Programmable Systems for Intelligence in Automobiles

Results

Project Information

PRYSTINE
Grant agreement ID: 783190

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H2020-EU.2.1.1.
H2020-EU.2.1.1.7.

Overall budget
€ 50 293 730,79

EU contribution
€ 14 368 382,46

Coordinated by
INFINEON TECHNOLOGIES AG
Germany

Deliverables

Documents, reports (13)

Report on end user acceptance of automated driving (T7.3)
Summary report on D63

Summary report on test and demonstration of heavy duty vehicle (T6.6)
Summary report on test and demonstration of control sharing (T6.8)
Summary report on D68

Summary report on test and demonstration of fail-operational environment perception system (T6.5)
Summary report on D65

Summary report on test and demonstration of fail-operational LiDAR and RADAR devices (T6.1)
Summary report on D61

PRYSTINE standardization survey on standards involvement, technologies concerned, and plan (T7.4)
PRYSTINE standardization survey on standards involvement, technologies concerned, and plan (T7.4)

Final report on PRYSTINE standardization and technology achievements and future plans (T7.4)
Final report on PRYSTINE standardization and technology achievements and future plans T74

Intermediate report on PRYSTINE standardization and technology activities and plans (T7.4)
Intermediate report on PRYSTINE standardization and technology activities and plans (T7.4)

Summary report on test and demonstration of fail-operational communication and E/E architecture (T6.4)
Summary report on D64

Report on project clustering and synergies (T8.5)
Report on project clustering and synergies T85

Summary report on test and demonstration of the passenger vehicle demonstrator (T6.7)
Summary report on D67

Summary report on test and demonstration of fail-operational embedded control system (T6.2)
Summary report of D62

Demonstrators, pilots, prototypes (5)

Integration of perception embedded system (T5.5)
Integration of perception embedded system (T5.5): A fail operational embedded perception SW demonstrating RT data fusion control is delivered and demonstrated at a simulation level.

**Demonstrator on control sharing demonstrator integration (T5.8)**
Demonstrator on control sharing demonstrator integration (T5.8): Two demonstrators will integrate the control sharing module and assure the driver status monitoring as well as the optimized AI control algorithm.

**Demonstrator on passenger vehicle demonstrator integration (T5.7)**
Demonstrator on passenger vehicle demonstrator integration (T5.7): A Maserati prototype vehicle is integrated with both ADF sensors and embedded boards as well as with in-vehicle driver monitoring cameras and HMI.

**Demonstrator on heavy-duty vehicle demonstrator integration (T5.6)**
Demonstrator on heavy-duty vehicle demonstrator integration (T5.6): A heavy vehicle and trailer prototype fleet is equipped with all the required sensors and the E/E architecture communication is assured.

**Integration of fail operational embedded control SW (T5.2)**
Integration of fail operational embedded control SW (T5.2): A fail operational embedded control SW will be demonstrated to effective decoupling AI and conventional signal processing approaches into a dependable system architecture blue-print

Websites, patent fillings, videos etc. (1)

- **Project website: PRYSTINE web portal established and operating (T7.1)**

Publications

Conference proceedings (59)

- **Kvazaar 2.0 - fast and efficient open-source HEVC inter encoder**

**Author(s):** Ari Lemmetti, Marko Viitanen, Alexandre Mercat, Jarno Vanne

**Published in:** Proceedings of the 11th ACM Multimedia Systems Conference, 2020, Page(s) 237-242, ISBN 9781450368452
Validation and testing of the decentralized architecture for the occupancy grid filtering pipeline

Author(s): Kenan Softic, Haris Sikic, Amar Civgin, Georg Stettinger, Daniel Watzenig
Published in: 2020 IEEE 3rd Connected and Automated Vehicles Symposium (CAVS), 2020, Page(s) 1-6, ISBN 978-1-7281-9001-3
Publisher: IEEE
DOI: 10.1109/cavs51000.2020.9334587

Live State-of-Health Safety Monitoring for Safety-Critical Automotive Systems

Author(s): Andreas Strasser, Philipp Stelzer, Christian Steger, Norbert Druml
Publisher: IEEE
DOI: 10.1109/dsd.2019.00025

Effects of Target Displacement on Single-Snapshot DOA Estimation in Automotive Radar

Author(s): Haoqing Liu, Jonas Fuchs, Thomas Horn, Markus Gardill
Publisher: IEEE
DOI: 10.1109/wisnet51848.2021.9414108

UVGRTP 2.0: Open-Source RTP Library For Real-Time VVC/HEVC Streaming

Author(s): Aaro Altonen, Joni Rasanen, Alexandre Mercat, Jarno Vanne
Publisher: IEEE
DOI: 10.1109/icmew53276.2021.9455968

A Full-Featured, Enhanced Cost Function to Mitigate Motion Sickness in Semi- and Fully-autonomous Vehicles

Author(s): Isa Moazen, Paolo Burgio
Publisher: SCITEPRESS - Science and Technology Publications
DOI: 10.5220/0010446604970504

Functional Architecture for Autonomous Driving and its Implementation

Author(s): Rihards Novickis, Aleksandrs Levinskis, Roberts Kadikis, Vitalijs Fescenko, Kaspars Ozols
Automotive Radar Interference Mitigation using a Convolutional Autoencoder

Author(s): Jonas Fuchs, Anand Dubey, Maximilian Lubke, Robert Weigel, Fabian Lurz
Publisher: IEEE
DOI: 10.1109/radar42522.2020.9114641

Enabling Live State-of-Health Monitoring for a Safety-Critical Automotive LiDAR System

Author(s): Andreas Strasser, Philipp Stelzer, Christian Steger, Norbert Druml
Publisher: IEEE
DOI: 10.1109/sas48726.2020.9220052

Comparison and Application of Multiple 3D LIDAR Fusion Methods for Object Detection and Tracking

Author(s): Elif Aksu Tasdelen, Volkan Sezer
Publisher: IEEE
DOI: 10.1109/icrae50850.2020.9310833

Analysis of Amplitude and Phase Errors in Digital-Beamforming Radars for Automotive Applications

Author(s): Rakesh Yadav Kodari, Markus Rosch, Marlene Harter
Publisher: IEEE
DOI: 10.23919/irs48640.2020.9253874

Towards an Evaluation Methodology for the Environment Perception of Automotive Sensor Setups

Author(s): Viktor Rack, Wilhelm Stork, Maike Hartstern
Publisher: Research Gate

Investigation of the Angle Dependency of Self-Calibration in Multiple-Input-Multiple-Output Radars
Author(s): Alua Musralina, Rakesh Yadav Kodari, Marlene Harter
Publisher: IEEE
DOI: 10.1109/apmc47863.2020.9331706

Region based Single-Stage Interference Mitigation and Target Detection

Author(s): Anand Dubey, Jonas Fuchs, Venkat Madhavan, Maximilian Lubke, Robert Weigel, Fabian Lurz
Published in: 2020 IEEE Radar Conference (RadarConf20), 2020, Page(s) 1-5, ISBN 978-1-7281-8942-0
Publisher: IEEE
DOI: 10.1109/radarconf2043947.2020.9266434

Parallax-Tolerant 360 Live Video Stitcher

Author(s): Miko Atokari, Marko Viitanen, Alexandre Mercat, Emil Kattainen, Jarno Vanne
Published in: 2019 IEEE Visual Communications and Image Processing (VCIP), 2019, Page(s) 1-4, ISBN 978-1-7281-3723-0
Publisher: IEEE
DOI: 10.1109/vcip47243.2019.8965900

PMCW Waveform Cross-correlation Characterization and Interference Mitigation

Author(s): Andre Bourdoux, Marc Bauduin
Published in: European Radar Conference (EuRAD), 2021
Publisher: IEEE
DOI: 10.1109/eurad48048.2021.00051

IQ Imbalance Robust and Low PAPR OFDM Radar Waveform

Author(s): Andre Bourdoux, Marc Bauduin, Claude Desset
Publisher: IEEE
DOI: 10.1109/radar.2019.8835496

System Requirements Specification for Unmanned Aerial Vehicle (UAV) to Server Communication

Author(s): Patrick Purucker, Josef Schmid, Alfred Hob, Bjorn W. Schuller
Published in: 2021 International Conference on Unmanned Aircraft Systems (ICUAS), 2021, Page(s) 1499-1508, ISBN 978-1-6654-1535-4
Publisher: IEEE
DOI: 10.1109/icuas51884.2021.9476799

Towards Synchronisation of Multiple Independent MEMS-based Micro-Scanning LiDAR Systems
On registration of vector maps with known correspondences

Author(s): Ales Jelinek
Published in: 2018 ELEKTRO, 2018, Page(s) 1-6, ISBN 978-1-5386-4759-2
Publisher: IEEE
DOI: 10.1109/elektro.2018.8398367

AD-EYE: A Co-Simulation Platform for Early Verification of Functional Safety Concepts

Author(s): Naveen Mohan, Martin Törngren
Published in: SAE Technical Paper Series, 2019
Publisher: SAE International
DOI: 10.4271/2019-01-0126

PRYSTINE - PRogrammable sYSTems for INtelligence in AutomobilEs

Author(s): Norbert Druml, Georg Macher, Michael Stolz, Eric Armengaud, Daniel Watzenig, Christian Steger, Thomas Herndl, Andreas Eckel, Anna Ryabokon, Alfred Hoess, Sumeet Kumar, George Dimitrakopoulos, Herbert Roedig
Publisher: IEEE
DOI: 10.1109/dsd.2018.00107

1D MEMS Micro-Scanning LiDAR

Author(s): Norbert Druml Ievgeniia Maksymova Thomas Thurner Diederik van Lierop Marcus Hennecke Andreas Foroutan
Publisher: IARIA

FITness Assessment - Hardware Algorithm Safety Validation

Author(s): Andreas Strasser Philipp Stelzer Christian Steger Norbert Druml
Publisher: IARIA
A Retargetable Fault Injection Framework for Safety Validation of Autonomous Vehicles

Author(s): Yuting Fu, Andrei Terechko, Tjerk Bijlsma, Pieter J. L. Cuijners, Jeroen Redegeld, Ali Osman Ors
Publisher: IEEE
DOI: 10.1109/icsa-c.2019.00020

Speed-Up of MEMS Mirror’s Transient Start-Up Procedure

Author(s): Andreas Strasser, Philipp Stelzer, Christian Steger, Norbert Druml
Publisher: IEEE
DOI: 10.1109/sas.2019.8706041

PRYSTINE - Technical Progress After Year 1

Author(s): Norbert Druml, Omar Veledar, Georg Macher, Georg Stettinger, Solmaz Selim, Jakob Reckenzaun, Sergio E. Diaz, Mauricio Marcano, Jorge Villagra, Rutger Beekelaar, Johannes Jany-Luig, Marta Maria Corredoira, Paolo Burgio, Christian Ballato, Bjorn Debaillie, Lars van Meurs, Andrei Terechko, Fabio Tango, Anna Ryabokon, Andrei Anghel, Oguz Icoglu, Sumeet S. Kumar, George Dimitrakopoulos
Publisher: IEEE
DOI: 10.1109/dsd.2019.00063

Analysis of Sine Precision Influence on DOA Estimation Using the MUSIC Algorithm

Author(s): Sven Cordes, Snjezana Gligorevic, Peter Blicharski
Publisher: IEEE
DOI: 10.23919/irs.2019.8768162

Enhanced Interference Detection Method in Automotive FMCW Radar Systems

Author(s): Francesco Laghezza, Feike Jansen, Jeroen Overdevest
Published in: 2019 20th International Radar Symposium (IRS), 2019, Page(s) 1-7, ISBN 978-3-7369-9860-5
Publisher: IEEE
DOI: 10.23919/irs.2019.8767459

A Comparison of AI-Based Throughput Prediction for Cellular Vehicle-To-Server Communication

Author(s): Josef Schmid, Mathias Schneider, Alfred Hos, Bjorn Schuller
Published in: 2019 15th International Wireless Communications & Mobile
Low-temperature Cu-Cu thermocompression bonding for encapsulation of a MEMS Mirror

Author(s): Henri Ailas, Jaakko Saarilahti, Tuomas Pensala, Jyrki Kiihamaki
Publisher: IEEE
DOI: 10.23919/nordpac.2019.8760353

Traffic state prediction: A value added service for automated driving operations

Author(s): Henri Palm, Han Zwijnenberg, Luc Wismans
Published in: 13th ITS European Congress, 13, 3/06/19 → 6/06/19, 2019, Page(s) 1-7
Publisher: ITS2019

A study of a comfortable vehicle motion predictive control with no speed limit reference

Author(s): Jose A. Matute-Peaspan, Leonardo Gonzalez, Asier Zubizarreta
Publisher: IEEE
DOI: 10.1109/mtits.2019.8883285

Open-Source CiThruS Simulation Environment for Real-Time 360-Degree Traffic Imaging

Author(s): Teo Niemirepo, Juuso Toivonen, Marko Viitanen, Jarno Vanne
Published in: 2019 IEEE International Conference on Connected Vehicles and Expo (ICCVE), 2019, Page(s) 1-5, ISBN 978-1-7281-0142-2
Publisher: IEEE
DOI: 10.1109/iccve45908.2019.8965242

Pre-Crash Vehicle Control and Manoeuvre Planning: A Step Towards Minimizing Collision Severity for Highly Automated Vehicles

Author(s): Masoumeh Parseh, Fredrik Asplund, Mikael Nybacka, Lars Svensson, Martin Torngren
Published in: 2019 IEEE International Conference on Vehicular Electronics and Safety (ICVES), 2019, Page(s) 1-6, ISBN 978-1-7281-3473-4
Publisher: IEEE
DOI: 10.1109/icves.2019.8906431

A Deep Learning Approach for Location Independent Throughput Prediction
Author(s): Josef Schmid, Mathias Schneider, Alfred Hob, Bjorn Schuller
Published in: 2019 IEEE International Conference on Connected Vehicles and Expo (ICCVE), 2019, Page(s) 1-5, ISBN 978-1-7281-0142-2
Publisher: IEEE
DOI: 10.1109/iccv45908.2019.8965216

Wobbling Mode AlN-Piezo-MEMS Mirror Enabling 360-Degree Field of View LIDAR for Automotive Applications

Author(s): Tuomas Pensala, Jyrki Kiihamaki, Jukka Kynnarainen, James Dekker, Sergey Gorelick, Panu Pekko, Tapio Pernu, Oili Ylivaara, Feng Gao, Dmitry Morits
Publisher: IEEE
DOI: 10.1109/ultsym.2019.8925660

Demo: CiThruS Traffic Scene Simulator

Author(s): Teo Niemirepo, Juuso Toivonen, Mikko Pitkanen, Marko Viitanen, Jarno Vannen
Publisher: IEEE
DOI: 10.1109/vnc48660.2019.9062780

Uncertainty Analysis of Deep Neural Network for Classification of Vulnerable Road Users using micro-Doppler

Author(s): A. Dubey, J. Fuchs, T. Reissland, R. Weigel, F. Lurz
Publisher: IEEE
DOI: 10.1109/wisnet46826.2020.9037574

Tool-Supported Dependability Analysis of Semi-Markov Processes with Application to Autonomous Driving

Author(s): Stefan Kaalen, Mattias Nyberg, Carl Bondesson
Publisher: IEEE
DOI: 10.1109/icsrs48664.2019.8987701

Improved Pattern for ISO 26262 ASIL Decomposition with Dependent Requirements

Author(s): Christian Lidstrom, Carl Bondesson, Mattias Nyberg, Jonas Westman
Published in: 2019 IEEE 19th International Conference on Software Quality, Reliability and Security Companion (QRS-C), 2019, Page(s) 28-35, ISBN 978-1-
Are Consumers Ready to Adopt Highly Automated Passenger Vehicles? Results from a Cross-national Survey in Europe

Author(s): Ilias Panagiotopoulos, George Dimitrakopoulos, Gabriëlë Keraité, Urte Steikuniene
Publisher: SCITEPRESS - Science and Technology Publications
DOI: 10.5220/0009398804730480

Beam-steering MOEMS system based on a resonant piezoMEMS mirror and a phase-locked loop controller

Author(s): Konsta Ruotsalainen, Dmitry Morits
Published in: MOEMS and Miniaturized Systems XX, Proceedings Volume 11697, MOEMS and Miniaturized Systems XX; 1169701 (2021), 2021, Page(s) 16, ISBN 9781510642300
Publisher: SPIE
DOI: 10.1117/12.2576871

Towards Equilibrium-based Interaction Modeling for Pedestrian Path Prediction

Author(s): Ariyan Bighashdel, Panagiotis Meletis, Gijs Dubbelman
Publisher: IEEE
DOI: 10.1109/itsc45102.2020.9294530

17.7 A 12mW 10GHz FMCW PLL Based on an Integrating DAC with 90kHz rms Frequency Error for 23MHz/µs Slope and 1.2GHz Chirp Bandwidth

Author(s): Pratap Tumkur Renukaswamy, Nereo Markulic, Sehoon Park, Anirudh Kankuppe, Qixian Shi, Piet Wambacq, Jan Craninckx
Published in: 2020 IEEE International Solid-State Circuits Conference - (ISSCC), Period16/02/20 → 20/02/20, 2020, Page(s) 278-280, ISBN 978-1-7281-3205-1
Publisher: IEEE
DOI: 10.1109/isscc19947.2020.9063080

Short Term Prediction Services From Pro-Active Urban Traffic Management

Author(s): L.C.W. Suijs, E. Mein, Technolution M. de Kievit
Published in: European Transport Conference 2020, Date: 2020-9-9 to 2020-9-11, 2020, Page(s) 14
Reachability Estimation in Dynamic Driving Scenes for Autonomous Vehicles

Author(s): Medina-Lee, Juan Felipe; Artüñedo, Antonio; Godoy, Jorge; Villagra, Jorge
Published in: 2020 IEEE Intelligent Vehicles Symposium, 2020
Publisher: Institute of Electrical and Electronics Engineers

Generative Adversarial Network based Extended Target Detection for Automotive MIMO Radar

Author(s): Anand Dubey, Jonas Fuchs, Maximilian Lubke, Robert Weigel, Fabian Lurz
Publisher: IEEE
DOI: 10.1109/radar42522.2020.9114564

Enabling Fail-Operational Behavior and Degradation for Safety-Critical Automotive 3D Flash LiDAR Systems

Author(s): Andreas Strasser, Philipp Stelzer, Felix Warmer, Christian Steger, Norbert Druml
Publisher: IEEE
DOI: 10.1109/dsd51259.2020.00079

Traded Control Architecture for Automated Vehicles Enabled by the Scene Complexity Estimation

Author(s): Juan Felipe Medina-Lee1a, Jorge Villagra1band Antonio Artüñedo1
Published in: 4th International Conference on Computer-Human Interaction Research and Applications, 2020
Publisher: SCITEPRESS - Science and Technology Publications

AUTOMOTIVE RADAR INTERFERENCE MITIGATION WITH UNFOLDED ROBUST PCA BASED ON RESIDUAL OVERCOMPLETE AUTO-ENCODER BLOCKS

Author(s): Nicolae-Cătălin Ristea, Andrei Anghel, Radu Tudor Ionescu, Yonina C. Eldar
Published in: CVPR 2021 Embedded Vision Workshop, 2021
Publisher: eprint arXiv:2010.10357

Open-Source RTP Library for High-Speed 4K HEVC Video Streaming
Author(s): Aaro Altonen, Joni Rasanen, Jaakko Laitinen, Marko Viitanen, Jarno Vanne
Publisher: IEEE
DOI: 10.1109/mmssp48831.2020.9287162

A Rapid Prototyping System, Intelligent Watchdog and Gateway Tool for Automotive Applications

Author(s): Maid Dzambic, Christoph Kreuzberger, Omar Veledark and Georg Macher
Published in: 2021 IEEE 18th International Conference on Software Architecture Companion (ICSA-C), 2021
Publisher: IEEE
DOI: 10.1109/icsa-c52384.2021.00037

Graphic Interfaces in ADAS - from requirements to implementation

Author(s): Alessio Masola, Cristian Gabbi, Andrea Castellano, Nicola Capodieci, Paolo Burgio
Published in: Proceedings of the 6th EAI International Conference on Smart Objects and Technologies for Social Good, 2020, Page(s) 193-198, ISBN 9781450375597
Publisher: ACM
DOI: 10.1145/3411170.3411259

Feasability of Bluetooth 5.0 connectionless communications for I2V applications

Author(s): Juan Carlos Garcia Ortiz, Javier Silvestre-Blanes, Victor Sempere-Paya, Ruben Ponce Tortajada
Publisher: IEEE
DOI: 10.1109/etfa46521.2020.9211984

Fail-Operational Shock Detection and Correction of MEMS-based Micro-Scanning LiDAR Systems

Author(s): Philipp Stelzer, Andreas Strasser, Christian Steger, Norbert Druml
Publisher: IEEE
DOI: 10.1109/sas48726.2020.9220034

Programmable Systems for Intelligence in Automobiles (PRYSTINE): Technical Progress after Year 2


Publisher: IEEE
DOI: 10.1109/dsd51259.2020.00065

Bird’s-eye view image acquisition from simulated scenes using geometric inverse perspective mapping

Author(s): Daniels Janis Justs, Rihards Novickis, Kaspars Ozols, Modris Greitans

Published in: 2020 17th Biennial Baltic Electronics Conference (BEC), 2020, Page(s) 1-6, ISBN 978-1-7281-9444-8

Publisher: IEEE
DOI: 10.1109/bec49624.2020.9277042

Simulation-based Evaluation of Automotive Sensor Setups for Environmental Perception in Early Development Stages

Author(s): Maike Hartstern Viktor Rack, Mohsen Kaboli, and Wilhelm Stork

Published in: IEEE Intelligent Vehicles Symposium (IV) (IV 2020), 2020

Publisher: IEEE

Book chapters (6)

Integration of a RTT Prediction into a Multi-path Communication Gateway

Author(s): Josef Schmid, Patrick Purucker, Mathias Schneider, Rick vander Zwet, Morten Larsen, Alfred Höß


Publisher: Springer International Publishing
DOI: 10.1007/978-3-030-83906-2_16

Development of a Driver-State Adaptive Co-Driver as Enabler for Shared Control and Arbitration

Author(s): Andrea Castellano, Giuseppe Carbonara, Sergio Díaz, Mauricio Marcano, Fabio Tango, Roberto Montanari

Published in: HCI International 2020 – Late Breaking Posters - 22nd International Conference, HCII 2020, Copenhagen, Denmark, July 19–24, 2020,
Human-Automation Interaction Through Shared and Traded Control Applications

Author(s): Mauricio Marcano, Sergio Díaz, Joshue Pérez, Andrea Castellano, Elisa Landini, Fabio Tango, Paolo Burgio
Publisher: Springer International Publishing
DOI: 10.1007/978-3-030-39512-4_101

A Supervisor Agent-Based on the Markovian Decision Process Framework to Optimize the Behavior of a Highly Automated System

Author(s): A. Castellano, M. Karimshoushtari, C. Novara, F. Tango
Publisher: Springer International Publishing
DOI: 10.1007/978-3-030-78114-9_24

Shared Control Framework and Application for European Research Projects

Author(s): Mauricio Marcano, Sergio Diaz, Myriam Vaca, Joshué Pérez, Eloy Irigoyen
Publisher: Springer International Publishing
DOI: 10.1007/978-3-030-57802-2_63

Deep Adaptive Multi-intention Inverse Reinforcement Learning

Author(s): Ariyan Bighashdel, Panagiotis Meletis, Pavol Jancura, Gijs Dubbelman
Publisher: Springer International Publishing
DOI: 10.1007/978-3-030-86486-6_13
Author(s): Vicent Ortiz Ortiz Castelló, Ismael Salvador Salvador Igual, Omar del Tejo Catalá, Juan-Carlos Perez-Cortes
Published in: Journal of Imaging, 6/12, 2020, Page(s) 142, ISSN 2313-433X
Publisher: MDPI
DOI: 10.3390/jimaging6120142

How Imitation Learning and Human Factors Can Be Combined in a Model Predictive Control Algorithm for Adaptive Motion Planning and Control
Author(s): Milad Karimshoushtari, Carlo Novara, Fabio Tango
Published in: Sensors, 21/12, 2021, Page(s) 4012, ISSN 1424-8220
Publisher: Multidisciplinary Digital Publishing Institute (MDPI)
DOI: 10.3390/s21124012

Real-Time Requirements for ADAS Platforms Featuring Shared Memory Hierarchies
Author(s): Nicola Capodieci, Paolo Burgio, Roberto Cavicchioli, Ignacio Sanudo Olmedo, Marco Solieri, Marko Bertogna
Published in: IEEE Design & Test, 2020, Page(s) 1-1, ISSN 2168-2356
Publisher: IEEE Computer Society
DOI: 10.1109/mdat.2020.3013828

Shared and traded control for human-automation interaction: a haptic steering controller and a visual interface
Author(s): Mauricio Marcano, Andrea Castellano, Sergio Díaz, Joshué Pérez, Fabio Tango, Elisa Landini, Paolo Burgio
Published in: Human-Intelligent Systems Integration, 3/1, 2021, Page(s) 25-35, ISSN 2524-4876
Publisher: Springer Nature
DOI: 10.1007/s42454-021-00030-6

Author(s): Maksims Ivanovs, Roberts Kadikis, Kaspars Ozols
Published in: Pattern Recognition Letters, 150, 2021, Page(s) 228-234, ISSN 0167-8655
Publisher: Elsevier BV
DOI: 10.1016/j.patrec.2021.06.030

From the Concept of Being “the Boss” to the Idea of Being “a Team”: The Adaptive Co-Pilot as the Enabler for a New Cooperative Framework
Author(s): Mauricio Marcano, Fabio Tango, Joseba Sarabia, Andrea Castellano, Joshué Pérez, Eloy Irigoyen, Sergio Díaz
A cascade steering shared controller with dual-level dynamic authority

Author(s): Mauricio Marcano, Sergio Díaz, Jose A. Matute, Eloy Irigoyen, Joshué Pérez
Published in: IFAC-PapersOnLine, 53/2, 2020, Page(s) 15353-15359, ISSN 2405-8963
Publisher: Elsevier
DOI: 10.1016/j.ifacol.2020.12.2349

Towards Synchronous Mode of Multiple Independently Controlled MEMS Mirrors

Author(s): Andreas Strasser, Philipp Stelzer, Christian Steger, Norbert Druml
Published in: IFAC-PapersOnLine, 52/15, 2019, Page(s) 31-36, ISSN 2405-8963
Publisher: Elsevier
DOI: 10.1016/j.ifacol.2019.11.645

Ground Segmentation Algorithm for Sloped Terrain and Sparse LiDAR Point Cloud

Author(s): Victor Jimenez, Jorge Godoy, Antonio Artunedo, Jorge Villagra
Published in: IEEE Access, 9, 2021, Page(s) 132914-132927, ISSN 2169-3536
Publisher: Institute of Electrical and Electronics Engineers Inc.
DOI: 10.1109/access.2021.3115664

Fast Angle Adaption of a MEMS-based LiDAR System

Author(s): Philipp Stelzer, Andreas Strasser, Christian Steger, Alberto Garcia, Norbert Druml
Published in: IFAC-PapersOnLine, 52/15, 2019, Page(s) 55-60, ISSN 2405-8963
Publisher: Elsevier
DOI: 10.1016/j.ifacol.2019.11.649

Merit-Based Motion Planning for Autonomous Vehicles in Urban Scenarios

Author(s): Juan Medina-Lee, Antonio Artuñedo, Jorge Godoy, Jorge Villagra
Published in: Sensors, 21/11, 2021, Page(s) 3755, ISSN 1424-8220
Publisher: Multidisciplinary Digital Publishing Institute (MDPI)
DOI: 10.3390/s21113755

Conceptual design of a trust model for perceptual sensor data of autonomous vehicles

Author(s): Lauri Halla-aho, Ethiopia Nigussie, Jouni Isoaho
Published in: Procedia Computer Science, 184, 2021, Page(s) 156-163, ISSN 1877-0509
Machine learning based motion planning approach for intelligent vehicles

**Author(s):** Antonio Artuñedo, G. Corrales, J. Villagra, J. Godoy
**Published in:** 2020 IEEE Intelligent Vehicles Symposium, 2020, 2020
**Publisher:** https://www.semanticscholar.org/

Estimating Magnitude and Phase of Automotive Radar Signals under Multiple Interference Sources with Fully Convolutional Networks

**Author(s):** Nicolae-Cătălin Ristea, Andrei Anghel, Radu Tudor Ionescu
**Published in:** 2020
**Publisher:** arXiv

Prystine – 360° Umfelderkennung für das automatisierte Fahren

**Author(s):** Marlene Harter, Alua Musralina, Joseena Memadathil
**Published in:** "Forschung im Fokus 2021" (fif) Offenburg University, University Research Magazine, 2021
**Publisher:** Offenburg University

Fully Convolutional Neural Networks for Automotive Radar Interference Mitigation

**Author(s):** Nicolae-Cătălin Ristea; Andrei Anghel; Radu Tudor Ionescu
**Published in:** ResearchGate, 2020
**Publisher:** ResearchGate
**DOI:** 10.36227/techrxiv.11919102.v1

Thesis dissertations (1)

Copper thermocompression for MEMS encapsulation (Master thesis)

**Author(s):** Ailas, Henri
**Published in:** 2019
**Publisher:** Aalto University
Datasets

Datasets via OpenAIRE (2)

Product-line assurance cases from contract-based design - online appendix

**Author(s):** Damir Nešić  
**Published in:** Zenodo

OPEN-KTH: An Open Lidar Dataset of KTH Campus Valhallavägen

**Author(s):** Mohan, Naveen; Sainte Catherine, Maxime  
**Published in:** Zenodo

**Last update:** 9 November 2022  
**Record number:** 216116

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