# Paul Newman

List of Publications by Year
in descending order



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|---|---|---|---|
| 122 papers | 7,796 citations | 361413 20 h-index | 395702 33 g-index |
| 123 all docs | 123 docs citations | 123 times ranked | 3819 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Listening for Sirens: Locating and Classifying Acoustic Alarms in City Scenes. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 17087-17096. | 8.0 | 17 |
| 2 | Depth-SIMS: Semi-Parametric Image and Depth Synthesis. , 2022, , . | | 2 |
| 3 | Fast-MbyM: Leveraging Translational Invariance of the Fourier Transform for Efficient and Accurate Radar Odometry. , 2022, , . | | 11 |
| 4 | What Goes Around: Leveraging a Constant-Curvature Motion Constraint in Radar Odometry. IEEE Robotics and Automation Letters, 2022, 7, 7865-7872. | 5.1 | 5 |
| 5 | The Hulk: Design and Development of a Weather-Proof Vehicle for Long-Term Autonomy in Outdoor Environments. Springer Proceedings in Advanced Robotics, 2021, , 101-114. | 1.3 | 0 |
| 6 | Self-supervised learning for using overhead imagery as maps in outdoor range sensor localization. International Journal of Robotics Research, 2021, 40, 1488-1509. | 8.5 | 13 |
| 7 | Learning to Correct Reconstructions from Multiple Views. , 2021, , . | | 0 |
| 8 | Look Here: Learning Geometrically Consistent Refinement of Inverse-Depth Images for 3D Reconstruction. International Journal of Pattern Recognition and Artificial Intelligence, 2021, 35, . | 1.2 | 0 |
| 9 | Multi-weather city: Adverse weather stacking for autonomous driving. , 2021, , . | | 7 |
| 10 | The Oxford Road Boundaries Dataset. , 2021, , . | | 0 |
| 11 | Contrastive Learning for Unsupervised Radar Place Recognition. , 2021, , . | | 8 |
| 12 | Kidnapped Radar: Topological Radar Localisation using Rotationally-Invariant Metric Learning. , 2020, , . | | 27 |
| 13 | The Oxford Radar RobotCar Dataset: A Radar Extension to the Oxford RobotCar Dataset. , 2020, , . | | 188 |
| 14 | Large-scale outdoor scene reconstruction and correction with vision. International Journal of Robotics Research, 2020, , 027836492093705. | 8.5 | 1 |
| 15 | kRadar++: Coarse-to-Fine FMCW Scanning Radar Localisation. Sensors, 2020, 20, 6002. | 3.8 | 17 |
| 16 | Radar as a Teacher: Weakly Supervised Vehicle Detection using Radar Labels. , 2020, , . | | 6 |
| 17 | On the Road: Route Proposal from Radar Self-Supervised by Fuzzy LiDAR Traversability. AI, 2020, 1, 558-585. | 3.8 | 7 |
| 18 | LiDAR Lateral Localisation Despite Challenging Occlusion from Traffic. , 2020, , . | | 5 |

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|---|---|---|---|
| 19 | Look Around You: Sequence-based Radar Place Recognition with Learned Rotational Invariance. , 2020, , . | | 21 |
| 20 | Keep off the Grass: Permissible Driving Routes from Radar with Weak Audio Supervision. , 2020, , . | | 6 |
| 21 | RSS-Net: Weakly-Supervised Multi-Class Semantic Segmentation with FMCW Radar. , 2020, , . | | 30 |
| 22 | Senseâ€“Assessâ€“eXplain (SAX): Building Trust in Autonomous Vehicles in Challenging Real-World Driving Scenarios. , 2020, , . | | 5 |
| 23 | Distant Vehicle Detection Using Radar and Vision. , 2019, , . | | 107 |
| 24 | I Can See Clearly Now: Image Restoration via De-Raining. , 2019, , . | | 54 |
| 25 | Radar-only ego-motion estimation in difficult settings via graph matching. , 2019, , . | | 70 |
| 26 | Fast Radar Motion Estimation with a Learnt Focus of Attention using Weak Supervision. , 2019, , . | | 44 |
| 27 | Training Object Detectors With Noisy Data. , 2019, , . | | 20 |
| 28 | What Could Go Wrong? Introspective Radar Odometry in Challenging Environments. , 2019, , . | | 30 |
| 29 | The Right (Angled) Perspective: Improving the Understanding of Road Scenes Using Boosted Inverse Perspective Mapping. , 2019, , . | | 23 |
| 30 | Donâ€™t Worry About the Weather: Unsupervised Condition-Dependent Domain Adaptation. , 2019, , . | | 10 |
| 31 | Online Inference and Detection of Curbs in Partially Occluded Scenes with Sparse LIDAR. , 2019, , . | | 13 |
| 32 | Generating All the Roads to Rome: Road Layout Randomization for Improved Road Marking Segmentation. , 2019, , . | | 2 |
| 33 | Resource-Performance Tradeoff Analysis for Mobile Robots. IEEE Robotics and Automation Letters, 2018, 3, 1840-1847. | 5.1 | 20 |
| 34 | Inferring Road Boundaries Through and Despite Traffic. , 2018, , . | | 12 |
| 35 | Multimotion Visual Odometry (MVO): Simultaneous Estimation of Camera and Third-Party Motions. , 2018, , . | | 37 |
| 36 | Reading between the Lanes: Road Layout Reconstruction from Partially Segmented Scenes. , 2018, , . | | 22 |

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|---|---|---|---|
| 37 | Geometric Multi-model Fitting with a Convex Relaxation Algorithm. , 2018, , . | | 20 |
| 38 | Semantic Classification of Road Markings from Geometric Primitives. , 2018, , . | | 7 |
| 39 | Imminent Collision Mitigation with Reinforcement Learning and Vision. , 2018, , . | | 11 |
| 40 | Fast Global Labelling for Depth-Map Improvement Via Architectural Priors. , 2018, , . | | 1 |
| 41 | Adversarial Training for Adverse Conditions: Robust Metric Localisation Using Appearance Transfer. , 2018, , . | | 70 |
| 42 | Meshed Up: Learnt Error Correction in 3D Reconstructions. , 2018, , . | | 3 |
| 43 | Surface Edge Explorer (see): Planning Next Best Views Directly from 3D Observations. , 2018, , . | | 21 |
| 44 | Precise Ego-Motion Estimation with Millimeter-Wave Radar Under Diverse and Challenging Conditions. , 2018, , . | | 115 |
| 45 | Mark Yourself: Road Marking Segmentation via Weakly-Supervised Annotations from Multimodal Data. , 2018, , . | | 24 |
| 46 | Principles of robotics: regulating robots in the real world. Connection Science, 2017, 29, 124-129. | 3.0 | 106 |
| 47 | 1 year, 1000 km: The Oxford RobotCar dataset. International Journal of Robotics Research, 2017, 36, 3-15. | 8.5 | 878 |
| 48 | NID-SLAM: Robust Monocular SLAM Using Normalised Information Distance. , 2017, , . | | 33 |
| 49 | A unified representation for application of architectural constraints in large-scale mapping. , 2016, , . | | 0 |
| 50 | Made to measure: Bespoke landmarks for 24-hour, all-weather localisation with a camera. , 2016, , . | | 57 |
| 51 | Real-time probabilistic fusion of sparse 3D LIDAR and dense stereo. , 2016, , . | | 64 |
| 52 | The path less taken: A fast variational approach for scene segmentation used for closed loop control. , 2016, , . | | 5 |
| 53 | Checkout my map: Version control for fleetwide visual localisation. , 2016, , . | | 14 |
| 54 | What lies behind: Recovering hidden shape in dense mapping. , 2016, , . | | 4 |

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|---|---|---|---|
| 55 | Dense and Swift Mapping with Monocular Vision. Springer Tracts in Advanced Robotics, 2016, , 157-172. | 0.4 | 2 |
| 56 | Visual Place Recognition: A Survey. IEEE Transactions on Robotics, 2016, 32, 1-19. | 10.3 | 729 |
| 57 | Building, Curating, and Querying Large-Scale Data Repositories for Field Robotics Applications. Springer Tracts in Advanced Robotics, 2016, , 517-531. | 0.4 | 4 |
| 58 | Learning place-dependant features for long-term vision-based localisation. Autonomous Robots, 2015, 39, 363-387. | 4.8 | 27 |
| 59 | Know your limits: Embedding localiser performance models in teach and repeat maps. , 2015, , . | | 12 |
| 60 | Too much TV is bad: Dense reconstruction from sparse laser with non-convex regularisation. , 2015, , . | | 11 |
| 61 | Work smart, not hard: Recalling relevant experiences for vast-scale but time-constrained localisation. , 2015, , . | | 84 |
| 62 | From dusk till dawn: Localisation at night using artificial light sources. , 2015, , . | | 21 |
| 63 | FARLAP: Fast robust localisation using appearance priors. , 2015, , . | | 31 |
| 64 | Direct Visual Localisation and Calibration for Road Vehicles in Changing City Environments. , 2015, , . | | 32 |
| 65 | Leveraging experience for large-scale LIDAR localisation in changing cities. , 2015, , . | | 43 |
| 66 | Reading the Road: Road Marking Classification and Interpretation. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 2072-2081. | 8.0 | 29 |
| 67 | A variational approach to online road and path segmentation with monocular vision. , 2015, , . | | 5 |
| 68 | A framework for infrastructure-free warehouse navigation. , 2015, , . | | 12 |
| 69 | Opportunistic Radio Assisted Navigation for Autonomous Ground Vehicles. , 2015, , . | | 2 |
| 70 | Dense mono reconstruction: Living with the pain of the plain plane. , 2015, , . | | 10 |
| 71 | Visual precis generation using coresets. , 2014, , . | | 16 |
| 72 | Shady dealings: Robust, long-term visual localisation using illumination invariance. , 2014, , . | | 90 |

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|---|---|---|---|
| 73 | LAPS-II: 6-DoF day and night visual localisation with prior 3D structure for autonomous road vehicles. , 2014, , . | | 22 |
| 74 | Special issue on Robotics: Science and Systems. Autonomous Robots, 2013, 35, 239-239. | 4.8 | 0 |
| 75 | Risky Planning on Probabilistic Costmaps for Path Planning in Outdoor Environments. IEEE Transactions on Robotics, 2013, 29, 445-457. | 10.3 | 25 |
| 76 | Self-help: Seeking out perplexing images for ever improving topological mapping. International Journal of Robotics Research, 2013, 32, 1742-1766. | 8.5 | 5 |
| 77 | Experience-based navigation for long-term localisation. International Journal of Robotics Research, 2013, 32, 1645-1661. | 8.5 | 175 |
| 78 | Dealing with shadows: Capturing intrinsic scene appearance for image-based outdoor localisation. , 2013, , . | | 63 |
| 79 | Distraction suppression for vision-based pose estimation at city scales. , 2013, , . | | 13 |
| 80 | Cross-calibration of push-broom 2D LIDARs and cameras in natural scenes. , 2013, , . | | 42 |
| 81 | Lost in translation (and rotation): Rapid extrinsic calibration for 2D and 3D LIDARs. , 2012, , . | | 57 |
| 82 | Laser-only road-vehicle localization with dual 2D push-broom LIDARS and 3D priors. , 2012, , . | | 18 |
| 83 | What could move? Finding cars, pedestrians and bicyclists in 3D laser data. , 2012, , . | | 36 |
| 84 | Semantic categorization of outdoor scenes with uncertainty estimates using multi-class gaussian process classification. , 2012, , . | | 14 |
| 85 | Road vehicle localization with 2D push-broom LIDAR and 3D priors. , 2012, , . | | 42 |
| 86 | How was your day? Online visual workspace summaries using incremental clustering in topic space. , 2012, , . | | 19 |
| 87 | Practice makes perfect? Managing and leveraging visual experiences for lifelong navigation. , 2012, , . | | 88 |
| 88 | LAPS - localisation using appearance of prior structure: 6-DoF monocular camera localisation using prior pointclouds. , 2012, , . | | 42 |
| 89 | Generation and exploitation of local orthographic imagery for road vehicle localisation. , 2012, , . | | 18 |
| 90 | Can priors be trusted? Learning to anticipate roadworks. , 2012, , . | | 8 |

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| 91 | Taking the Long View: A Report on Two Recent Workshops on Long-Term Autonomy [From the Field]. IEEE Robotics and Automation Magazine, 2012, 19, 109-111. | 2.0 | 2 |
| 92 | Choosing landmarks for risky planning. , 2011, , . | | 0 |
| 93 | RSLAM: A System for Large-Scale Mapping in Constant-Time Using Stereo. International Journal of Computer Vision, 2011, 94, 198-214. | 15.6 | 159 |
| 94 | Self help: Seeking out perplexing images for ever improving navigation. , 2011, , . | | 8 |
| 95 | TICSync: Knowing when things happened. , 2011, , . | | 32 |
| 96 | Risky planning: Path planning over costmaps with a probabilistically bounded speed-accuracy tradeoff. , 2011, , . | | 13 |
| 97 | Choosing landmarks for risky planning. , 2011, , . | | 2 |
| 98 | Adaptive compression for 3D laser data. International Journal of Robotics Research, 2011, 30, 914-935. | 8.5 | 20 |
| 99 | Appearance-only SLAM at large scale with FAB-MAP 2.0. International Journal of Robotics Research, 2011, 30, 1100-1123. | 8.5 | 490 |
| 100 | Vast-scale Outdoor Navigation Using Adaptive Relative Bundle Adjustment. International Journal of Robotics Research, 2010, 29, 958-980. | 8.5 | 138 |
| 101 | Planning most-likely paths from overhead imagery. , 2010, , . | | 12 |
| 102 | Closing loops without places. , 2010, , . | | 48 |
| 103 | Planes, trains and automobiles — autonomy for the modern robot. , 2010, , . | | 13 |
| 104 | FAB-MAP 3D: Topological mapping with spatial and visual appearance. , 2010, , . | | 100 |
| 105 | Non-parametric learning for natural plan generation. , 2010, , . | | 6 |
| 106 | Using text-spotting to query the world. , 2010, , . | | 26 |
| 107 | Accelerating FAB-MAP With Concentration Inequalities. IEEE Transactions on Robotics, 2010, 26, 1042-1050. | 10.3 | 28 |
| 108 | Discovering and mapping complete surfaces with stereo. , 2010, , . | | 4 |

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| 109 | Navigating, Recognizing and Describing Urban Spaces With Vision and Lasers. International Journal of Robotics Research, 2009, 28, 1406-1433. | 8.5 | 108 |
| 110 | The New College Vision and Laser Data Set. International Journal of Robotics Research, 2009, 28, 595-599. | 8.5 | 251 |
| 111 | A generative framework for fast urban labeling using spatial andÂtemporal context. Autonomous Robots, 2009, 26, 153-170. | 4.8 | 51 |
| 112 | A comparison of loop closing techniques in monocular SLAM. Robotics and Autonomous Systems, 2009, 57, 1188-1197. | 5.1 | 222 |
| 113 | FAB-MAP: Probabilistic Localization and Mapping in the Space of Appearance. International Journal of Robotics Research, 2008, 27, 647-665. | 8.5 | 1,166 |
| 114 | High quality 3D laser ranging under general vehicle motion. , 2008, , . | | 28 |
| 115 | Accelerated appearance-only SLAM. , 2008, , . | | 59 |
| 116 | An image-to-map loop closing method for monocular SLAM. , 2008, , . | | 41 |
| 117 | Describing Composite Urban Workspaces. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , . | 0.0 | 14 |
| 118 | Probabilistic Appearance Based Navigation and Loop Closing. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , . | 0.0 | 114 |
| 119 | Detecting Loop Closure with Scene Sequences. International Journal of Computer Vision, 2007, 74, 261-286. | 15.6 | 171 |
| 120 | Session Overview Simultaneous Localisation and Mapping. , 2007, , 187-189. | | 0 |
| 121 | Loop closure detection in SLAM by combining visual and spatial appearance. Robotics and Autonomous Systems, 2006, 54, 740-749. | 5.1 | 73 |
| 122 | Fast Probabilistic Labeling of City Maps. , 0, , . | | 16 |