

# List of Publications

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## Peer-reviewed Journal Papers

- 1) Döring, N., Mikhailova, V., Brandenburg, KH., Broll, W., Gross, H.-M., Werner, St., Raake, A. Digital media in intergenerational communication: Status quo and future scenarios for the grandparent-grandchild relationship. *Universal Access in the Information Society* vol. 23, pp. 379-394, Springer 2024, <https://doi.org/10.1007/s10209-022-00957-w>
- 2) Eisenbach, M., Franke, H., Franze, E., Köhler, M., Aganian, D., Seichter, D., Gross, H.-M. Detection of Novel Objects without Fine-tuning in Assembly Scenarios by Class-Agnostic Object Detection and Object Re-Identification submitted to: *Automation*, 2024; MDPI 2024
- 3) Stephan, B., Köhler, M., Müller, St., Zhang, Y., Gross, H.-M., Notni, G. OHO: A Multi-Modal, Multi-Purpose Dataset for Human-Robot Object Hand-Over. *Sensors* 23(18), 7807; MDPI 2023, <https://doi.org/10.3390/s23187807>
- 4) Köhler, M., Eisenbach, M., Gross, H.-M. Few-Shot Object Detection: A Comprehensive Survey. *IEEE Transactions on Neural Networks and Learning Systems*, 21 pages, IEEE 2023, <https://doi.org/10.1109/TNNLS.2023.3265051>
- 5) Müller, St., Müller, T., Ahmed, A., Gross, H.-M. Laser-Based Door Localization for Autonomous Mobile Service Robots. *Sensors, Special Issue: Advances in Mobile Robot Perceptions, Planning, Control, and Learning*, 2023; 23(11):5247, MDPI 2023, <https://doi.org/10.3390/s23115247>
- 6) Döring, N., Conde, M., Brandenburg, K.-H., Broll, W., Gross, H.-M., Werner, St., Raake, A. Can Communication Technologies Reduce Loneliness and Social Isolation in Older People? A Scoping Review of Reviews. *International Journal of Environmental Research and Public Health*, vol. 19 (2022) 18, pp. 11310ff, MDPI
- 7) Katzmann, A., Taubmann, O., Ahmad, St., Mühlberg, A., Sühling, M., Gross, H.-M. Explaining clinical decision support systems in medical imaging using cycle-consistent activation maximization. *Neurocomputing*, vol. 458 (2021), pp. 141-156, Elsevier
- 8) Röhner, E., Mayfarth, A., Sternitzke, Ch., Layher, F., Scheidig, A., Gross, H.-M., Matziolis, G., Böhle, S., Sander, K. Mobile robot-based gait training after Total Hip Arthroplasty (THA) improves walking in biomechanical gait analysis. *Journal of Clinical Medicine, Special Issue on Recent Advances in Arthroplasty*, 10 (2021) 11, pp. 2416 ff. (11 pages), MDPI, <https://doi.org/10.3390/jcm10112416>
- 9) Scheidig, A., Schütz, B., Trinh, T.Q., Vorn-dran, A., Mayfarth, A., Sternitzke, Ch., Röhner, E., Gross, H.-M. Robot-assisted gait self-training: assessing the level achieved. *Sensors*, 21 (2021) pp. 6213 ff (15 Pages), MDPI, <https://doi.org/10.3390/s21186213>
- 10) Wengefeld, T., Lewandowski, B., Seichter, D., Pfennig, L., Müller, St. Gross, H.-M. Real-time person orientation estimation and tracking using colored point clouds. *Robotics and Autonomous Systems (RAS)*, vol. 135 (2021) 103665 ff. (15 pages), Elsevier, <https://doi.org/10.1016/j.robot.2020.103665>
- 11) Zhang, Y., Müller, St., Stephan, B., Gross, H.-M., Notni, G. Point Cloud Hand-Object Segmentation using Multi-Modal Imaging with Thermal and Color Data for Safe Robotic Object Handover. *Sensors* vol. 21 (2021), 5676 ff. (16 pages), MDPI, <https://doi.org/10.3390/s21165676>
- 12) Müller, St., Wengefeld, T., Trinh, T. Q., Aganian, D., Eisenbach, M. Gross, H.-M. A Multi-Modal Person Perception Framework for Socially Interactive Mobile Service Robots. *Sensors* vol. 20 (2020) 3, 722, 18 pages; <https://doi.org/10.3390/s20030722>
- 13) Gross, H.-M., Scheidig, A., Debes, K., Einhorn, E., Eisenbach, M., Müller, St., Schmiedel, Th., Trinh, T. Q., Weinrich, Ch., Wengefeld, T., Bley, A., Martin, Ch. ROREAS - Robot Coach for Walking and Orientation Training in Clinical Post-Stroke Rehabilitation: Prototype Implementation and Evaluation in Fields Trials.

- Autonomous Robots (AR)*, vol. 41 (2017) 3, pp. 679-698, Springer, <https://doi.org/10.1007/s10514-016-9552-6>
- 14) **Doering, N., Richter, K., Gross, H.-M., Schroeter, Ch., Mueller, S., Volkhardt, M., Scheidig, A., Debes, K.** Robotic Companions for Older People: A Case Study in the Wild. *Studies in Health Technology and Informatics* vol. 219 (2016), pp. 147-152
  - 15) **Doering, N., Poeschl, S., Gross, H.-M., Bley, A., Martin, Ch., Boehme, H.-J.** User-Centered Design and Evaluation of a Mobile Shopping Robot. *Int. Journal of Social Robotics (JSR)*, vol. 7 (2015), pp. 203-225
  - 16) **Einhorn, E., Gross, H.-M.** Generic NDT Mapping in Dynamic Environments and its Application for Lifelong SLAM. *Robotics and Autonomous Systems (RAS)*, vol. 69 (2015), pp. 28-39
  - 17) **Vollmer, Ch., Hellbach, S., Eggert, J., Gross, H.-M.** Sparse Coding of Human Motion Trajectories with Non-Negative Matrix Factorization. *Neurocomputing (NC)* vol. 124 (2014), pp. 22-32
  - 18) **Kirstein, St., Wersing, H., Gross, H.-M., Körner, E.** A Life-Long Learning Vector Quantization Approach for Interactive Learning of Multiple Categories. *Neural Networks (NN)* vol. 28 (2012), pp. 90-105
  - 19) **Einhorn, E., Schröter, Ch., Gross, H.-M.** Attention-Driven Monocular Scene Reconstruction for Obstacle Detection, Robot Navigation and Map Building. *Robotics and Autonomous Systems (RAS)*, vol. 59 (2011) 5, pp. 296-309, Elsevier
  - 20) **Poeschl, S., Doering, N., Gross, H.-M., Bley, A., Martin, Ch., Boehme, H.-J.** Roboter-Gestuetzte Artikelsuche im Baumarkt. *Zeitschrift fuer Evaluation (ZfEv)*, vol. 10 (2011) 1, pp. 99-132
  - 21) **Barrois, B., Konrad, M., Woehler, Ch., Gross, H.-M.** Resolving Stereo Matching Errors due to Repetitive Structures Using Model Information. *Pattern Recognition Letters (PRL)*, vol. 31, Issue 12 (2010), pp. 1683-1692, Elsevier
  - 22) **Martin, Ch., Steege, F.-F., Gross, H.-M.** Estimation of Pointing Poses for Visually Instructing Mobile Robots under Real World Conditions. *Robotics and Autonomous Systems (RAS)*, vol. 58 (2010) 2, pp. 174-185, Elsevier
  - 23) **Arras, K., Burgard, W., Gross, H.-M.** Special Issue of Selected Papers from the 2007 European Conference on Mobile Robots. *Robotics and Autonomous Systems (RAS)*, vol. 58 (2010) 2, pp. 131-132, Elsevier
  - 24) **Hellbach, S., Eggert, J., Koerner, E., Gross, H.-M.** Experimental Evaluation of Approaches for Long Term Prediction of Human Movement Trajectories. *Australian Journal of Intelligent Information Processing Systems (AJIIPS)*, vol. 10 (2009) 3
  - 25) **Kirstein, St., Denecke, A., Hasler, St., Wersing, H., Gross, H.-M., Koerner, E.** A Vision Architecture for Unconstrained and Incremental Learning of Multiple Categories. in *Memetic Computing (MC)*, vol. 1 (2009), 4, pp. 291-304
  - 26) **Woehler, Chr., d'Angelo, P., Krueger, L., Kuhl, A., Gross, H.-M.** Monocular 3D Scene Reconstruction at Absolute Scale. *ISPRS Journal of Photogrammetry and Remote Sensing (ISPRS)*, vol. 64 (2009), 6, pp. 529-540, Elsevier 2009
  - 27) **Richarz, J., Scheidig, A., Martin, Ch., Mueller, St., Gross, H.-M.** A Monocular Pointing Pose Estimator for Gestural Instruction of a Mobile Robot. *Int. Journal of Advanced Robotic Systems (IJARS)*, vol. 4, No. 1 (2007), pp. 139-150
  - 28) **Gross, H.-M.** Learning and Self-Organization of Behavior - Service. *Kuenstliche Intelligenz (KI)*, vol. 3 (2006), pp. 43-44, BoettcherIT Verlag, Bremen
  - 29) **Martin, Ch., Schaffernicht, E., Scheidig, A., Gross, H.-M.** Multi-Modal Sensor Fusion Using a Probabilistic Aggregation Scheme for People Detection and Tracking. *Robotics and Autonomous Systems (RAS)*, vol. 54 (2006) 9, pp. 721-728, Elsevier ScienceDirect
  - 30) **Scheidig, A., Mueller, St., Gross, H.-M.** User-Adaptive Interaction with Social Service Robots. *Kuenstliche Intelligenz (KI)*, vol. 3 (2006), pp. 31-34, BoettcherIT Verlag, Bremen
  - 31) **Wilhelm, T., Boehme, H.-J., Gross, H.-M.** A Multi-Modal System for Tracking and Analyzing Faces on a Mobile Robot. *Robotics and Autonomous Systems (RAS)*, vol. 48 (2004), pp. 31-40, Elsevier Science
  - 32) **Boehme, H.-J., Wilhelm, T., Key, J., Schauer, C., Schroeter, Chr., Gross, H.-M., Hempel, T.** An Approach to Multi-Modal Human-Machine Interaction for Intelligent Service Robots. *Robotics and Autonomous Systems (RAS)*, vol. 44 (2003), pp. 83-96, Elsevier Science
  - 33) **Stephan, V., Gross, H.-M.** Visuomotor Anticipation - A Powerful Approach to Behavior-Driven Perception. *Kuenstliche Intelligenz (KI)*, vol. 2 (2003), pp. 12-17
  - 34) **Stephan, V., Debes, K., Gross, H.-M., Wintrich, F., Wintrich, H.** A New Control Scheme for Combustion Processes Using Reinforcement Learning Based on Neural Networks. *Int. Journal on Computational Intelligence and Applications (IJCIA)*, vol. 1 (2001) 2, pp. 121-136, Imperial College Press 2001
  - 35) **Corradini, A., Boehme, H.-J., Gross, H.-M.** A Hybrid Stochastic-Connectionist Approach to Gesture Recognition. *Int. Journal on Artificial Intelligence Tools (IJAIT)*, vol.9 (2000), no. 2, pp. 177-204
  - 36) **Gross, H.-M., Boehme, H.-J., Key, J., Wilhelm, T.** The PERSES Project - A Vision-Based Interactive Mobile Shopping Assistant. *Kuenstliche Intelligenz (KI)*, vol. 4 (2000), pp. 34-36
  - 37) **Gross, H.-M., Heinze, A., Seiler, T., Stephan, V.** Generative Character of Perception: A Neural Architecture for Sensorimotor Anticipation. *Neural Networks, 1999 Special Issue "Organisation of Computation in Brain-like Systems" (NN)*, vol. 12 (1999), pp. 1101-1129
  - 38) **Thust, S., Pomierski, T., Schade, H.-P., Gross, H.-M.** Automatische Farbkorrektur fuer Film, Video und Photo. *Fernseh- und Kino-Technik*

- (FKTG), vol. 51 (1997), no. 3, pp. 589-592 [A]
- 39) **Hamker, F.-H., Gross, H.-M.** Region Finding for Attention Control in Consideration of Subgoals. *Neural Network World, International Journal on Neural and Mass-Parallel Computing and Information Systems (NNW)*, vol. 6 (1996), no. 3, pp. 305-313 [5, E]
  - 40) **Gross, H.-M., Boehme, H.-J., Debes, K.** A Neural Network Hierarchy for Data and Knowledge Controlled Selective Visual Attention. *Chinese Journal of Biomedical Engineering (CJBME)*, vol. 4 (1994) pp. 363-368
  - 41) **Schwind, J., Gross, H.-M.** Verfahren zur online-Minimierung von Lidschlag- und vertikalen Augenbewegungsartefakten im EEG. *EEG-EMG Zeitschrift fuer Elektroenzephalographie, Elektromyographie und verwandte Gebiete*, vol. 19 (1988), pp. 96-100

## Reviewed International Conference and Workshop Papers

- 1) **Arboleda, S.A., Fishedick, S.B., Diao, Ch., Richter, K., Gross, H.-M. Raake, A.** An Exploratory Study on the Impact of Varying Levels of Robot Control on Presence in Robot-Mediated Communication. in: *IEEE Int. Conf. on Robot and Human Interactive Communication (RO-MAN), Pasadena, USA*, pp. ..., IEEE 2024
- 2) **Stephan, B., Fishedick, S.B., Seichter, D., Aganian, D., Gross, H.-M.** GraspTrack: Object and Grasp Pose Tracking for Arbitrary Objects. in: *IEEE Int. Conf. on Automation Science and Engineering (CASE), Bari, Italy*, IEEE 2024
- 3) **Wengefeld, T., Seichter, D., Lewandowski, B., Gross, H.-M.** Enhancing Person Perception for Mobile Robotics by Real-Time RGB-D Person Attribute Estimation. in: *2024 IEEE/SICE Int. Symp. on System Integration (SII), Ha Long, Vietnam*, pp. 914-921, IEEE 2024  
<https://doi.org/10.1109/SII58957.2024.10417431>
- 4) **Aganian, D., Stephan, B., Eisenbach, M., Stretz, C., Gross, H.-M.** ATTACH Dataset: Annotated Two-Handed Assembly Actions for Human Action Understanding. in: *IEEE Int. Conf. on Robotics and Automation (ICRA), London, UK*, pp. 11367-11373, IEEE 2023, <https://doi.org/10.1109/ICRA48891.2023.10160633>
- 5) **Aganian, D., Köhler, M., Baake, S., Eisenbach, M., Gross, H.-M.** How Object Information Improves Skeleton-Based Human Action Recognition in Assembly Tasks. in: *IEEE Int. Joint Conf. on Neural Networks (IJCNN), Queensland, Australia*, pp. 01-09, IEEE 2023, <https://doi.org/10.1109/IJCNN54540.2023.10191686>
- 6) **Aganian, D., Köhler, M., Stephan, B., Eisenbach, M., Gross, H.-M.** Fusing Hand and Body Skeletons for Human Action Recognition in Assembly. in: *Int. Conf. on Artificial Neural Networks and Machine Learning (ICANN), Heraklion, Greece*, Lecture Notes in Computer Science, vol 14254, pp. 207-219, Springer 2023, [https://doi.org/10.1007/978-3-031-44207-0\\_18](https://doi.org/10.1007/978-3-031-44207-0_18)

- 7) **Eisenbach, M., Lübberstedt, J., Aganian, D., Gross, H.-M.** A Little Bit Attention Is All You Need for Person Re-Identification. in: *IEEE Int. Conf. on Robotics and Automation (ICRA), London, UK*, pp. 7598-7605, IEEE 2023, <https://doi.org/10.1109/ICRA48891.2023.10160304>
- 8) **Fishedick, S.B., Seichter, D., Schmidt, R., Rabes, L., Gross, H.-M.** Efficient Multi-Task Scene Analysis with RGB-D Transformers. in: *IEEE Int. Joint Conf. on Neural Networks (IJCNN), Gold Coast, Australia*, pp. 1-10, IEEE 2023, <https://doi.org/10.1109/IJCNN54540.2023.10191977>
- 9) **Fishedick, S.B., Richter, K., Wengefeld, T., Seichter, D., Scheidig, A., Döring, N., Broll, W., Werner, St., Raake, A., Gross, H.-M.** Bridging Distance with a Collaborative Telepresence Robot for Older Adults – Report on Progress in the CO-HUMANICS Project. in: *Int. Symposium on Robotics (ISR Europe), Stuttgart, Germany*, pp. 346-353, VDE 2023
- 10) **Müller, St., Stephan, B., Müller, T., Gross, H.-M.** Robust Perception Skills for Autonomous Elevator Operation by Mobile Robots. in: *European Conference on Mobile Robots (ECMR 2023), Coimbra, Portugal*, pp. 1-10, IEEE 2023, <https://doi.org/10.1109/ECMR59166.2023.10256353>
- 11) **Müller, T., Müller, St., Gross, H.-M.** Door Manipulation as a Fundamental Skill Realized on Robots With Differential Drive. in: *Int. Symposium on Robotics (ISR Europe), Stuttgart, Germany*, pp. 338-345, VDE 2023
- 12) **Scheidig, A., Hartramph, R. Schütz, B., Müller, St., Kunert, K., Lahne, J., Oelschlegel, U., Scheidig, R., Gross, H.-M.** Feasibility Study: Towards a Robot-Assisted Gait Training in Ophthalmological Rehabilitation. in: *IEEE-RAS-EMBS Int. Conf. on Rehabilitation Robotics (ICORR), Singapore*, pp. 1-6, IEEE 2023, <https://doi.org/10.1109/ICORR58425.2023.10304760>
- 13) **Seichter, D., Stephan, B., Fishedick, S.B., Müller, St., Rabes, L., Gross, H.-M.** PanopticNDT: Efficient and Robust Panoptic Mapping. in: *Int. Conf. on Intelligent Robots and Systems (IROS), Detroit, USA*, pp. 7233-7240, IEEE 2023, <https://doi.org/10.1109/IROS55552.2023.10342137>
- 14) **Stephan, B., Dontsov, I., Müller, St., Gross, H.-M.** On Learning of Inverse Kinematics for Highly Redundant Robots with Neural Networks. in: *IEEE Int. Conf. on Advanced Robotics (ICAR), Abu Dhabi, UAE*, pp. 402-408, IEEE 2023, <https://doi.org/10.1109/ICAR58858.2023.10406939>
- 15) **Seichter, D., Langer, P., Wengefeld, T., Lewandowski, B., Hoechemer, D., Gross, H.-M.** Efficient and Robust Semantic Mapping for Indoor Environments. in: *IEEE Int. Conf. on Robotics and Automation (ICRA), Philadelphia, USA*, pp. 9221-9227, IEEE 2022
- 16) **Seichter, Fishedick, S.B. Söhnke, B.F., Köhler, M., Gross, H.-M.** Efficient Multi-Task RGB-D Scene Analysis for Indoor Environments. *IEEE Int. Joint Conf. on Neural Networks (IJCNN)*,

- Padua, Italy, pp. 1-10, IEEE 2022
- 17) **Sämänn, T., Hammam, A.M., Bursuc, A., Stiller, C., Gross, H.-M.** Improving Predictive Performance and Calibration by Weight Fusion in Semantic Segmentation. *NeurIPS Workshop on Machine Learning for Autonomous Driving, New Orleans, USA*, 2022
  - 18) **Stephan, B., Aganian, D., Hinneburg, L., Eisenbach, M., Müller, St., Gross, H.-M.** On the Importance of Label Encoding and Uncertainty Estimation for Robotic Grasp Detection in: *IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS), Kyoto, Japan*, pp. 4781-88, IEEE 2022
  - 19) **Wengefeld, T., Schütz, B., Girdziunaite, G., Scheidig, A., Gross, H.-M.** The MORPHIA Project: First Results of a Long-Term User Study in an Elderly Care Scenario from Robotic Point of View. in: *Int. Symposium on Robotics (ISR Europe), Munich, Germany*, pp. 1-8, VDE
  - 20) **Aganian, D., Eisenbach, M., Wagner, J., Seichter, D., Gross, H.-M.** Revisiting Loss Functions for Person Re-identification. in: *Int. Conf. on Artificial Neural Networks (ICANN), Bratislava*, pp. 30-42, Springer 2021
  - 21) **Balada, Ch., Eisenbach, M., Gross, H.-M.** Evaluation of Transfer Learning for Visual Road Condition Assessment. in: *Int. Conf. on Artificial Neural Networks (ICANN), Bratislava*, pp. 540-551, Springer 2021
  - 22) **Döring, N., Mikhailova, V., Brandenburg, K.-H., Broll, W., Gross, H.-M., Werner, St., Raake, A.** Saying “Hi” to Grandma in Nine Different Ways: Established and Innovative Communication Media in the Grandparent-Grandchild Relationship. in: *American Psychological Association’s conference on Technology, Mind & Society*, 2021
  - 23) **Eisenbach, M., Aganian, D., Köhler, M., Stephan, B., Schroeter, Chr., Gross, H.-M.** Visual Scene Understanding for Enabling Situation-Aware Cobots. in: *IEEE Int. Conf. on Automation Science and Engineering (CASE)*, IEEE 2021
  - 24) **Fischer, K., Simon, M., Oelsner, F., Milz, St., Gross, H.-M., Maeder, P.** StickyPillars: Robust and Efficient Feature Matching on Point Clouds using Graph Neural Networks. in: *IEEE Int. Conf. on Computer Vision and Pattern Recognition (CVPR)*, pp. 313-323, IEEE 2021
  - 25) **Müller, St., Stephan, B., Gross, H.-M.** MDP-based Motion Planning for Grasping in Dynamic Szenarios. in: *Europ. Conf. on Mobile Robotics (ECMR), Bonn, Germany*, 8 pages, 2021, IEEE 2021
  - 26) **Seichter, D., Köhler, M., Lewandowski, B., Wengefeld, T., Gross, H.-M.** Efficient RGB-D Semantic Segmentation for Indoor Scene Analysis. in: *IEEE Int. Conf. on Robotics and Automation (ICRA), Xian, China*, pp. 13525-13531, IEEE 2021
  - 27) **Stricker, R., Aganian, D., Sesselmann, M., Seichter, D., Engelhardt, M., Spielhofer, R., Hahn, M., Hautz, A., Debes, K., Gross, H.-M.** Road Surface Segmentation - Pixel Per-  
fect Distress and Object Detection for Road Assessment. in: *IEEE Int. Conf. on Automation Science and Engineering (CASE)*, pp. 1789-1796, IEEE 2021
  - 28) **Schnuerer, Th., Probst, M., Gross, H.-M.** Relational Concepts in Deep Reinforcement Learning: Emergence and Representation. in: *Int. Workshop “Concepts in Action: Representation, Learning, and Application” (CARLA), Bolzano, Italy*, 3 pages, OpenReview.Net 2020
  - 29) **Katzmann, A. Muehlberg, A., Suehling, M., Noerenberg, D., Holch, J. W., Gross, H.-M.** Deep Random Forests for Small Sample Size Prediction with Medical Imaging Data. in: *Int. Symposium on Biomedical Imaging (ISBI), Iowa City, USA*, pp.1543-47, IEEE 2020
  - 30) **Lembach, J., Stricker, R., Gross, H.-M.** Efficient Implementation of Regional Mutual Information for the Registration of Road Images. in: *Int. Conf. on Image Processing Theory, Tools and Applications (IPTA), Paris, France*, 6 pages, IEEE 2020
  - 31) **Lewandowski, B., Wengefeld, T. Mueller, S., Jenny, M., Glende, S., Schroeter, Ch., Bley, A., Gross, H.-M.** Socially Compliant Human-Robot Interaction for Autonomous Scanning Tasks in Supermarket Environments. in: *IEEE Int. Symp. on Robot and Human Interactive Communication (RO-MAN), Naples, Italy*, pp. 363-370, IEEE 2020
  - 32) **Seichter, D., Lewandowski, B., Hoechemer, D., Wengefeld, T., Gross, H.-M.** Multi-Task Deep Learning for Depth-based Person Perception in Mobile Robotics. in: *IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS), Las Vegas, USA*, pp. 10497-10504, IEEE 2020
  - 33) **Trinh, T. Q., Vorndran, A., Schuetz, B., Jaeschke, B., Mayfarth, A., Scheidig, A., Gross, H.-M.** Autonomous Mobile Gait Training Robot for Orthopedic Rehabilitation in a Clinical Environment. in: *Int. Symp. on Robot and Human Interactive Communication (RO-MAN), Naples, Italy*, pp. 580-587, IEEE 2020
  - 34) **Wengefeld, T., Hoechemer, D., Lewandowski, B., Koehler, M., Beer, M., Gross, H.-M.** A Laser Projection System for Robot Intention Communication and Human Robot Interaction. in: *Int. Symp. on Robot and Human Interactive Communication (RO-MAN), Naples, Italy*, pp. 259-265, IEEE 2020
  - 35) **Eisenbach, M., Stricker, R., Sesselmann, M., Seichter, D., Gross, H.-M.** Enhancing the Quality of Visual Road Condition Assessment by Deep Learning. in: *World Road Congress 2019, Abu Dhabi, UAE*, 13 pages, 2019
  - 36) **Gross, H.-M., Scheidig, A., Mueller, St., Schuetz, B., Fricke, Ch., Meyer, S.** Living with a Mobile Companion Robot in your Own Apartment - Final Implementation and Results of a 20-Weeks Field Study with 20 Seniors. in: *IEEE Int. Conf. on Robotics and Automation (ICRA), Montreal, Canada*, pp. 2253-2259, IEEE 2019
  - 37) **Katzmann, A. Muehlberg, A., Suehling, M., Noerenberg, D., Gross, H.-M.** Deep Meta-

- memory - A Generic Framework for Stabilized One-Shot Confidence Estimation in Deep Neural Networks and its Application on Colorectal Cancer Liver Metastases Growth Prediction. in: *IEEE Int. Symposium on Biomedical Imaging (ISBI)*, pp. 1298-1302, IEEE 2019
- 38) **Katzmann, A., Muehlberg, A., Suehling, M., Noerenberg, D., Maurus, St., Holch, J. W., Heinemann, V., Gross, H.-M.** Computed Tomography Image-Based Deep Survival Regression for Metastatic Colorectal Cancer Using a Non-proportional Hazards Model. in: *Predictive Intelligence in Medicine (PRIME), Shenzhen, China, LNCS 11843*, pp. 73-80, Springer 2019
- 39) **Lewandowski, B., Liebner, J., Wengefeld, T., Mueller, St., Gross, H.-M.** A Fast and Robust 3D Person Detector and Posture Estimator for Mobile Robotic Applications. in: *IEEE Int. Conf. on Robotics and Automation (ICRA), Montreal, Canada*, pp. 4869-75, IEEE 2019
- 40) **Lewandowski, B., Seichter, D., Wengefeld, T., Pfennig, L., Drumm, H., Gross, H.-M.** Deep Orientation: Fast and Robust Upper Body Orientation Estimation for Mobile Robotic Applications. in: *IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS), Macau*, pp. 441-48, IEEE 2019
- 41) **Liebner, J., Scheidig, A., Gross, H.-M.** Now I Need Help! Passing Doors and Using Elevators as an Assistance Requiring Robot. in: *Int. Conf. on Social Robotics (ICSR), Madrid, Spain*, pp. 527-37, Springer 2019
- 42) **Milz, St., Simon, M., Fischer, K., Poepperl, M., Gross, H.-M.** Points2Pix: 3D Point-Cloud to Image Translation Using Conditional GANs. in: *Pattern Recognition (DAGM GCPR), Dortmund, Germany, LNCS vol. 11824*, pp. 387-400, Springer 2019
- 43) **Mueller, St., Seichter, D., Gross, H.-M.** Cross-Talk Compensation in Low-Cost Resistive Pressure Matrix Sensors. in: *IEEE Int. Conf. on Mechatronics (ICM), Ilmenau, Germany*, pp. 232-237, IEEE 2019
- 44) **Scheidig, A., Jaeschke, B., Schuetz, B., Trinh, T. Q., Vorndran, A., Mayfarth, A., Gross, H.-M.** May I Keep an Eye on Your Training? Gait Assessment Assisted by a Mobile Robot. in: *IEEE/RAS-EMBS Int. Conf. on Rehabilitation Robotics (ICORR)*, pp. 701-708, IEEE 2019
- 45) **Schnuerer, Th., Fuchs, St., Eisenbach, M., Gross, H.-M.** Real-Time 3D Pose Estimation from Single Depth Images. in: *Proc. Int. Joint Conf. on Computer Vision, Imaging and Computer Graphics - Theory and Applications (VISAPP), Prague, Czech Republic*, pp. 716-724, 2019
- 46) **Saemann, T., Amende, K., Milz, St., Gross, H.-M.** Robust Semantic Video Segmentation through Confidence-based Feature Map Warping. in: *ACM Computer Science in Cars Symposium (CSCS), Kaiserslautern, Germany, 9 pages*, ACM 2019
- 47) **Saemann, T., Amende, K., Milz, St., Gross, H.-M.** Leverage Temporal Consistency for Robust Semantic Video Segmentation. in: *ICML 2019 Workshop on Uncertainty and Robustness in Deep Learning, Long Beach, CA, USA*, 8 pages, 2019
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