

# Dieter Fox

## List of Publications by Year in descending order

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Version: 2024-02-01

96  
papers

12,675  
citations

201674

27  
h-index

265206

42  
g-index

98  
all docs

98  
docs citations

98  
times ranked

8036  
citing authors

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 1  | Robust Monte Carlo localization for mobile robots. Artificial Intelligence, 2001, 128, 99-141.   | 5.8 | 1,359     |
| 2  | RGB-D mapping: Using Kinect-style depth cameras for dense 3D modeling of indoor environments. International Journal of Robotics Research, 2012, 31, 647-663. | 8.5 | 967       |
| 3  | A large-scale hierarchical multi-view RGB-D object dataset. , 2011, , .  |     | 894       |
| 4  | PoseCNN: A Convolutional Neural Network for 6D Object Pose Estimation in Cluttered Scenes. , 0, , .  |     | 833       |
| 5  | Experiences with an interactive museum tour-guide robot. Artificial Intelligence, 1999, 114, 3-55.   | 5.8 | 605       |
| 6  | A Probabilistic Approach to Collaborative Multi-Robot Localization. Autonomous Robots, 2000, 8, 325-344.   | 4.8 | 507       |
| 7  | Learning and inferring transportation routines. Artificial Intelligence, 2007, 171, 311-331.   | 5.8 | 480       |
| 8  | Active Markov localization for mobile robots. Robotics and Autonomous Systems, 1998, 25, 195-207.  | 5.1 | 330       |
| 9  | The limits and potentials of deep learning for robotics. International Journal of Robotics Research, 2018, 37, 405-420.                                      | 8.5 | 320       |
| 10 | Inferring High-Level Behavior from Low-Level Sensors. Lecture Notes in Computer Science, 2003, , 73-89.  | 1.3 | 267       |
| 11 | 6-DOF GraspNet: Variational Grasp Generation for Object Manipulation. , 2019, , .  |     | 263       |
| 12 | Depth kernel descriptors for object recognition. , 2011, , .   |     | 238       |
| 13 | GP-BayesFilters: Bayesian filtering using Gaussian process prediction and observation models. Autonomous Robots, 2009, 27, 75-90.                            | 4.8 | 229       |
| 14 | DeepIM: Deep Iterative Matching for 6D Pose Estimation. Lecture Notes in Computer Science, 2018, , 695-711.  | 1.3 | 223       |
| 15 | Unsupervised feature learning for 3D scene labeling. , 2014, , .   |     | 215       |
| 16 | Closing the Sim-to-Real Loop: Adapting Simulation Randomization with Real World Experience. , 2019, , .  |     | 196       |
| 17 | Learning to navigate through crowded environments. , 2010, , .   |     | 169       |
| 18 | IQA: Visual Question Answering in Interactive Environments. , 2018, , .  |     | 157       |

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 19 | Object recognition with hierarchical kernel descriptors. , 2011, , .   |      | 146       |
| 20 | Manipulator and object tracking for in-hand 3D object modeling. International Journal of Robotics Research, 2011, 30, 1311-1327.   | 8.5  | 145       |
| 21 | Sparse distance learning for object recognition combining RGB and depth information. , 2011, , .   |      | 137       |
| 22 | Multipath Sparse Coding Using Hierarchical Matching Pursuit. , 2013, , .   |      | 137       |
| 23 | Estimation, planning, and mapping for autonomous flight using an RGB-D camera in GPS-denied environments. International Journal of Robotics Research, 2012, 31, 1320-1343.             | 8.5  | 134       |
| 24 | Object Recognition in 3D Point Clouds Using Web Data and Domain Adaptation. International Journal of Robotics Research, 2010, 29, 1019-1037.   | 8.5  | 123       |
| 25 | RGB-D flow: Dense 3-D motion estimation using color and depth. , 2013, , .   |      | 123       |
| 26 | Detection-based object labeling in 3D scenes. , 2012, , .  |      | 120       |
| 27 | SE3-nets: Learning rigid body motion using deep neural networks. , 2017, , .   |      | 120       |
| 28 | 6-DOF Grasping for Target-driven Object Manipulation in Clutter. , 2020, , .   |      | 103       |
| 29 | Autonomous generation of complete 3D object models using next best view manipulation planning. , 2011, , .   |      | 102       |
| 30 | Opportunity Knocks: A System to Provide Cognitive Assistance with Transportation Services. Lecture Notes in Computer Science, 2004, , 433-450.   | 1.3  | 99        |
| 31 | Self-Supervised Visual Descriptor Learning for Dense Correspondence. IEEE Robotics and Automation Letters, 2017, 2, 420-427.   | 5.1  | 97        |
| 32 | Interactive 3D modeling of indoor environments with a consumer depth camera. , 2011, , .   |      | 96        |
| 33 | ST-HMP: Unsupervised Spatio-Temporal feature learning for tactile data. , 2014, , .  |      | 96        |
| 34 | Gaussian Processes and Reinforcement Learning for Identification and Control of an Autonomous Blimp. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , . | 0.0  | 95        |
| 35 | Contact-GraspNet: Efficient 6-DoF Grasp Generation in Cluttered Scenes. , 2021, , .  |      | 94        |
| 36 | PoseRBPF: A Rao-Blackwellized Particle Filter for 6-D Object Pose Tracking. IEEE Transactions on Robotics, 2021, 37, 1328-1342.  | 10.3 | 79        |

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|----|--|------|-----------|
| 37 | Interactive singulation of objects from a pile. , 2012, , .  |      | 72        |
| 38 | GP-UKF: Unscented kalman filters with Gaussian process prediction and observation models. , 2007, , .  |      | 70        |
| 39 | Building Personal Maps from GPS Data. Annals of the New York Academy of Sciences, 2006, 1093, 249-265.   | 3.8  | 69        |
| 40 | Multi-task policy search for robotics. , 2014, , .   |      | 58        |
| 41 | Patch Volumes: Segmentation-Based Consistent Mapping with RGB-D Cameras. , 2013, , .   |      | 56        |
| 42 | Learning GP-BayesFilters via Gaussian process latent variable models. Autonomous Robots, 2011, 30, 3-23.   | 4.8  | 55        |
| 43 | Visual closed-loop control for pouring liquids. , 2017, , .  |      | 52        |
| 44 | Learning hierarchical sparse features for RGB-(D) object recognition. International Journal of Robotics Research, 2014, 33, 581-599.               | 8.5  | 47        |
| 45 | RGB-D Object Recognition: Features, Algorithms, and a Large Scale Benchmark. Advances in Computer Vision and Pattern Recognition, 2013, , 167-192. | 1.3  | 46        |
| 46 | ACRONYM: A Large-Scale Grasp Dataset Based on Simulation. , 2021, , .  |      | 45        |
| 47 | Gambit: An autonomous chess-playing robotic system. , 2011, , .  |      | 44        |
| 48 | GP-BayesFilters: Bayesian filtering using Gaussian process prediction and observation models. , 2008, , .  |      | 43        |
| 49 | Depth-based tracking with physical constraints for robot manipulation. , 2015, , .   |      | 43        |
| 50 | DART: dense articulated real-time tracking with consumer depth cameras. Autonomous Robots, 2015, 39, 239-258.                                      | 4.8  | 41        |
| 51 | RGB-D object discovery via multi-scene analysis. , 2011, , .   |      | 38        |
| 52 | Distributed multirobot exploration, mapping, and task allocation. Annals of Mathematics and Artificial Intelligence, 2008, 52, 229-255.            | 1.3  | 37        |
| 53 | Unseen Object Instance Segmentation for Robotic Environments. IEEE Transactions on Robotics, 2021, 37, 1343-1359.                                  | 10.3 | 37        |
| 54 | Map-Based Multiple Model Tracking of a Moving Object. Lecture Notes in Computer Science, 2005, , 18-33.  | 1.3  | 36        |

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|----|---|-----|-----------|
| 55 | Collaborative Multi-Robot Localization. Informatik Aktuell, 1999, , 15-26.  | 0.6 | 35        |
| 56 | Toward online 3-D object segmentation and mapping. , 2014, , .  |     | 31        |
| 57 | Following directions using statistical machine translation. , 2010, , .   |     | 30        |
| 58 | Attribute based object identification. , 2013, , .  |     | 30        |
| 59 | Space-time functional gradient optimization for motion planning. , 2014, , .  |     | 29        |
| 60 | SE3-Pose-Nets: Structured Deep Dynamics Models for Visuomotor Control. , 2018, , .  |     | 24        |
| 61 | Change Their Perception: RGB-D for 3-D Modeling and Recognition. IEEE Robotics and Automation Magazine, 2013, 20, 49-59.  | 2.0 | 23        |
| 62 | Neural Autonomous Navigation with Riemannian Motion Policy. , 2019, , .   |     | 21        |
| 63 | Scaling Local Control to Large-Scale Topological Navigation. , 2020, , .  |     | 21        |
| 64 | IRIS: Implicit Reinforcement without Interaction at Scale for Learning Control from Offline Robot Manipulation Data. , 2020, , .                                |     | 20        |
| 65 | iCaps: Iterative Category-Level Object Pose and Shape Estimation. IEEE Robotics and Automation Letters, 2022, 7, 1784-1791.                                     | 5.1 | 20        |
| 66 | CRF-Filters: Discriminative Particle Filters for Sequential State Estimation. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , . | 0.0 | 19        |
| 67 | Anatomically correct testbed hand control: Muscle and joint control strategies. , 2009, , .   |     | 18        |
| 68 | Perceiving and reasoning about liquids using fully convolutional networks. International Journal of Robotics Research, 2018, 37, 452-471.                       | 8.5 | 17        |
| 69 | Integrating active localization into high-level robot control systems. Robotics and Autonomous Systems, 1998, 23, 205-220.                                      | 5.1 | 16        |
| 70 | Control strategies for the index finger of a tendon-driven hand. International Journal of Robotics Research, 2013, 32, 115-128.                                 | 8.5 | 15        |
| 71 | Joint Inference of Kinematic and Force Trajectories with Visuo-Tactile Sensing. , 2019, , .   |     | 15        |
| 72 | A spatio-temporal probabilistic model for multi-sensor object recognition. , 2007, , .  |     | 14        |

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|----|--|-----|-----------|
| 73 | Learning predictive models of a depth camera & manipulator from raw execution traces. , 2014, , .  |     | 14        |
| 74 | Reasoning About Liquids via Closed-Loop Simulation. , 0, , .   |     | 14        |
| 75 | Collaborative Multi-robot Localization. Lecture Notes in Computer Science, 1999, , 255-266.  | 1.3 | 13        |
| 76 | RMPflow: A Computational Graph for Automatic Motion Policy Generation. Springer Proceedings in Advanced Robotics, 2020, , 441-457.                               | 1.3 | 13        |
| 77 | Manipulation Trajectory Optimization with Online Grasp Synthesis and Selection. , 0, , .   |     | 13        |
| 78 | RMP <i>flow</i> : A Geometric Framework for Generation of Multitask Motion Policies. IEEE Transactions on Automation Science and Engineering, 2021, 18, 968-987. | 5.2 | 12        |
| 79 | Hierarchical Models for Activity Recognition. , 2006, , .  |     | 10        |
| 80 | Geometric Fabrics: Generalizing Classical Mechanics to Capture the Physics of Behavior. IEEE Robotics and Automation Letters, 2022, 7, 3202-3209.                | 5.1 | 10        |
| 81 | Hierarchical Policies for Cluttered-Scene Grasping With Latent Plans. IEEE Robotics and Automation Letters, 2022, 7, 2883-2890.                                  | 5.1 | 9         |
| 82 | A Bayesian Developmental Approach to Robotic Goal-Based Imitation Learning. PLoS ONE, 2015, 10, e0141965.  | 2.5 | 8         |
| 83 | Dynamic High Resolution Deformable Articulated Tracking. , 2017, , .   |     | 7         |
| 84 | Learning to identify new objects. , 2014, , .  |     | 5         |
| 85 | Autonomous question answering with mobile robots in human-populated environments. , 2016, , .  |     | 5         |
| 86 | EARLY FUSION for Goal Directed Robotic Vision. , 2019, , .   |     | 5         |
| 87 | Efficient Multi-Robot Localization Based on Monte Carlo Approximation. , 2000, , 153-160.  |     | 5         |
| 88 | Designing information gathering robots for human-populated environments. , 2015, , .   |     | 4         |
| 89 | Real-time 3D Glint Detection in Remote Eye Tracking Based on Bayesian Inference. , 2018, , .   |     | 4         |
| 90 | NEOL: Toward Never-Ending Object Learning for robots. , 2016, , .  |     | 3         |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 91 | Synthesizing Robot Manipulation Programs from a Single Observed Human Demonstration. , 2019, , .                                      |     | 3         |
| 92 | Probabilistic State Estimation Techniques for Autonomous and Decision Support Systems. Informatik-Spektrum, 2011, 34, 455-461.        | 1.3 | 1         |
| 93 | Learning Composable Behavior Embeddings for Long-Horizon Visual Navigation. IEEE Robotics and Automation Letters, 2021, 6, 3128-3135. | 5.1 | 1         |
| 94 | Special issue on robotics: science and systems. Autonomous Robots, 2014, 37, 333-334.   | 4.8 | 0         |
| 95 | Part Segmentation for Highly Accurate Deformable Tracking in Occlusions via Fully Convolutional Neural Networks. , 2019, , .          |     | 0         |
| 96 | RGB-D Based Tracking of Complex Objects. Lecture Notes in Computer Science, 2018, , 115-127.  | 1.3 | 0         |