

RAFAŁ DŁUGOSZ – LIST OF PUBLICATIONS

A. Patents / patent applications

- [1] M. Banach, R. Długosz, P. Bogacki, “Methods and Apparatuses for Supporting Vehicle-to-Infrastructure Communication”, Publication number: EP4170389 (A1), CN116016576 (A), US2023131659 (A1) (2023-04-27); APTIV TECH LTD.
- [2] M. Banach, R. Długosz, P. Bogacki, “Methods and Apparatuses for Vehicle Position Determination”, Publication number: EP4170284 (A1), CN116017269 (A), US2023125780 (A1) (2023-04-27); APTIV TECH LTD.
- [3] M. Banach, P. Bogacki, R. Długosz, W. Dworakowski, “Method And Apparatus for Processing an Image of a Road to Identify a Region of the Image Which Represents an Unoccupied Area of the Road”, Publication number: EP4148667 (A1), CN115797380 (A), US2023084189 (A1) (2023-03-16); APTIV TECH LTD.
- [4] M. Banach, P. Bogacki, R. Długosz, W. Dworakowski, “Method and Apparatus for Processing an Image of a Road Having a Road Marker to Identify a Region of the Image which Represents the Road Marker”, Publication number: EP4148668 (A1), CN115797379(A), US2023082331 (A1) (2023-03-16); APTIV TECH LTD.
- [5] P. Bogacki, R. Długosz, M. Banach, “Method and Apparatus for Determining the Speed of a Vehicle Traveling Along a Road by Processing Images of the Road”, Publication number: EP4148689 (A1), CN115798225 (A), US2023083262 (A1) (2023-03-16); APTIV TECH LTD.
- [6] W. Dworakowski, M. Banach, R. Długosz, “Automated Driving System ”, Publication number: CN114212099 (A), EP3971049 (A1), US 2022/0089193 (A1) (2022-03-24); APTIV TECH LTD.
- [7] W. Dworakowski, M. Banach, R. Długosz, “Object Detection System with a Side Communication Channel”, Publication number: EP3951420 (A1), US 2022/0043134 (A1) (2022-02-18); APTIV TECH LTD.
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- [9] W. Dworakowski, R. Długosz, “Heating device” (1), Publication number: EP3672361 (B1), CN111343739 (B), US2020189523 (A1) (2021-07-07); APTIV TECH LTD.
- [10] W. Dworakowski, R. Długosz, “Heating device” (2), Publication number: EP3672362 (B1), CN111343732 (B), US2020192085 (A1) (2021-07-07); APTIV TECH LTD.
- [11] Marzena Banach and Rafał Długosz, “Method to Improve the Determination of a Position of a Roadside Unit, Road-Side Unit and System to Provide Position Information”, Publication number: US10924888 (B2), CN111065042 (B), EP3640665 (A1), US2020120444 (A1) (2020-04-24); APTIV TECH LTD.
- [12] Rafał Długosz, “Method for Identifying and Removing False Calibration Points Detected During the Camera Calibration”,
Defensive Publication, Research Disclosure database number 674021;
Published in the June 2020 paper journal;
Published digitally 01 May 2020 15:36 UT;
- [13] R. Długosz, W. Dworakowski, K. Gongolewski, “Method of identifying feature points of a calibration pattern within a set of candidate points”, Publication number: US10902640 (B2), EP3534334 (B1), US2019266752 (A1) (2019-09-06); APTIV TECH LTD.

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- [17] W. Dworakowski, K. Gongolewski, R. Długosz, “Method for Calibrating the Orientation of a Camera Mounted to a Vehicle”,
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- [18] M. Szulc, R. Długosz, P. Skruch, “Method of Tracking a Plurality of Objects in the Vicinity of a Host Vehicle” Publication number: EP3370085 (B1), US10679506 (B2), CN108535727 (B), US2018253974 (A1) (2020-06-09) APTIV TECH LTD.
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- [20] D. Borkowski, R. Długosz, “Method to Provide a Vehicle Environment Contour Polyline From Detection Data”, Publication number: CN108008379 (B), EP3318890 (B1), US10509980 (B2), US2018121750 (A1) (2019-12-17); APTIV TECH LTD.
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Bibliographic data: EP3336762 (A1) – 2018-06-20;
Application number: EP20160205140 (2016.12.19);
Priority number(s): EP20160205140 (2016.12.19);
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- [22] P. Bogacki, R. Długosz, M. Banach,
“Determining Position of the Central Point of Point Cloud Data”,
Application number: EP21216903.3; Date of filing: 22 December 2021 (in progress);
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- [23] P. Bogacki, R. Długosz, M. Banach,
“A Feature Describing the Shape of Spatially Distributed Data Set”,
Application number: EP21216903.1; Date of filing: 22 December 2021 (in progress);
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Application number: EP21216907.2; Date of filing: 22 December 2021 (in progress);
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B. Journal papers

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- [26] Zofia Długosz, Rafał Długosz, Tomasz Talaśka, “A novel, flexible circuit used to implement selected mathematical operations for AI algorithms optimized for hardware applications”, *Journal of Computational and Applied Mathematics*, Vol. 428, August 2023, 115160 <https://www.sciencedirect.com/science/article/abs/pii/S0377042723001048>
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- [28] Marzena Banach, Rafał Długosz, “A novel approach to cities’ assessment in terms of their implementation of smart city idea”, *Journal of Computational and Applied Mathematics*, Vol. 428, August 2023, 115161 www.sciencedirect.com/science/article/abs/pii/S037704272300105X
- [29] M. Banach, R. Długosz, T. Talaśka, W. Pedrycz, “Air Pollution Monitoring System with Prediction Abilities Based on Smart Autonomous Sensors Equipped with ANNs with Novel Training Scheme”, *Remote Sensing*, 2022, 14(2), 413; <https://www.mdpi.com/2072-4292/14/2/413>
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D. Conference papers

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