematics and Multi-Vehicle Systems 8 papers	C.1	A Survey of Network Intrusion Detection Systems for Controller Area Network	Guillaume Dupont; Jerry den Hartog; Sandro Etalle; Alexios Lekidis
	C.2	Introducing Various Novel Optimization Techniques for Task Allocation in Multi-Vehicles Systems	Wessam Shoman; Mahmoud El-Barrawy; Youssef Mekhail; Ali B. Bahgat; Elsayed I. Morgan
	C.3	Multi-Path Planning Method for UAVs Swarm Purposes	Angel Madridano; Abdulla Al-Kaff; David Martin Gomez; Arturo de la Escalera
	C.4	Cyclic Leader-Follower Strategy For Cooperative Unmanned Aerial Vehicles	Mohamed Mahfouz; Ahmed Taimour Hafez; Mahmoud Ashry; Gamal Elnashar
	C.5	Rapid Management of Unexpected Events in Urban V2I Communications Systems	Michael Lucic; Hakim Ghazzai; Ahmed Khattab; Yehia Massoud
	C.6	Novel Approach of Satellite Health Evaluation via Convolutional Neural Network	Hossam Emam Saudi; Ahmad Al-Zaidy; Wessam Hussein; Ehab Said
	C.7	Incremental Recommendation System for Large-scale Taxi Fleet in Smart Cities	Xiangpeng Wan; Hakim Ghazzai; Yehia Massoud
	C.8	Enhanced Urban Clustering in VANETs Using Online Machine Learning	Ghada Alsuhli; Ahmed Khattab; Yasmine Fahmy; Yehia Massoud
Oral Session D Advanced Driver Assistance Systems (ADAS) 8 papers	D.1	A Joint Simulation for Electric Vehicle Design based on MATLAB/Simulink and CarSim	Chengwei Zhu; Can Zhao; Zhiheng Li
	D.2	A tool chain for generating critical traffic situations for testing vehicle safety functions	Peter Riegl; Andreas Gaull; Michael Beitelschmidt
	D.3	Cooperative Strategical Decision and Trajectory Planning for Automated Vehicle in Urban Areas	Reza Dariani; Julian Schindler
	D.4	Towards Vision Zero: Addressing White Spots by Accident Data based ADAS Design and Evaluation	Lukas Stark; Simone Obst; Stefan Schoenawa; Michael Düring
	D.5	Scenario Mining for Development of Predictive Safety Functions	Hiroki Watanabe; Lukas Tobisch; Julia Rost; Johannes Wallner; Günther Prokop
	D.6	Path Planning with Discrete Geometric Shape Patterns	Bruno Simon; Peter Riegl; Andreas Gaull
	D.7	Explicit Negotiation Method for Cooperative Automated Vehicles	Matthias Nichting; Daniel Heß; Julian Schindler; Tobias Hesse; Frank Köster
	D.8	Autonomous Embedded System Enabled Real-Time 3-D Detector using Point Cloud and Camera	Mohamed El-Sharkawy; Dewant Katara

Oral Session E Vehicle Perception and Pattern Recognition 7 papers	E.1	Brain-in-Car: A Brain Activity-based Emotion Recognition Embedded System for Automotive	Abdelrahman El-Amin, Ahmed Attia, Omar Hammam, Osama Ivasi, Osama Ghozlan; Remon Raouf; Ahmed Hamed; Hany Eldawlatly; Magdy A. El-Masry; Seif Eldawlatly
	E.2	Multi-Grid based decision making at Roundabout for Autonomous Vehicles	Weichao Wang; Quang A. Nguyen; Wubin Ma; Jiefei Wei; Paul Chung; Qinggang Meng
	E.3	Object Detection Learning Techniques for Autonomous Vehicle Applications	Mehdi Masmoudi; Hakim Ghazzaï; Mounir Frikha; Yehia Massoud
	E.4	Raindrops on the Windshield: Performance Assessment of Camera-based Object Detection	Sinan Hasirlioglu; Fabio Reway; Tim Klingenberg; Andreas Riener; Werner Huber
	E.5	An Indoor Vision-Based Markov Localization Technique of a Quadrotor	Fares Ali; Omar AbdulAziz Fahmy; Ayman A. El-Badawy
	E.6	A Novel Method of Traversable Area Extraction Fused With LiDAR Odometry in Off-road Environment	Baochang Zhu; Guangming Xiong; Huijun Di; Kaijin Ji; Xin Zhang; Jianwei Gong
	E.7	Optimization of a CNN-based Object Detector for Fisheye Cameras	Payam Goodarzi; Martin Stellmacher; Michael Paetzold; Ahmed Hussein; Elmar Matthes
Oral Session F Vehicle/Engine and Cruise Control Systems 8 papers	F.1	Path-following and Adjustable Driving Behavior of Autonomous Vehicles using Dual-Objective Nonlinear MPC	Mohamed A Daoud; Mostafa Osman; Mohamed W Mehrez; William Melek
	F.2	Optimal Dubins Path Generation, System Identification and Control of a Paramotor	William Habib; Ramy Elsabbagh; Ayman A. El-Badawy
	F.3	Studying the Dynamical-based Closed Loop Robot Trajectory Behavior via LQR, SMC, and TDC	Mohamed Mostafa Rehaan; Roaa Altahtawy; Ali R Ibrahim; Catherine M. Elias; Dalia Mamdouh Mahfouz; Elsayed I. Morgan
	F.4	A Realistic Model Predictive Control using Single and Multiple Shooting in the Formulation of Non-linear Programming Model	Ali S. Hussein; Catherine M. Elias; Elsayed I. Morgan
	F.5	A Novel ROS-Based Joining and Leaving Protocols for Platoon Management	Amr Farag; Dalia Mamdouh Mahfouz; Omar M. Shehata; Elsayed I. Morgan
	F.6	Beneficial Performance Assessment of Voronoi-based Centroidal Scheme for Area Coverage	Shaza ElTobgy; Catherine M. Elias; Elsayed I. Morgan
	F.7	Deep Policy-Gradient Based Path Planning and Reinforcement Cooperative Q-Learning Behavior of Multi-Vehicle Systems	Ahmed M. Afifi; Omar Hesham Alhosainy; Catherine M. Elias; Omar M. Shehata; Elsayed I. Morgan
	F.8	Fuzzified Flocking Based Formation ROS-enabled Architecture of Heterogeneous Multi-Agent Systems	Omar M. Galal; Mustafa Alberri; Sherif Hegazy; Catherine M. Elias; Omar M. Shehata; Elsayed I. Morgan
Oral Session G Vehicular On-board Systems and Sensors 8 papers	G.1	Multi-Modal Deep Learning for Vehicle Sensor Data Abstraction and Attack Detection	Mark Rofail; Aysa Alsafty; Matthias Matousek; Frank Kargl
	G.2	Automotive Standards Compliance Cost Reduction by Mutual Integration between Automotive SPICE and IATF 16949:2016	Samer Sameh Makkar
	G.3	System Identification using LMS, RLS, EKF and Neural Network	Goekhan Akguen; Habib Khan; Marawan Azmy Hebaish; Diana Goehringer
	G.4	Optimal Operation of Electric Vehicle Parking Lots with Rooftop Photovoltaics	Helena Espassandim; Mohamed Lotfi; Gerardo J. Osório; Miadreza Shafie-khah; Omar M. Shehata; João Catalão
	G.5	Multi-Sensor Fusion for the Localization of a Small Vehicle in Outdoor Urban Driving Scenario	Mostafa Ayman; Youssef Ahmed Salem; Ahmed Hammam; Elsayed I. Morgan
	G.6	Ammonia Coverage Ratio and Input Ammonia Estimations Based on Unscented Kalman Filter in Diesel-engine SCR System	Shichun Yang; Song Feng; Zhengjie Zhang; Jian Liu; Xiaoyu Yan; Yaoguang Cao; Yang Hua; Fei Chen
	G.7	Normalization of Micro-Doppler Spectra for Cyclists Using High-Resolution Projection Technique	Patrick Held; Dagmar Steinhäuser; Alexander Kamann; Andreas Koch; Thomas Brandmeier; Ulrich Schwarz
	G.8	Shallow SqueezeNext: An Efficient & Shallow DNN	Mohamed El-Sharkawy; Jayan Kant Duggal