
Most Relevant Publications of RA F

- M. Beetz, F. Stulp, P. Esden-Tempski, A. Fedrizzi, U. Klank, I. Kresse, A. Maldonado & F. Ruiz-Ugalde, Generality and legibility in mobile manipulation, *Autonomous Robots Journal*, Special Issue on Mobile Manipulation, 28(1):21-44, 2010.
- F. Wallhoff, J. Blume, A. Bannat, W. Rösel, C. Lenz & A. Knoll, A skill-based approach towards hybrid assembly, *Advanced Engineering Informatics*, 24(3):329 - 339, 2010.
- K. Shea, C. Ertelt, T. Gmeiner & F. Ameri, Design-to-fabrication automation for the cognitive machine shop, *Advanced Engineering Informatics*, 24(3):251-268, 2010.
- N. Martiny, S. Sosnowski, K. Kühnlenz, S. Hirche, Y. Nie, J-M.P. Fransosch & J.L. van Hemmen, Design of a lateral-line sensor for an autonomous underwater vehicle, *Proc. 8th IFAC Int. Conf. Manoeuvring and Control of Marine Craft*, 292-297, 2009.
- M. F. Zaeh, M. Beetz, K. Shea, G. Reinhart, K. Bender, C. Lau, M. Ostgathe, W. Vogl, M. Wiesbeck, M. Engelhard, C. Ertelt, T. Ruehr, M. Friedrich & S. Herle, The cognitive factory, ElMaraghy, H. A. (Hrsg.): *Changeable and Reconfigurable Manufacturing Systems*, 355-371, 2009.
- M. Waibel, M. Beetz, R. D'Andrea, R. Janssen, M. Tenorth, J. Civera, J. Elfring, D. G´alvez-L´opez, K. Häussermann, J.M.M. Montiel, A. Perzylo, B. Schießle, O. Zweigle & R. van de Molengraft, RoboEarth - A world wide web for robots, *Robotics & Automation Magazine*, Accepted for publication, 2011.
- T. Villgrattner, E. Schneider, P. Andersch & H. Ulbrich, Compact high dynamic 3 DoF camera orientation system, development and control, *Journal of the Japan Society of Mechanical Engineers*, in press, 2011.
- M. F. Zaeh, W. Roesel, A. Bannat, T. Bautze, M. Beetz, J. Blume, K. Diepold, C. Ertelt, F. Geiger, T. Gmeiner, T. Gyger, A. Knoll, C. Lau, C. Lenz, M. Ostgathe, G. Reinhart, T. Ruehr, A. Schubö, K. Shea, I. Stork genannt Wersborg, S. Stork, W. Tekouo, F. Wallhoff & M. Wiesbeck, Artificial cognition in production systems, *IEEE Transactions on Automation Science and Engineering*, 8(1):148-174, 2011.
- M. F. Zaeh, G. Reinhart, M. Ostgathe, F. Geiger & C. Lau, A holistic approach for the cognitive control of production systems *Advanced Engineering Informatics* 24(3):300-307, 2010.
- A.B. Sichert, R. Bamler & J.L. van Hemmen, Hydrodynamic object recognition: When multipoles count, *Phys. Rev. Lett.*, 102, 058104, 2009.
- J. Li, A. Maldonado, M. Beetz & A. Schubö, Obstacle avoidance in a pick-and-place task, *Proceedings of the 2009 IEEE Conference on Robotics and Biomimetics*, 919-924, 2009.
- M.F. Zaeh, M. Wiesbeck, S. Stork & A. Schubö, A multi-dimensional complexity measure for manual assembly operations, *Production Engineering - Research and Development*, 3(4-5):489-496, 2009.
- K. Shea, The cognitive factory, *Advanced Engineering Informatics*, Editorial for the Special Issue on the Cognitive Factory, 24(3):241-242, 2010.
- W. Rösel, A. Bannat, J. Gast, A. Knoll, C. Lenz, S. Nair, G. Reinhart, M. Rickert & F. Wallhoff, Joint-action for humans and industrial robots for assembly tasks, *IEEE International Symp. on Robot and Human Interactive Communication*, 130-135, 2008.
- R.B. Rusu, B. Gerkey & M. Beetz, Robots in the kitchen: Exploiting ubiquitous sensing and actuation, *Robotics and Autonomous Systems Journal*, Special Issue on Network Robot Systems, 56(10):844-856, 2008.
- C. Stoessel, M. Wiesbeck, S. Stork, M.F. Zäh & A. Schubö, Towards optimal worker assistance: Investigating cognitive processes in manual assembly, *Proceedings of the 41st CIRP Conference on Manufacturing Systems*, 245-250, 2008.
- F. von Hundelshausen, M. Himmelsbach, F. Hecker, A. Müller & H.-J. W¨unsche, Driving with tentacles - Integral structures of sensing and motion, *International Journal of Field Robotics Research*, 25(9):640-673, 2008.

J.-M.P. Franosch, S. Sosnowski, N.K. Chami, K. Kühnlenz, S. Hirche, J.L. van Hemmen, Biomimetic lateral-line system for underwater vehicles, *IEEE Sensors* 2010, 2212 - 2217, 2010.

T. Villgrattner & H. Ulbrich, Design and control of a compact high-dynamic cameraorientation system, *IEEE/ASME Transactions on Mechatronics*, 16(2):221-231, 2011.

A. Gusrialdi, S. Hirche, D. Asikin, T. Hatanaka & M. Fujita, Voronoi based coverage control with anisotropic sensors and experimental case study, *Intelligent Service Robotics*, 2(4):195-204, 2009.

D. Althoff, O. Kourakos, M. Lawitzky, A. Mörtl, M. Rambow, F. Rohrmüller, D. Bršičič, D. Wollherr, S. Hirche & M. Buss, An architecture for real-time control in multi-robot systems, *Human Centered Robot Systems*, (H. Ritter, G. Sagerer, R. Dillmann, M. Buss, ed.), *Cognitive Systems Monographs*, Springer, 43-52, 2009.

C.-C. Chen, H. Wu, K. Kühnlenz, S. Hirche, Switching control for a networked vision-based control system, *Automatisierungstechnik*, 59:124-133, 2011.

T. Zhang, W. Li, K. Kühnlenz & M. Buss, Multi-sensory motion estimation and control of an autonomous quadrotor, *Advanced Robotics*, 25(11-12):1493-1514, 2011.

A. Bauer, K. Klasing, G. Lidoris, Q. Mühlbauer, F. Rohrmüller, S. Sosnowski, T. Xu, K. Kühnlenz, D. Wollherr & M. Buss, The autonomous city explorer: Towards natural humanrobot interaction in urban environments, *Int. J. of Social Robotics*, 1(2):127-140, 2009.

G. Cheng., S-H. Hyon, J. Morimoto, A. Ude, J. Hale, G. Colvin, W. Scroggin, & S. Jacobsen, CB: A humanoid research platform for exploring neuroscience, *Journal of Advanced Robotics*, 21(10):1097–1114, 2007.

K. Shea, The cognitive factory, *Advanced Engineering Informatics, Editorial for the Special Issue on the Cognitive Factory*, 24(3):241-242, 2010.

M. Bürck, P. Friedel, A.B. Sichert, C. Vossen & J.L. van Hemmen, Optimality in mono- and multisensory map formation, *Biol. Cybern.*, 103:1-20, 2010.

G. Cheng & T. Chaminade, Social cognitive neuroscience and humanoid robotics, *Journal of Physiology*, 103(3-5):286-295, 2009.

J. Goulet, J. Engelmann, B.P. Chagnaud, J.-M.P. Franosch, M.D. Suttner & J.L. van Hemmen, Object localization through the lateral line system of fish: theory and experiment, *J. Comp. Physiol. A*, 194:1-17, 2008.

G. Schroth, I. Stork genannt Wersborg & K. Diepold, A cognitive system for autonomous robotic welding, *IEEE/RSJ Int. Conf. Intell. Robots and Systems (IROS)*, 3148-3153, 2009
