

Dirk Kraft  
Mærsk Mc-Kinney Møller Institutet  
SDU Robotics  
E-mail: kraft@mmmi.sdu.dk  
Telefon: +4565507926

## Publikationer

### **In-Hand Pose Estimation and Pin Inspection for Insertion of Through-Hole Components**

Hagelskjær, F. & Kraft, D., 2022, *2022 IEEE 18th International Conference on Automation Science and Engineering (CASE)*. IEEE, s. 382-389 (IEEE International Conference on Automation Science and Engineering, Bind 2022-August).

### **Towards Flexible PCB Assembly Using Simulation-Based Optimization**

Mathiesen, S. F., Sørensen, L. C., Iversen, T. M., Hagelskjær, F. & Kraft, D., 2022, *Towards Sustainable Customization: Bridging Smart Products and Manufacturing Systems - Proceedings of the 8th Changeable, Agile, Reconfigurable and Virtual Production Conference CARV 2021 and 10th World Mass Customization and Personalization Conference MCPC 2021*. Andersen, A-L., Andersen, R., Brunoe, T. D., Larsen, M. S. S., Nielsen, K., Napoleone, A. & Kjeldgaard, S. (red.). Springer, s. 166-173 (Lecture Notes in Mechanical Engineering).

### **Wilson Score Kernel Density Estimation for Bernoulli Trials**

Sørensen, L. C., Mathiesen, S., Kraft, D. & Petersen, H. G., 10. jul. 2020, *Proceedings of the 17th International Conference on Informatics in Control, Automation and Robotics*. Gusikhin, O., Madani, K. & Zaytoon, J. (red.). SCITEPRESS Digital Library, Bind 1. s. 305-313

### **Towards robot cell matrices for agile production—SDU Robotics' assembly cell at the WRC 2018**

Schlette, C., Buch, A. G., Hagelskjær, F., Iturrate, I., Kraft, D., Kramberger, A., Lindvig, A. P., Mathiesen, S., Petersen, H. G., Rasmussen, M. H., Savarimuthu, T. R., Sloth, C., Sørensen, L. C. & Thulesen, T. N., 17. apr. 2020, I: *Advanced Robotics*. 34, 7-8, s. 422-438

### **Rapid Estimation of Optical Properties for Simulation-Based Evaluation of Pose Estimation Performance**

Iversen, T. M., Wilm, J. & Kraft, D., nov. 2019, *Proceedings of the 2019 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. IEEE, s. 2030-2037 (IEEE International Conference on Intelligent Robots and Systems. Proceedings).

### **Increasing safety by combining multiple declarative rules in robotic perception systems**

Ingbergsson, J. T. M., Kraft, D. & Schultz, U. P., 13. apr. 2019, *Cyber Physical Systems. Design, Modeling, and Evaluation: 7th International Workshop, CyPhy 2017, Revised Selected Papers*. Chamberlain, R., Taha, W. & Törngren, M. (red.). Springer, s. 43-60 (Lecture Notes in Computer Science, Bind 11267).

### **Optimizing sensor placement: A mixture model framework using stable poses and sparsely precomputed pose uncertainty predictions**

Iversen, T. M. & Kraft, D., 27. dec. 2018, *Proceedings of the 2018 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. IEEE, s. 6652-6659

### **Adapting Parameterized Motions using Iterative Learning and Online Collision Detection**

Laursen, J. S., Sørensen, L. C., Schultz, U. P., Ellekilde, L-P. & Kraft, D., 13. sep. 2018, *Proceeding of the 2018 IEEE International Conference on Robotics and Automation*. IEEE, s. 7587-7594

### **Optimisation of Trap Design for Vibratory Bowl Feeders**

Mathiesen, S., Sørensen, L. C., Kraft, D. & Ellekilde, L-P., 13. sep. 2018, *Proceeding of the 2018 IEEE International Conference on Robotics and Automation*. IEEE, s. 3467-3474

### **Local point pair feature histogram for accurate 3D matching**

Buch, A. G. & Kraft, D., 6. sep. 2018.

### **BOP: Benchmark for 6D Object Pose Estimation**

Hodan, T., Michel, F., Brachmann, E., Kehl, W., Buch, A. G., Kraft, D., Drost, B., Vidal, J., Ihrke, S., Zabulis, X., Sahin, C., Manhardt, F., Tombari, F., Kim, T-K., Matas, J. & Rother, C., sep. 2018, *Computer Vision - ECCV 2018: 15th European Conference, Munich, Germany, September 8–14, 2018, Proceedings, Part III*. Ferrari, V., Hebert, M., Sminchisescu, C. & Weiss, Y. (red.). Springer, Bind 11207. s. 19-35 (Lecture Notes in Computer Science).

### **Bootstrapping relational affordances of object pairs using transfer**

Fichtl, S., Kraft, D., Krüger, N. & Guerin, F., mar. 2018, *IEEE Transactions on Cognitive and Developmental Systems*. 10, 1, s. 56-71

### **Automatic Parameter Learning for Easy Instruction of Industrial Collaborative Robots**

Sørensen, L. C., Andersen, R. S., Schou, C. & Kraft, D., feb. 2018, *IEEE International Conference on Industrial Technology*. IEEE, s. 87-92

### **Simulation-based optimization of camera placement in the context of industrial pose estimation**

Jørgensen, T. B., Iversen, T. M., Lindvig, A. P., Schlette, C., Kraft, D., Savarimuthu, T. R., Roßmann, J. & Krüger, N., jan. 2018, *Proceedings of the 13th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications*. Imai, F., Tremeau, A. & Braz, J. (red.). SCITEPRESS Digital Library, Bind 5. s. 524-533

### **Integrating Multi-Purpose Natural Language Understanding, Robot's Memory, and Symbolic Planning for Task Execution in Humanoid Robots**

Wächter, M., Ovchinnikova, E., Wittenbeck, V., Kaiser, P., Szedmak, S., Mustafa, W., Kraft, D., Krüger, N., Piater, J. & Asfour, T., 2018, *Robotics and Autonomous Systems*. 99, s. 148-165

### **Safety Computer Vision Rules for Improved Sensor Certification**

Mogensen, J. T. I., Kraft, D. & Schultz, U. P., 11. maj 2017, *Proceedings of the First IEEE International Conference on Robotic Computing (IRC)*. IEEE, s. 89-92

### **Declarative Rule-based Safety for Robotic Perception Systems**

Mogensen, J. T. I., Kraft, D. & Schultz, U. P., 2017, *Journal of Software Engineering for Robotics*. 8, 1, s. 17-31

### **Explicit Image Quality Detection Rules for Functional Safety in Computer Vision**

Mogensen, J. T. I., Kraft, D. & Schultz, U. P., 2017, *Proceedings of the 12th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications*. Braz, J., Tremeau, A. & Imai, F. (red.). Institute for Systems and Technologies of Information, Control and Communication, Bind 6. s. 433-444

### **Generation of synthetic Kinect depth images based on empirical noise model**

Iversen, T. M. & Kraft, D., 2017, *Electronics Letters*. 53, 13, s. 856-858

### **Prediction of ICP Pose Uncertainties Using Monte Carlo Simulation with Synthetic Depth Images**

Iversen, T. M., Buch, A. G. & Kraft, D., 2017, *Proceedings of the 2017 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. IEEE, s. 4640-4647

### **Rotational Subgroup Voting and Pose Clustering for Robust 3D Object Recognition**

Buch, A. G., Kiforenko, L. & Kraft, D., 2017, *Proceedings of the 2017 IEEE International Conference On Computer Vision*. IEEE, s. 4137-4145 9 s. (I C C V - International Conference on Computer Vision, Bind 2017).

### **The Sliced Pineapple Grid Feature for Predicting Grasping Affordances**

Thomsen, M. T., Kraft, D. & Krüger, N., 2017, *Computer Vision, Imaging and Computer Graphics Theory and Applications - 11th International Joint Conference, VISIGRAPP 2016, Revised Selected Papers*. Braz, J., Magnenat-Thalmann, N., Richard, P., Linsen, L., Telea, A., Battiato, S. & Imai, F. (red.). Springer, s. 418-438 (Communications in Computer and Information Science, Bind 693).

### **A Semi-Local Surface Feature for Learning Successful Grasping Affordances**

Thomsen, M. T., Kraft, D. & Krüger, N., 27. feb. 2016, *Proceedings of the 11th Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications*. Magnenat-Thalmann, N., Richard, P., Linsen, L., Telea, A., Battiato, S., Imai, F. & Braz, J. (red.). SCITEPRESS Digital Library, Bind 3. s. 562-572

#### **Affordance estimation for vision-based object replacement on a humanoid robot**

Mustafa, W., Wächter, M., Szedmak, S., Agostini, A., Kraft, D., Asfour, T., Piater, J., Wörgötter, F. & Krüger, N., 2016, *Proceedings of the 47th International Symposium on Robotics*. VDE-Verlag, s. 164-172

#### **Emotion Recognition Through Body Language Using RGB-D Sensor**

Kiforenko, L. & Kraft, D., 2016, *Proceedings of the 11th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications*. Magnenat-Thalmann, N., Richard, P., Linsen, L., Telea, A., Battiato, S., Imai, F. & Braz, J. (red.). SCITEPRESS Digital Library, Bind 3. s. 398-405

#### **Facilitating Robotic Subtask Reuse by a New Representation of Parametrized Solutions**

Buch, J. P., Sørensen, L. C., Kraft, D. & Petersen, H. G., 2016, *Proceedings of the 13th International Conference on Informatics in Control, Automation and Robotics*. Gusikhin, O., Peaucelle, D. & Madani, K. (red.). SCITEPRESS Digital Library, s. 37-48

#### **Industrial Assembly Cases**

Ellekilde, L-P., Buch, J. P., Iversen, T. M., Laursen, J. S., Mathiesen, S., Sørensen, L. C., Kraft, D., Savarimuthu, T. R., Petersen, H. G., Chrysostomou, D., Hansson, M. & Schou, C., 2016, Syddansk Universitet. Mærsk Mc-Kinney Møller Institutet. 22 s. (Technical Reports - Maersk Mc-Kinney Moller Institute, University of Southern Denmark; Nr. 1).

#### **Online Action Learning using Kernel Density Estimation for Quick Discovery of Good Parameters for Peg-in-Hole Insertion**

Sørensen, L. C., Buch, J. P., Petersen, H. G. & Kraft, D., 2016, *Proceedings of the 13th International Conference on Informatics in Control, Automation and Robotics*. Gusikhin, O., Peaucelle, D. & Madani, K. (red.). SCITEPRESS Digital Library, s. 166-177

#### **Multi-Label Object Categorization Using Histograms of Global Relations**

Mustafa, W., Xiong, H., Kraft, D., Szedmak, S., Piater, J. & Krüger, N., 20. nov. 2015, *International Conference on 3D Vision (3DV)*. Brown, M., Kosecka, J. & Theobalt, C. (red.). IEEE, s. 309-317

#### **Using surfaces and surface relations in an early cognitive vision system**

Kraft, D., Mustafa, W., Popovic, M., Jessen, J. B., Buch, A. G., Savarimuthu, T. R., Pugeault, N. & Krüger, N., nov. 2015, I: *Machine Vision and Applications*. 26, 7-8, s. 933-954

#### **Using Relational Histogram Features and Action Labelled Data to Learn Preconditions for Means-End Actions**

Fichtl, S., Kraft, D., Krüger, N. & Guerin, F., 2. okt. 2015, *IROS 2015 workshop proceedings*. IEEE, 6 s.

#### **Towards Declarative Safety Rules for Perception Specification Architectures**

Mogensen, J. T. I., Schultz, U. P. & Kraft, D., 28. sep. 2015, *Proceedings of 6th International Workshop on Domain-Specific Languages and models for Robotic systems (DSLRob-15)*. 4 s.

#### **On transferability and contexts when using simulated grasp databases**

Jørgensen, J. A., Ellekilde, L-P., Kraft, D., Petersen, H. G. & Krüger, N., jun. 2015, I: *Robotica*. 33, 5, s. 1131-1146

#### **Structural Bootstrapping: A Novel, Generative Mechanism for Faster and More Efficient Acquisition of Action-Knowledge**

Wörgötter, F., Geib, C., Tamosiunaite, M., Aksoy, E. E., Piater, J., Xiong, H., Ude, A., Nemeč, B., Kraft, D., Krüger, N., Wächter, M. & Asfour, T., jun. 2015, I: *IEEE Transactions on Autonomous Mental Development*. 7, 2, s. 140-154

#### **Geometric Edge Description and Classification in Point Cloud Data with Application to 3D Object Recognition**

Jørgensen, T. B., Buch, A. G. & Kraft, D., 11. mar. 2015, *Proceedings of the 10th International Conference on Computer Vision Theory and Applications*. Braz, J., Battiato, S. & Imai, F. (red.). Institute for Systems and Technologies of Information, Control and Communication, Bind 1. s. 333-340

#### **Identifying relevant feature-action associations for grasping unmodelled objects**

Thomsen, M. T., Kraft, D. & Krüger, N., mar. 2015, I: *Paladyn. Journal of Behavioral Robotics*. 6, 1, s. 85-110

### **Real-time extraction of surface patches with associated uncertainties by means of Kinect cameras**

Olesen, S. M., Lyder, S., Kraft, D., Krüger, N. & Jessen, J. B., mar. 2015, I: *Journal of Real-Time Image Processing*. 10, 1, s. 105-118

### **Extracting Categories By Hierarchical Clustering Using Global Relational Features**

Mustafa, W., Kraft, D. & Krüger, N., 2015, *Pattern Recognition and Image Analysis: 7th Iberian Conference, IbPRIA 2015, Santiago de Compostela, Spain, June 17-19, 2015, Proceedings*. Paredes, R., Cardoso, J. S. & Pardo, X. M. (red.). Springer, s. 541-551 (Lecture Notes in Computer Science, Bind 9117).

### **Shape Dependency of ICP Pose Uncertainties in the Context of Pose Estimation Systems**

Iversen, T. M., Buch, A. G., Krüger, N. & Kraft, D., 2015, *Computer Vision Systems: 10th International Conference, ICVS 2015, Copenhagen, Denmark, July 6-9, 2015, Proceedings*. Gasteratos, A., Nalpantidis, L., Kruger, V. & Eklundh, J.-O. (red.). Springer, s. 303-315 (Lecture Notes in Computer Science, Bind 9163).

### **A Structured Light Scanner for Hyper Flexible Industrial Automation**

Hansen, K., Pedersen, J., Sølund, T., Aanaes, H. & Kraft, D., dec. 2014, *2nd International Conference on 3D Vision (3DV)*. IEEE, Bind 1. s. 401-408

### **Technologies for the Fast Set-Up of Automated Assembly Processes**

Krüger, N., Ude, A., Petersen, H. G., Nemeč, B., Ellekilde, L.-P., Savarimuthu, T. R., Jørgensen, J. A., Fischer, K., Buch, A. G., Kraft, D., Mustafa, W., Aksoy, E. E., Papon, J., Kramberger, A. & Worgotter, F., nov. 2014, I: *KI - Künstliche Intelligenz*. 28, 4, s. 305-313

### **Applying Simulation and a Domain-Specific Language for an Adaptive Action Library**

Buch, J. P., Laursen, J. S., Sørensen, L. C., Ellekilde, L.-P., Kraft, D., Schultz, U. P. & Petersen, H. G., 20. okt. 2014, *Simulation, Modeling, and Programming for Autonomous Robots*. Brugali, D., Broenink, J. F., Kroeger, T. & MacDonald, B. A. (red.). Springer, Bind 8810. s. 86-97 (Lecture Notes in Computer Science, Bind 8810).

### **Automatic Grasp Generation and Improvement for Industrial Bin-Picking**

Kraft, D., Ellekilde, L.-P. & Rytz, J. A., 2014, *Gearing Up and Accelerating Cross-fertilization between Academic and Industrial Robotics Research in Europe: Technology Transfer Experiments from the ECHORD Project*. Röhrbein, F., Veiga, G. & Natale, C. (red.). Springer, s. 155-176 (Springer Tracts in Advanced Robotics, Bind 94).

### **Enhanced 3D face processing using an active vision system**

Lidegaard, M., Larsen, R., Kraft, D., Jessen, J. B., Beck, R., Savarimuthu, T. R., Gramkow, C., Neckelmann, O., Haustad, J. & Krüger, N., 2014, *Proceedings of the 9th International Conference on Computer Vision Theory and Applications*. Battiato, S. (red.). SCITEPRESS Digital Library, Bind 3. s. 466-473

### **Learning Spatial Relationships From 3D Vision Using Histograms**

Fichtl, S., McManus, A., Mustafa, W., Kraft, D., Krüger, N. & Guerin, F., 2014, *Proceedings of the 2014 IEEE International Conference on Robotics and Automation*. IEEE, s. 501-508

### **Towards Error Handling in a DSL for Robot Assembly Tasks**

Laursen, J. S., Buch, J. P., Sørensen, L. C., Kraft, D., Petersen, H. G., Ellekilde, L.-P. & Schultz, U. P., 2014. 5 s.

### **On Transferability of grasp-affordances in data-driven grasping**

Rytz, J. A., Ellekilde, L.-P., Kraft, D., Petersen, H. G. & Krüger, N., 11. aug. 2013, *Proceedings of the RAAD 2013*. 9 s.

### **A Survey of the Ontogeny of Tool Use: From Sensorimotor Experience to Planning**

Guerin, F., Krüger, N. & Kraft, D., mar. 2013, I: *IEEE Transactions on Autonomous Mental Development*. 5, 1, s. 18-45

### **Extended 3D Line Segments from RGB-D Data for Pose Estimation**

Buch, A. G., Jessen, J. B., Kraft, D., Savarimuthu, T. R. & Krüger, N., 2013, *Image Analysis: 18th Scandinavian Conference, SCIA 2013, Espoo, Finland, June 17-20, 2013, Proceedings*. Kämäräinen, J.-K. & Koskela, M. (red.). Springer, s. 54-65 (Lecture Notes in Computer Science, Bind 7944).

### **Learning Object Relationships which determine the Outcome of Actions**

Fichtl, S., Alexander, J., Kraft, D., Rytz, J. A., Krüger, N. & Guerin, F., 2013, I: *Paladyn: Journal of Behavioral Robotics*. 3, 4, s. 188-199

### **Learning Spatial Relations between Objects From 3D Scenes**

Fichtl, S., Alexander, J., Guerin, F., Mustafa, W., Kraft, D. & Krüger, N., 2013, *IEEE Third Joint International Conference on Development and Learning and Epigenetic Robotics (ICDL)*. IEEE, s. 1-2

### **Pose Estimation using a Hierarchical 3D Representation of Contours and Surfaces**

Buch, A. G., Kraft, D., Kämäräinen, J-K. & Krüger, N., 2013, *Proceedings of the 8th International Conference on Computer Vision Theory and Applications*. SCITEPRESS Digital Library, s. 105-111

### **Pose Estimation using Local Structure-Specific Shape and Appearance Context**

Buch, A. G., Kraft, D., Kämäräinen, J-K., Petersen, H. G. & Krüger, N., 2013, *IEEE International Conference on Robotics and Automation (ICRA)*. IEEE, s. 2080-2087 8 s.

### **Applying a Learning Framework for Improving Success Rates in Industrial Bin Picking**

Ellekilde, L-P., Jørgensen, J. A., Kraft, D., Krüger, N., Piater, J. & Petersen, H. G., 2012, *International Conference on Intelligent Robots and Systems (IROS)*. IROS, s. 1637-1643 7 s.

### **Rapidly learning preconditions for means-ends behaviour using active learning**

Fichtl, S., Alexander, J., Guerin, F., Rytz, J. A., Kraft, D. & Krüger, N., 2012, *2012 IEEE International Conference on Development and Learning and Epigenetic Robotics, ICDL 2012*. IEEE, s. 1-2

### **Robust peg-in-hole manipulation motivated by a human tele-operating strategy**

Ellekilde, L-P., Nemeč, B., Liljekrans, D., Savarimuthu, T. R., Kraft, D., Abu-Dakka, F., Ude, A. & Krüger, N., 2012. 2 s.

### **Accumulation of different visual feature descriptors in a coherent framework**

Jessen, J. B., Pilz, F., Kraft, D., Pugeault, N. & Krüger, N., 2011, *Image Analysis 17th Scandinavian Conference, SCIA 2011, Ystad, Sweden, May 2011. Proceedings*. Springer, s. 79-90 (Lecture Notes in Computer Science, Bind 6688).

### **Grasp Densities for Grasp Refinement in Industrial Bin Picking**

Hupfaut, B., Hahn, H., Bodenhausen, L., Kraft, D., Krüger, N. & Piater, J., 2011.

### **Grasp Learning by Means of Developing Sensorimotor Schemas and Generic World Knowledge**

Krüger, N., Popovic, M., Bodenhausen, L., Kraft, D. & Guerin, F., 2011, *Proceedings of AISB 2011 : Computational Models of Cognitive Development*. Society for the Study of Artificial Intelligence and the Simulation of Behaviour, s. 23-31

### **Learning Grasp Affordance Densities**

Detry, R., Kraft, D., Kroemer, O., Bodenhausen, L., Peters, J., Krüger, N. & Piater, J., 2011, I: *Paladyn. Journal of Behavioral Robotics*. 2, 1, s. 1-17

### **Learning Visual Representations for Perception-Action Systems**

Piater, J., Jodogne, S., Detry, R., Kraft, D., Krüger, N., Kroemer, O. & Peters, J., 2011, I: *International Journal of Robotics Research*. 30, 3, s. 294-307

### **Object-Action Complexes: Grounded Abstractions of Sensori-motor Processes**

Krüger, N., Geib, C., Piater, J., Petrick, R., Steedman, M., Wörgötter, F., Ude, A., Asfour, T., Kraft, D., Omrcen, D., Agostini, A. & Dillmann, R., 2011, I: *Robotics and Autonomous Systems*. 59, 10, s. 740-757 18 s.

### **Ring on the hook: placing a ring on a moving and pendulating hook based on visual input**

Kjær-Nielsen, A., Buch, A. G., Jensen, A. K., Møller, B., Kraft, D., Krüger, N., Petersen, H. G. & Ellekilde, L-P., 2011, I: *Industrial Robot: the international journal of robotics research and application*. 38, 3, s. 301-314

### **Development of Object and Grasping Knowledge by Robot Exploration**

Kraft, D., Detry, R., Pugeault, N., Baseski, E., Guerin, F., Piater, J. & Krüger, N., dec. 2010, I: *IEEE Transactions on Autonomous Mental Development*. 2, 4, s. 368-383

### **Refining Grasp Affordance Models by Experience**

Detry, R., Kraft, D., Buch, A. G., Krüger, N. & Piater, J., 15. jul. 2010, *Robotics and Automation (ICRA), 2010 IEEE International Conference on*. IEEE, s. 2287-2293 7 s.

### **A Strategy for Grasping unknown Objects based on Co-Planarity and Colour Information**

Popovic, M., Kraft, D., Bodenhausen, L., Baseski, E., Pugeault, N., Kragic, D., Asfour, T. & Krüger, N., 31. maj 2010, I: *Robotics and Autonomous Systems*. 58, 5, s. 551-565

### **Early Cognitive Vision as a Frontend for Cognitive Systems**

Krüger, N., Pugeault, N., Baseski, E., Jensen, L. B. W., Kalkan, S., Kraft, D., Jessen, J. B., Pitz, F., Kjær-Nielsen, A., Popovic, M., Asfour, T., Piater, J., Kragic, D. & Wörgötter, F., 2010.

### **Learning to Grasp Unknown Objects Based on 3D Edge Information**

Bodenhausen, L., Kraft, D., Popovic, M., Baseski, E., Hotz, P. E. & Krüger, N., 2010, *IEEE International Symposium on Computational Intelligence in Robotics and Automation (CIRA2009)*. IEEE, s. 421 - 428

### **A HIERARCHICAL 3D CIRCLE DETECTION ALGORITHM APPLIED IN A GRASPING SCENARIO**

Baseski, E., Kraft, D. & Krüger, N., 2009, *Proceedings of the Int. Conf. on Computer Vision Theory and Applications (VISAPP'09)*. VISAPP, Bind 1. s. 497-502 7 s.

### **Combining Cognitive Vision, Knowledge-Level Planning with Sensing, and Execution Monitoring for Effective Robot Control**

Petrick, R. P. A., Kraft, D., Krüger, N. & Steedman, M., 2009, *4th Workshop on Planning and Plan Execution for Real-World Systems Principles and Practices for Planning in Execution*. Monterey Bay Aquarium Research Institute

### **Learning Visual Representations for Interactive Systems**

Piater, J., Jodogne, S., Detry, R., Kraft, D., Krüger, N., Kroemer, O. & Peters, J., 2009, *International Symposium on Robotics Research*. International Foundation of Robotics Research

### **Grounded Object and Grasp Representations in a Cognitive Architecture**

Kraft, D., 2009, Syddansk Universitet. Det Tekniske Fakultet. 136 s.

### **Learning Objects and Grasp Affordances through Autonomous Exploration**

Kraft, D., Detry, R., Pugeault, N., Baseski, E., Piater, J. & Krüger, N., 2009, *Computer Vision Systems: 7th International Conference on Computer Vision Systems, ICVS 2009 Liège, Belgium, October 13-15, 2009. Proceedings*. Springer, s. 235-244 (Lecture Notes in Computer Science, Bind 5815/2009).

### **Tactile object exploration using cursor navigation sensors**

Kraft, D., Bierbaum, A., Kjaergaard, M., Ratkevicius, J., Kjær-Nielsen, A., Ryberg, C., Petersen, H. G., Asfour, T., Dillmann, R. & Krüger, N., 2009, *EuroHaptics conference, 2009 and Symposium on Haptic Interfaces for Virtual Environment and Teleoperator Systems. World Haptics 2009. Third Joint*. Electrical Engineering/Electronics, Computer, Communications and Information Technology Association, s. 296 301 s.

### **A Scene Representation Based on Multi-Modal 2D and 3D Features**

Baseski, E., Pugeault, N., Kalkan, S., Kraft, D., Wörgötter, F. & Krüger, N., 2008.

### **Birth of the Object: Detection of Objectness and Extraction of Object Shape through Object Action Complexes**

Kraft, D., Pugeault, N., Baseski, E., Popovic, M., Kragic, D., Kalkan, S., Wörgötter, F. & Krüger, N., 2008, I: *International Journal of Humanoid Robotics*. 5, 2, s. 247-265

**Early Reactive Grasping with Second Order 3D Feature Relations**

Aarno, D., Sommerfeld, J., Kragic, D., Pugeault, N., Kalkan, S., Wörgötter, F., Kraft, D. & Krüger, N., 2008, I: Lecture Notes in Control and Information Sciences. s. 91-105

**Exploration and Planning in a Three-Level Cognitive Architecture**

Kraft, D., Baseski, E., Popovic, M., Batog, A. M., Kjær-Nielsen, A., Krüger, N., Petrick, R., Geib, C., Pugeault, N., Steedman, M., Asfour, T., Dillmann, R., Kalkan, S., Wörgötter, F., Hommel, B., Detry, R. & Piater, J., 2008, *Proceedings of the International Conference on Cognitive Systems*. Cogsys, 8 s.

**Representation and Integration: Combining Robot Control, High-Level Planning, and Action Learning**

Petrick, R., Kraft, D., Mourao, K., Geib, C., Pugeault, N., Krüger, N. & Steedman, M., 2008.

**Extraction of multi-modal Object representations in a Robot Vision System**

Pugeault, N., Baseski, E., Kraft, D., Wörgötter, F. & Krüger, N., 2007, *Robot Vision 2007, Proceedings of the 1st International Workshop, in conjunction with VISAPP 2007, Barcelona, Spain, March 8-11, 2007*. Iocchi, L. & Sorrenti, D. G. (red.). Institute for Systems and Technologies of Information, Control and Communication, s. 126-135