# Norbert Kruger

List of Publications by Year
in descending order

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|---|---|---|---|
| 124<br>papers | 4,520<br>citations | 279798<br>23<br>h-index | 114465<br>63<br>g-index |
| 131<br>all docs | 131<br>docs citations | 131<br>times ranked | 3089<br>citing authors |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 1 | HRI-Gestures: Gesture Recognition for Human-Robot Interaction. , 2022, , . | | 1 |
| 2 | Multi-view object pose distribution tracking for pre-grasp planning on mobile robots. , 2022, , . | | 3 |
| 3 | Multi-modal Proactive Approaching of Humans for Human-Robot Cooperative Tasks. , 2021, , . | | 4 |
| 4 | Context-aware Social Robot Navigation. , 2021, , . | | 0 |
| 5 | Context-aware Social Robot Navigation. , 2021, , . | | 2 |
| 6 | Donâ€™t Be Afraid! Design ofÂaÂPlayful Cleaning Robot forÂPeople withÂDementia. Communications in Computer and Information Science, 2021, , 141-155. | 0.5 | 0 |
| 7 | Bibo theÂDancing Cup: Reminding People withÂDementia toÂDrink. Communications in Computer and Information Science, 2021, , 127-140. | 0.5 | 1 |
| 8 | SMOOTH Robot: Design for a Novel Modular Welfare Robot. Journal of Intelligent and Robotic Systems: Theory and Applications, 2020, 98, 19-37. | 3.4 | 19 |
| 9 | Synthetic Ground Truth for Presegmentation of Known Objects for Effortless Pose Estimation. , 2020, , . | | 0 |
| 10 | Intention Indication for Human Aware Robot Navigation. , 2020, , . | | 3 |
| 11 | Cut &amp; recombine: reuse of robot action components based on simple language instructions. International Journal of Robotics Research, 2019, 38, 1179-1207. | 8.5 | 4 |
| 12 | Automated Fixture Design Using an Imprint-Based Design Approach & Optimisation in Simulation. , 2019, , . | | 0 |
| 13 | Robot technology for future welfare: meeting upcoming societal challenges â€" an outlook with offset in the development in Scandinavia. Health and Technology, 2019, 9, 197-218. | 3.6 | 27 |
| 14 | Combined Optimization of Gripper Finger Design and Pose Estimation Processes for Advanced Industrial Assembly. , 2019, , . | | 4 |
| 15 | Using spatial constraints for fast set-up of precise pose estimation in an industrial setting. , 2019, , . | | 9 |
| 16 | An Adaptive Robotic System for Doing Pick and Place Operations with Deformable Objects. Journal of Intelligent and Robotic Systems: Theory and Applications, 2019, 94, 81-100. | 3.4 | 27 |
| 17 | The Penguin â€" On the Boundary Between Pet and Machine. An Ecological Perspective on the Design of Assistive Robots for Elderly Care. Lecture Notes in Computer Science, 2019, , 425-443. | 1.3 | 3 |
| 18 | Teaching a Robot the Semantics of Assembly Tasks. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2018, 48, 670-692. | 9.3 | 46 |

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| 19 | A performance evaluation of point pair features. Computer Vision and Image Understanding, 2018, 166, 66-80. | 4.7 | 29 |
| 20 | Integrating multi-purpose natural language understanding, robot's memory, and symbolic planning for task execution in humanoid robots. Robotics and Autonomous Systems, 2018, 99, 148-165. | 5.1 | 16 |
| 21 | Compensating Pose Uncertainties through Appropriate Gripper Finger Cutouts. Acta Mechanica Et Automatica, 2018, 12, 78-83. | 0.6 | 8 |
| 22 | Multi-view object instance recognition in an industrial context. Robotica, 2017, 35, 271-292. | 1.9 | 6 |
| 23 | Designing Fingers in Simulation based on Imprints. , 2017, , . | | 5 |
| 24 | Optimizing grippers for compensating pose uncertainties by dynamic simulation. , 2016, , . | | 1 |
| 25 | A Large-Scale 3D Object Recognition Dataset. , 2016, , . | | 9 |
| 26 | Local shape feature fusion for improved matching, pose estimation and 3D object recognition. SpringerPlus, 2016, 5, 297. | 1.2 | 25 |
| 27 | A comparison of feature detectors and descriptors for object class matching. Neurocomputing, 2016, 184, 3-12. | 5.9 | 20 |
| 28 | A Required Paradigm Shift in Today's Vision Research. KI - Kunstliche Intelligenz, 2015, 29, 89-94. | 3.2 | 1 |
| 29 | Identifying relevant feature-action associations for grasping unmodelled objects. Paladyn, 2015, 6, . | 2.7 | 0 |
| 30 | Multi-label Object Categorization Using Histograms of Global Relations. , 2015, , . | | 1 |
| 31 | Spatial constraint identification of parts in SE3 for action optimization. , 2015, , . | | 2 |
| 32 | Object detection using categorised 3D edges. Proceedings of SPIE, 2015, , . | 0.8 | 3 |
| 33 | What We Can Learn From the Primate's Visual System. KI - Kunstliche Intelligenz, 2015, 29, 9-18. | 3.2 | 2 |
| 34 | Special Issue on Bio-inspired Vision Systems. KI - Kunstliche Intelligenz, 2015, 29, 5-7. | 3.2 | 0 |
| 35 | On transferability and contexts when using simulated grasp databases. Robotica, 2015, 33, 1131-1146. | 1.9 | 1 |
| 36 | Teach it Yourself - Fast Modeling of Industrial Objects for 6D Pose Estimation. Lecture Notes in Computer Science, 2015, , 289-302. | 1.3 | 1 |

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| 37 | Structural Bootstrappingâ€"A Novel, Generative Mechanism for Faster and More Efficient Acquisition of Action-Knowledge. IEEE Transactions on Autonomous Mental Development, 2015, 7, 140-154. | 1.6 | 21 |
| 38 | Affordance Estimation Enhances Artificial Visual Attention: Evidence from a Change-Blindness Study. Cognitive Computation, 2015, 7, 526-538. | 5.2 | 3 |
| 39 | Task and context sensitive optimization of gripper design using dynamic grasp simulation. , 2015, , . | | 10 |
| 40 | Optimizing Pick and Place Operations in a Simulated Work Cell For Deformable 3D Objects. Lecture Notes in Computer Science, 2015, , 431-444. | 1.3 | 3 |
| 41 | Object Detection Using a Combination of Multiple 3D Feature Descriptors. Lecture Notes in Computer Science, 2015, , 343-353. | 1.3 | 2 |
| 42 | Adaptation of manipulation skills in physical contact with the environment to reference force profiles. Autonomous Robots, 2015, 39, 199-217. | 4.8 | 100 |
| 43 | Using surfaces and surface relations in an Early Cognitive Vision system. Machine Vision and Applications, 2015, 26, 933-954. | 2.7 | 2 |
| 44 | Real-time extraction of surface patches with associated uncertainties by means of Kinect cameras. Journal of Real-Time Image Processing, 2015, 10, 105-118. | 3.5 | 20 |
| 45 | Indoor Objects and Outdoor Urban Scenes Recognition by 3D Visual Primitives. Lecture Notes in Computer Science, 2015, , 270-285. | 1.3 | 1 |
| 46 | Shape Dependency of ICP Pose Uncertainties in the Context of Pose Estimation Systems. Lecture Notes in Computer Science, 2015, , 303-315. | 1.3 | 1 |
| 47 | Extracting Categories by Hierarchical Clustering Using Global Relational Features. Lecture Notes in Computer Science, 2015, , 541-551. | 1.3 | 1 |
| 48 | Error Feedback for Robust Learning from Demonstration. , 2015, , . | | 3 |
| 49 | Technologies for the Fast Set-Up of Automated Assembly Processes. KI - Kunstliche Intelligenz, 2014, 28, 305-313. | 3.2 | 17 |
| 50 | In Search of Inliers: 3D Correspondence by Local and Global Voting. , 2014, , . | | 36 |
| 51 | Learning spatial relationships from 3D vision using histograms. , 2014, , . | | 11 |
| 52 | Statistics-based segmentation using a continuous-scale naive Bayes approach. Computers and Electronics in Agriculture, 2014, 109, 271-277. | 7.7 | 8 |
| 53 | An Adaptable Robot Vision System Performing Manipulation Actions With Flexible Objects. IEEE Transactions on Automation Science and Engineering, 2014, 11, 749-765. | 5.2 | 51 |
| 54 | A new benchmark for pose estimation with ground truth from virtual reality. Production Engineering, 2014, 8, 745-754. | 2.3 | 5 |

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| 55 | Teleoperation for learning by demonstration: Data glove versus object manipulation for intuitive robot control. , 2014, , . | | 25 |
| 56 | Solving peg-in-hole tasks by human demonstration and exception strategies. Industrial Robot, 2014, 41, 575-584. | 2.1 | 52 |
| 57 | Automatic Evaluation of Task-Focused Parallel Jaw Gripper Design. Lecture Notes in Computer Science, 2014, , 450-461. | 1.3 | 6 |
| 58 | Deep Hierarchies in the Primate Visual Cortex: What Can We Learn for Computer Vision?. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2013, 35, 1847-1871. | 13.9 | 285 |
| 59 | A Simple Ontology of Manipulation Actions Based on Hand-Object Relations. IEEE Transactions on Autonomous Mental Development, 2013, 5, 117-134. | 1.6 | 53 |
| 60 | A Survey of the Ontogeny of Tool Use: From Sensorimotor Experience to Planning. IEEE Transactions on Autonomous Mental Development, 2013, 5, 18-45. | 1.6 | 56 |
| 61 | Pose estimation using local structure-specific shape and appearance context. , 2013, , . | | 56 |
| 62 | Multi-view object recognition using view-point invariant shape relations and appearance information. , 2013, , . | | 18 |
| 63 | Learning spatial relations between objects from 3D scenes. , 2013, , . | | 1 |
| 64 | Extended 3D Line Segments from RGB-D Data for Pose Estimation. Lecture Notes in Computer Science, 2013, , 54-65. | 1.3 | 4 |
| 65 | Supervised Object Class Colour Normalisation. Lecture Notes in Computer Science, 2013, , 611-619. | 1.3 | 0 |
| 66 | Enabling grasping of unknown objects through a synergistic use of edge and surface information. International Journal of Robotics Research, 2012, 31, 1190-1213. | 8.5 | 24 |
| 67 | Learning Object Relationships which determine the Outcome of Actions. Paladyn, 2012, 3, . | 2.7 | 6 |
| 68 | VisGraB: A Benchmark for Vision-Based Grasping. Paladyn, 2012, 3, . | 2.7 | 18 |
| 69 | Disparity disambiguation by fusion of signal- and symbolic-level information. Machine Vision and Applications, 2012, 23, 65-77. | 2.7 | 5 |
| 70 | Ring on the hook: placing a ring on a moving and pendulating hook based on visual input. Industrial Robot, 2011, 38, 301-314. | 2.1 | 3 |
| 71 | Objectâ€"Action Complexes: Grounded abstractions of sensoryâ€"motor processes. Robotics and Autonomous Systems, 2011, 59, 740-757. | 5.1 | 127 |
| 72 | Performance of Correspondence Algorithms in Vision-Based Driver Assistance Using an Online Image Sequence Database. IEEE Transactions on Vehicular Technology, 2011, 60, 2012-2026. | 6.3 | 40 |

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| 73 | Temporal accumulation of oriented visual features. Journal of Visual Communication and Image Representation, 2011, 22, 153-163. | 2.8 | 3 |
| 74 | The Driving School System: Learning Basic Driving Skills From a Teacher in a Real Car. IEEE Transactions on Intelligent Transportation Systems, 2011, 12, 1135-1146. | 8.0 | 12 |
| 75 | What a successful grasp tells about the success chances of grasps in its vicinity. , 2011, , . | | 1 |
| 76 | Learning visual representations for perception-action systems. International Journal of Robotics Research, 2011, 30, 294-307. | 8.5 | 22 |
| 77 | Learning Visual Representations for Interactive Systems. Springer Tracts in Advanced Robotics, 2011, , 399-416. | 0.4 | 12 |
| 78 | Accumulation of Different Visual Feature Descriptors in a Coherent Framework. Lecture Notes in Computer Science, 2011, , 79-90. | 1.3 | 2 |
| 79 | An Outline for an Intelligent System Performing Peg-in-Hole Actions with Flexible Objects. Lecture Notes in Computer Science, 2011, , 430-441. | 1.3 | 3 |
| 80 | A compact harmonic code for early vision based on anisotropic frequency channels. Computer Vision and Image Understanding, 2010, 114, 681-699. | 4.7 | 29 |
| 81 | Using multi-modal 3D contours and their relations for vision and robotics. Journal of Visual Communication and Image Representation, 2010, 21, 850-864. | 2.8 | 8 |
| 82 | A two-level real-time vision machine combining coarse- and fine-grained parallelism. Journal of Real-Time Image Processing, 2010, 5, 291-304. | 3.5 | 14 |
| 83 | Development of Object and Grasping Knowledge by Robot Exploration. IEEE Transactions on Autonomous Mental Development, 2010, 2, 368-383. | 1.6 | 27 |
| 84 | A strategy for grasping unknown objects based on co-planarity and colour information. Robotics and Autonomous Systems, 2010, 58, 551-565. | 5.1 | 77 |
| 85 | A cortical architecture on parallel hardware for motion processing in real time. Journal of Vision, 2010, 10, 18-18. | 0.3 | 23 |
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| 87 | VISUAL PRIMITIVES: LOCAL, CONDENSED, SEMANTICALLY RICH VISUAL DESCRIPTORS AND THEIR APPLICATIONS IN ROBOTICS. International Journal of Humanoid Robotics, 2010, 07, 379-405. | 1.1 | 27 |
| 88 | Disambiguating Multiâ€"Modal Scene Representations Using Perceptual Grouping Constraints. PLoS ONE, 2010, 5, e10663. | 2.5 | 5 |
| 89 | Continuous dimensionality characterization of image structures. Image and Vision Computing, 2009, 27, 628-636. | 4.5 | 39 |
| 90 | Using 3D contours and their relations for cognitive vision and robotics. , 2009, , . | | 1 |

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| 91 | Learning to grasp unknown objects based on 3D edge information. , 2009, , . | | 10 |
| 92 | Tactile object exploration using cursor navigation sensors. , 2009, , . | | 5 |
| 93 | Learning Objects and Grasp Affordances through Autonomous Exploration. Lecture Notes in Computer Science, 2009, , 235-244. | 1.3 | 12 |
| 94 | Comparison of Point and Line Features and Their Combination for Rigid Body Motion Estimation. Lecture Notes in Computer Science, 2009, , 280-304. | 1.3 | 7 |
| 95 | Spatial-Temporal Junction Extraction and Semantic Interpretation. Lecture Notes in Computer Science, 2009, , 275-286. | 1.3 | 1 |
| 96 | A Real-Time Embedded System for Stereo Vision Preprocessing Using an FPGA. , 2008, , . | | 11 |
| 97 | BIRTH OF THE OBJECT: DETECTION OF OBJECTNESS AND EXTRACTION OF OBJECT SHAPE THROUGH OBJECTâ€"ACTION COMPLEXES. International Journal of Humanoid Robotics, 2008, 05, 247-265. | 1.1 | 59 |
| 98 | A Hybrid FPGA/Coarse Parallel Processing Architecture for Multi-modal Visual Feature Descriptors. , 2008, , . | | 4 |
| 99 | Semantic Reasoning for Scene Interpretation. Lecture Notes in Computer Science, 2008, , 121-134. | 1.3 | 0 |
| 100 | A Scene Representation Based on Multi-Modal 2D and 3D Features. , 2007, , . | | 6 |
| 101 | Editorial: ECOVISION: Challenges in Early-Cognitive Vision. International Journal of Computer Vision, 2007, 72, 5-7. | 15.6 | 1 |
| 102 | Early Reactive Grasping with Second Order 3D Feature Relations. Lecture Notes in Control and Information Sciences, 2007, , 91-105. | 1.0 | 14 |
| 103 | Utilizing Semantic Interpretation of Junctions for 3D-2D Pose Estimation. , 2007, , 692-701. | | 1 |
| 104 | Symbols as Self-emergent Entities in an Optimization Process of Feature Extraction and Predictions. Biological Cybernetics, 2006, 94, 325-334. | 1.3 | 67 |
| 105 | Symbolic Pointillism: Computer Art Motivated by Human Brain Structures. Leonardo, 2005, 38, 337-340. | 0.3 | 4 |
| 106 | Coding of visual information in the brain. Network: Computation in Neural Systems, 2005, 16, 321-322. | 3.6 | 0 |
| 107 | Multi-modal Primitives as Functional Models of Hyper-columns and Their Use for Contextual Integration. Lecture Notes in Computer Science, 2005, , 157-166. | 1.3 | 10 |
| 108 | Three Dilemmas of Signal- and Symbol-Based Representations in Computer Vision. Lecture Notes in Computer Science, 2005, , 167-176. | 1.3 | 4 |

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| 109 | Early Cognitive Vision: Using Gestalt-Laws for Task-Dependent, Active Image-Processing. Natural Computing, 2004, 3, 293-321. | 3.0 | 17 |
| 110 | An explicit and compact coding of geometric and structural image information applied to stereo processing. Pattern Recognition Letters, 2004, 25, 849-863. | 4.2 | 18 |
| 111 | Statistical and Deterministic Regularities: Utilization of Motion and Grouping in Biological and Artificial Visual Systems. Advances in Imaging and Electron Physics, 2004, 131, 81-146. | 0.2 | 7 |
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