

YASEMIN BEKIROGLU

DOCTORAL DEGREE

- Computer Science, KTH Royal Institute of Technology, Sweden, November 2012, Thesis: [Learning to Assess Grasp Stability from Vision, Touch and Proprioception](#).

HIGHER EDUCATION QUALIFICATIONS

- M.Sc., 2008, Applied Artificial Intelligence, Dalarna University, Sweden, Non-Stationary Feature Extraction Techniques for Automatic Classification of Impact Acoustic Signals
- M.Sc., 2007, Computer Engineering, Karadeniz Technical University, Turkey, Evaluation of Similarity Between Human Faces with Principal Component Analysis
- B.Sc., 2005, Computer Engineering, Karadeniz Technical University, Turkey
2004-2005, Computer Science, Erasmus Student, Roskilde University, Denmark

EMPLOYMENT

Assistant Professor

June 2020 - present

Chalmers University of Technology

- 80% research, 20% teaching position. I also collaborate with the Statistical Machine Learning Group as a Senior Research Fellow in Machine Learning for Robotics at University College London. My research is focused on data-efficient learning from multisensory data, e.g tactile, visual and proprioceptive, to equip robots with dexterity and high level reasoning required for achieving complex tasks autonomously. In particular, I am interested in studying how to better integrate touch sensing for robotic grasping and manipulation.

Expert evaluator

May 2019 - present

European Commission

- Evaluations of project proposals on robotics.

Developmental Robotist

August 2017 - May 2019

Vicarious AI, CA, USA

- Research and development for robotic industrial manufacturing applications. Coordination of a team responsible for developing grasping and manipulation systems integrated into a prototype for industrial picking and assembly tasks, research in learning approaches for high precision grasping and manipulation, developing systems using Python, C++ and ROS.

I have both coordinated a team of PhDs and engineers responsible for developing robotic grasping methods for the targeted prototype systems and conducted research to meet our goals on industrial manipulation tasks achieving robustness and precision. We maintained the codebase so that the solutions could be applied to any robot and can be easily extended to any task. I worked on developing a generic grasping system for the targeted objects of varying sizes, materials and shapes, e.g. bottles, boxes, small electronic parts such as resistors, which afford different manipulation goals such as insertion and integrating the grasping system into a full pipeline that involves other modules such as perception, motion planner and other controllers (insertion based on force control). I have also worked on a research project that focused on achieving high precision manipulation goals, i.e. reaching target poses based on RGB data only without relying on accurate camera calibration. The approach taken was based on learning from observations (keypoint movements in 3D robot workspace and 2D images) extending classical image based visual servoing.

Scientist

December 2016 - July 2017

ABB Corporate Research, Västerås, Sweden

- Main coordinator of European Research Project SARAFun: Smart Assembly Robots with Advanced Functionalities, and conducting independent research on machine learning approaches for grasping and manipulation including supervision of PhD and MSc students.

I coordinated the EU research project SARAFun on industrial assembly tasks demonstrated by a human, which involved researchers from different backgrounds such as neuroscience (perception and motor control) and robotics (perception, planning, control and learning). The project consortium included leading academic partners and research institutes, the Centre for Research and Technology Hellas/Information Technologies Institute (Greece), KTH Royal Institute of Technology (Sweden), Bielefeld University (Germany), Lund University (Sweden) and Tecnalia (Spain). As the main coordinator of SARAFun, my responsibilities included conducting independent research on machine learning approaches for grasping and manipulation including supervision of PhD and MSc students, and ensuring that the deliverable requirements for the whole project were met.

Postdoctoral Researcher

February 2016 - November 2016

University of Birmingham, School of Mechanical Engineering, UK

- Research activities in the European Research Project RoMaNS: Robotic Manipulation for Nuclear Sort and Segregation

Postdoctoral Researcher

December 2012 - January 2016

KTH Royal Institute of Technology, Computer Science, Sweden

- Research activities in the European Research Project RoboHow.Cog: Web-enabled and experience-based cognitive robots, eSMCs: Extending Sensorimotor Contingencies to Cognition
 - Research visits to University of Bremen in 2013 and 2014, preparing a ROS package for grasp stability assessment, integrating the package with CRAM, a Cognitive Robot Abstract Machine.

Ph.D. Student

September 2008 - November 2012

KTH Royal Institute of Technology, Computer Science, Sweden

- Researcher in EU project CogX: Cognitive Systems that Self-Understand and Self-Extend

Research Assistant

September 2005 - August 2008

Karadeniz Technical University, Department of Computer Engineering, Turkey

- Teaching Assistant, MSc studies.

AWARDS AND SCHOLARSHIPS

- Best Paper Award, IEEE International Conference on Robotics and Automation for Humanitarian Applications (RAHA), Kerala, India, 2016.
- KTH Innovation Competition 2014 – Prototyping and user testing
- IEEE/RSJ International Conference on Intelligent Robots and Systems IROS CoTeSys Cognitive Robotics Best Paper Award Finalist Tokyo, Japan, 2013
- Best Manipulation Paper Award, IEEE International Conference on Robotics and Automation (ICRA), Karlsruhe, Germany, 2013
- Scholarship by The Scientific and Technological Research Council of Turkey, 2005-2007
- Erasmus Scholarship for Exchange Studies, 2004-2005

INVITED TALKS

- AI-driven grasping for industrial applications, Preferred Networks (PFN), 26 May, Tokyo, Japan, 2021.
- Research life in robotics and AI, Women in AI, 22 October, 2020.
- Learning from vision and touch for robotic grasping and manipulation, Spotlight on Research Talk, CHAIR, Chalmers, 13 November, 2020.
- Object shape estimation and modeling combining visual data and tactile exploration, IEEE Conference on Multimedia and Expo (ICME) 2020, Workshop on The Corsmal Challenge: Multi-modal fusion and learning for robotics, 8 July, London, UK.
- Learning and multi-modal sensing for robotic grasping and manipulation, 30 June, Queen Mary University, London, UK.
- Learning and multi-modal sensing for robotic grasping and manipulation, NVIDIA Robotics Lab, 23 March, Seattle, USA.
- Autonomous Robotic Solutions for Agricultural Robotics, University of Lincoln, 4 March, Lincoln, UK.
- AI and multi-modal sensing for Autonomous Robotic Manipulation, University of Birmingham, 3 March, Birmingham, UK.
- Robust grasping and manipulation based on sensory data, University College London, 27 February, London, UK.
- Learning based grasping and manipulation, Chalmers Institute of Technology, 25 February, Goteborg, Sweden.
- Towards robust robotic grasping and manipulation applications for industrial tasks, UBTECH, Pasadena, CA, USA, 28 January 2020.
- Machine Learning for robotics, University of Orebro, Orebro, Sweden, 3 February 2020.
- Building Embodied Intelligence that can interact with human environments, Bristol University, UK, July 2019.
- 2017 ERF workshop Teaching by Demonstration for Industrial Applications, on SARAFun project, Edinburgh, UK, 22 March 2017.
- Learning Approaches for Grasping and Manipulation, Interactive Learning and Robotics Symposium, Stuttgart, Germany, 14 Dec 2016.
- IROS 2016 workshop: See, Touch, and Hear: 2nd Workshop on multimodal sensor-based robot control for HRI and soft manipulation, Learning Approaches for Robust Grasping and Manipulation based on Experience, South Korea, October 2016.
- Grasping and manipulation based on sensory data, Vicarious, CA, USA, September 2016.
- ICRA 2016 Workshop: Grasping and Manipulation Datasets, on tactile and visual data for grasping, Sweden, May 2016.
- The SQUIRREL Winter School, Tutorial on stability and shape estimation with multi-sensory data, Austria, Feb. 29 - March 4 2016.
- Machine Learning for robotic grasping and manipulation, University of Bath, UK, 5 July 2016.
- Towards Robust and Goal-oriented Robotic Grasping and Manipulation, Edinburgh University, UK, 19 May 2016.
- Learning from visual and tactile data for grasping and manipulation, Max Planck Institute for Intelligent Systems, The Autonomous Motion Department, Germany, 12 October 2015.
- The workshop on Visual, tactile and force sensing for robot manipulation, the British Machine Vision Association (BMVA), Learning to assess grasp stability from vision, touch and proprioception, London, UK, 9 December 2015.
- Learning from visual and tactile data for robotic grasping and manipulation, University of Birmingham, UK, 8 December 2015.
- The Dagstuhl seminar: Multimodal Manipulation Under Uncertainty, Dagstuhl Seminar 15411, Germany, October 4 – 9, 2015.
- Shape and stability estimation based on learning from visual and tactile data, The Karlsruhe Institute of Technology, High Performance Humanoid Technologies Lab (H2T), Germany, 14 October 2015.

- University of Orebro, the Centre of Applied Autonomous Sensor Systems (AASS), Enhancing Visual Perception of Shape through Tactile Glances, Sweden, 18 May 2015.
- Perception for grasping and manipulation based on learning and exploration, CSC School Day, KTH, Sweden, 21 Aug 2015.

WORKSHOP AND CONFERENCE ORGANIZATION ACTIVITIES

- 2021 ICRA Workshop on [Bridging the Gap between Data-driven and Analytical Physics-based Grasping and Manipulation II](#)
- Organizer of 2018 IROS workshop on: [Human-robot cooperation and collaboration in manipulation: advancements and challenges](#)
- Organizer of 2018 European Robotics Forum Workshop on [Inspection and maintenance of nuclear facilities](#)
- Organizer of 2017 Humanoids workshop on [Towards robust grasping and manipulation skills for humanoids](#) .
- Organizer of the IROS 2017 workshop on [Human in-the-loop robotic manipulation: on the influence of the human role](#)
- Organizer of the workshop [Teaching by Demonstration for Industrial Applications](#) at 2017 European Robotics Forum .
- Organizer of the workshop [Robotics for Nuclear Environments](#) at 2017 European Robotics Forum.
- Organizer of the workshop [Closed-loop Grasping and Manipulation: Challenges and Progress](#), 2016 IROS.
- Organizer of the workshop [Bridging the Gap between Data-driven and Analytical Physics-based Grasping and Manipulation](#), 2015 Robotics: Science and Systems (RSS)
- 2017 Finance Chair, IEEE-RAS International Conference on Humanoid Robots (Humanoids)
- Invited to contribute to the workshop on benchmarking protocols for grasp planning at IROS 2017
- Program Committee member, Robotics Science and Systems (RSS) 2016
- Program Committee Member, International Conference on Computer Vision Systems (ICVS) 2015

EDITORIAL ACTIVITIES

- Editor in Frontiers in Robotics and AI journal, 2021
- Associate Editor for IEEE Robotics and Automation Letters, 2020-present
- Associate Editor for IEEE/RSJ International Conference on Intelligent Robots and Systems, 2020-present
- Associate Editor for IEEE/RSJ International Conference on Intelligent Robots and Systems, 2016

JOURNAL AND CONFERENCE REVIEWER

- Conference on Robot Learning (CoRL, 2018, 2020, 2021), International Journal of Humanoid Robotics (2017), IEEE Transactions on Industrial Electronics (2017, 2020), IEEE Transactions on Automation Science and Engineering (2018), Big Data (2016), International Journal of Intelligent Robotics and Applications (IJIRA, 2018), International Journal of Robotics Research (IJRR, 2016), IEEE Robotics and Automation Letters (RA-L, 2016, 2017, 2018, 2019, 2020), Autonomous Robots (AURO, 2016), Associate Editor for the 2016 and 2020 IEEE/RSJ International Conference on Intelligent Robots and Systems, Robotics: Science and Systems (RSS, 2016), IEEE Haptics Symposium (2015), IEEE/ASME Transactions on Mechatronics (2015), The International Conference on Computer Vision Systems (ICVS, 2015), Advanced Robotics (2015), International Conference on Advanced Robotics (ICAR, 2015), IEEE CASE (2020), IEEE-RAS International Conference on Humanoid Robots (Humanoids, 2014, 2015, 2016, 2017, 2018), IEEE Transactions on Robotics (2014, 2015, 2016, 2020), Journal of Intelligent and Robotic Systems (2013, 2014, 2015), IEEE Transactions on Haptics (2013, 2014, 2016, 2017), IEEE IROS (2014, 2015, 2016, 2017, 2018), IEEE ICRA (2010, 2012, 2014, 2015, 2016, 2017, 2018, 2019, 2020), NeurIPS (2016, 2020, 2021), ICLR(2020), AAAI (2020), ICML (2021).

MEMBERSHIP

- IEEE
- IEEE Robotics and Automation Society
- IEEE Technical Committee on Robotic Hand Grasping and Manipulation

TEACHING

- Lecturer, Chalmers, Modeling and Simulation, 2021
- Lecturer, KTH, 2014-2015: Scientific Programming
- Teaching Assistant
 - KTH, 2012, 2014: Image Analysis and Computer Vision
 - Karadeniz Technical University 2005-2007: Microprocessors, Computer Systems, Data Structures, Artificial Intelligence
- Supervision
 - **PhD student**
 - Jackie Kay, Stochastic Priors for manipulation, co-supervision, September 2020-current, UCL
 - Sicelukwanda Zwane, Reinforcement Learning for safety in manipulation, co-supervision, September 2020-current, UCL
 - Christiana Miranda, precision grasping of unknown objects using multi-finger hands, visual data and tactile exploration, co-supervision, November 2019-present, University of Birmingham
 - Shahbaz Abdul Khader, learning manipulation skills from experience, co-supervision, January 2017-June 2017, ABB
 - Kaiyu Hang, in-hand grasp adaptation, co-supervision, 2014-2015, KTH
 - Puren Guler, identifying content using visual and tactile data, co-supervision, 2013-2014, KTH
 - Johannes Stork, in-hand manipulation, co-supervision, 2014, KTH
 - Francisco Vina, slip detection, co-supervision, 2012-2014, KTH
 - **MSc Students**
 - Zeid Al Idani, reactive grasping, main supervision, 2021, Chalmers
 - Silin Wang, mobile manipulation, January-June, main supervision, 2021, Chalmers
 - Kamiylah Charles, Reinforcement learning for data-driven grasping, January-June, co-supervision, 2021, UCL
 - Piotr Tarasiewicz, Bayesian optimization for data-driven grasping, January-June, co-supervision, 2021, UCL
 - Gabriela Zarzar Gandler, evaluation of probabilistic representations for modeling and understanding shape based on synthetic and real sensory data, main supervision, Feb 2017-June 2017, ABB
 - Kun Yuan, benchmarking for grasping and manipulation, co-supervision, 2016, University of Birmingham
 - Jesper Karlsson, enhancing object recognition based on contextual information using Markov Logic Networks, main supervision, November 2015 - June 2016, KTH
 - Claudio Giovanoli, Potential Field based tactile exploration, main supervision, 2011, KTH
 - Lu Wang, learning task-based robotic grasping with vision, haptics and proprioception, co-supervision, 2012, KTH
 - **BSc Students**
 - Luke Cosier, Sparse Gaussian Processes for motion planning, January-June, co-supervision, 2021, UCL
 - Zuka Murvanidze, Learning Implicit Surfaces for Object Shape Modeling, November 2020-April 2021, main supervision, 2021, UCL
 - Hampus Andersson, Felix Gustavsson, Valdemar Krona, Olof Olivecrona, PyBullet simulation tools for manipulation, October 2020-January 2021, Chalmers

- Henrik Andersson, Badr Aldeen Alhaffar, Elliot Ferning, Jesper Krook, Filippa Kruse, Erik Magnusson, Reactive grasping using a gripper with F/T and proximity sensors, main supervision, January-June, 2021, Chalmers
- Alexey Gorskiy, Henrik Gronback, Hampus Hagstrand, Emil Lukic, Emma Ringstrom, Mattias Wiberg, data-driven mobile manipulation, main supervision, January-June, 2021, Chalmers
- **Interns**
 - Quentin Teixeira, mobile manipulation, main supervision, May-August 2021, Chalmers
 - Irem Ozcan, mobile manipulation, main supervision, May-August 2021, Chalmers
 - Clara Scherer, object pose tracking, BSc thesis, co-supervision, May-August 2015, KTH
 - Judith Butepage, building an object model dataset for grasping, main supervision, March-May 2015, KTH
 - Johannes Exner, shape modeling using GPIS, main supervision, 2014, KTH
 - Mateusz Herczka, building a software library for controlling a KUKA arm, main supervision, 2014, KTH
 - Maren Leithe, using of tactile sensors for object modelling , main supervision, 2010, KTH
 - Anaïs Peyrucq, learning grasp stability based on tactile data, main supervision, 2010, KTH

PEER-REVIEWED ORIGINAL ARTICLES

- Farias, C., Marturi, N., Adjigble, M., Stolkin, R., **Bekiroglu, Y.**, Simultaneous tactile exploration and grasp refinement for unknown objects, IEEE Robotics and Automation Letters, 2021.
- **Bekiroglu, Y.***, Bjorkman, M.*, Gandler, G. Z.*, Ek, C. H., Kragic, D., Visual and Tactile 3D Point Cloud Data from Real Robots for Shape Modelling and Completion, Data in Brief, 2020.
- Gandler, G. Z., Ek, C. H., Bjorkman, M., Stolkin, R., **Bekiroglu, Y.**, Object shape estimation and modeling, based on sparse Gaussian process implicit surfaces, combining visual data and tactile exploration, Robotics and Autonomous Systems, 2020, Impact factor: 2.928, [7].
- **Bekiroglu, Y.***, Marturi, N.*, Roa, M.*, Adjigble, M., Pardi, T., Grimm, C., Balasubramanian, R., Hang, K., Stolkin, R., [Benchmarking Protocol for Grasp Planning Algorithms](#), IEEE Robotics and Automation Letters, vol. 5, no. 2, pp. 315-322, April 2020, [6].
- Marturi, N., Kopicki M., Rastegarpanah, A. Stolkin, R., Leonardis, A., **Bekiroglu, Y.**, [Dynamic grasp and trajectory planning for moving objects](#), Autonomous Robots (AURO), 2019, [25], Impact factor: 3.634.
- Pokorný, F.*, **Bekiroglu, Y.***, Pauwels, K., Butepage, J., Scherer, C., Kragic, D., [A Database for Reproducible Manipulation Research: CapriDB-Capture, Print, Innovate](#), Data in Brief, 2017, [4], Source Normalized Impact per Paper (SNIP): 0.429.
- Hang, K., Li, M., Stork, J. A., **Bekiroglu, Y.**, Pokorný, F. T., Billard, A., Kragic, D., [Hierarchical Fingertip Space: A Unified Framework for Grasp Planning and In-Hand Grasp Adaptation](#), IEEE Transactions on Robotics, 2016, [78], Impact factor: 6.483.
- **Bekiroglu, Y.**, Laaksonen, J., Jørgensen, J. A., Kyrki, V. & Kragic, D. (2011), [Assessing grasp stability based on learning and haptic data](#). IEEE Transactions on Robotics, Vol.27, No.3, 616–629, [185], Impact factor: 6.483.

PEER-REVIEWED CONFERENCE PAPERS

- Farias, C., Marturi, N., Adjigble, M., Stolkin, R., **Bekiroglu, Y.**, Simultaneous tactile exploration and grasp refinement for unknown objects, IEEE International Conference on Robotics and Automation (ICRA), 2021.
- Krug, R., **Bekiroglu, Y.**, Kragic, D., Roa, M., [Evaluating the Quality of Non-Prehensile Balancing Grasps](#), IEEE International Conference on Robotics and Automation (ICRA), 2018, Australia, [2].
- Haage, M., Piperagkas, G., Papadopoulos, C., Mariolis, I., Malec, J., **Bekiroglu, Y.**, Hedelind M., Tzovaras, D., [Teaching Assembly by Demonstration using Advanced Human Robot Interaction and a Knowledge Integration Framework](#), International Conference on Flexible Automation and Intelligent Manufacturing (FAIM), 2017, [20].

- Krug, R., **Bekiroglu**, Y., Roa, M., A., [Grasp Quality Evaluation Done Right: How Assumed Contact Force Bounds Affect Wrench-Based Quality Metrics](#), IEEE International Conference on Robotics and Automation (ICRA), 2017, Singapore, [19].
- Marturi, N., Rastegarpanah, A., Takahashi, C., Kuo, J. A., Stolkin, R., **Bekiroglu**, Y. [Towards Robotic Manipulation for Nuclear Decommissioning: A Pilot Study on Tele-operation and Autonomy](#), IEEE International Conference on Robotics and Automation for Humanitarian Applications (RAHA), 2016, **Best Paper Award**, [37].
- Caccamo, S., **Bekiroglu**, Y., Ek, C. H., Kragic, D., [Active Exploration Using Gaussian Random Fields and Gaussian Process Implicit Surfaces](#), IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2016, [27].
- **Bekiroglu**, Y., Damianou, A., Detry, R., Stork, J. A., Kragic, D., Ek, C.H., [Probabilistic Consolidation of Grasp Experience](#), IEEE ICRA, 2016, [9].
- Krug, R., Lilienthal, A. J., Kragic, D., **Bekiroglu**, Y., [Analytic Grasp Success Prediction with Tactile Feedback](#), IEEE ICRA, 2016, [25].
- Stork, J. A., Ek, C. H., **Bekiroglu**, Y., & Kragic, D., [Learning Predictive State Representation for In-Hand Manipulation](#). IEEE International Conference on Robotics and Automation (ICRA), 2015, Seattle, Washington, USA, [12].
- Bjorkman, M., **Bekiroglu**, Y., [Learning to Disambiguate Object Hypotheses through Self-Exploration](#). IEEE-RAS International Conference on Humanoids Robots (HUMANOIDS), 2014, Madrid, Spain, [2].
- Guler, P., **Bekiroglu**, Y., Gratal, X., Pauwels, K., & Kragic, D., [What is in the Container? Classifying Object Contents from Vision and Touch](#). IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2014, Chicago, USA, [35].
- Li, M., **Bekiroglu**, Y., Kragic, D., and Billard, A., [Learning of Grasp Adaptation through Experience and Tactile Sensing](#). IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2014, Chicago, USA, [101].
- Pokorný, F. T., **Bekiroglu**, Y., & Kragic, D., [Grasp Moduli Spaces and Spherical Harmonics](#). IEEE International Conference on Robotics and Automation (ICRA), 2014, Hong Kong, China, [9].
- Vina, F., **Bekiroglu**, Y., Smith, C., Karayiannidis, Y. & Kragic, D., [Predicting Slippage and Learning Manipulation Affordances through Gaussian Process Regression](#). IEEE-RAS International Conference on Humanoid Robots (Humanoids), 2013, [19].
- Bjorkman, M., **Bekiroglu**, Y., Hogman, V., Kragic & D., [Enhancing Visual Perception of Shape through Tactile Glances](#). IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2013, **IROS CoTeSys Cognitive Robotics Best Paper Award Finalist**, [110].
- **Bekiroglu**, Y., Song, D., Wang, L., & Kragic, D., [A Probabilistic Framework for Task-Oriented Grasp Stability Assessment](#). IEEE International Conference on Robotics and Automation (ICRA), 2013, **Best Manipulation Paper Award**, [49].
- **Bekiroglu**, Y., Detry, R., & Kragic, D., [Learning Tactile Characterizations of Object- And Pose-specific Grasps](#). IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2011, [52].
- **Bekiroglu**, Y., Hübner, K., & Kragic, D., [Integrating Grasp Planning with Online Stability Assessment using Tactile Sensing](#). IEEE International Conference on Robotics and Automation (ICRA), 2011, [24].
- **Bekiroglu**, Y., Kyrki, V., & Kragic, D., [Learning grasp stability based on tactile data and HMMs](#). IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN), 2010, [51].
- Kurt, B., Nabiyeve, V., **Bekiroglu**, Y., Yuz Ifadelerinin Taninması (Face Expression Recognition based on LBP), Elektrik, Elektronik, Bilgisayar, Biyomedikal Mühendisliği Ulusal Kongresi (EEBM), Istanbul, Turkey, 2007, [3].

PEER-REVIEWED WORKSHOP PAPERS

- Gandler, G. Z., Ek, C. H., Bjorkman, M., **Bekiroglu**, Y., [Shape Modeling based on Sparse Gaussian Process Implicit Surfaces](#), WIML, NeurIPS 2018, Canada.

- Pokorny*, F. T., **Bekiroglu***, Y., Pauwels, K., Butepage, J., Scherer, C., Kragic, D., CapriDB - Capture, Print, Innovate: A Low-Cost Pipeline and Database for Reproducible Manipulation Research, IEEE ICRA 2016 Workshop: Grasping and Manipulation Datasets, Stockholm, Sweden.
- Pokorny, F. T., **Bekiroglu**, Y., Bjorkman, M., Exner, J., and Kragic, D., Grasp Moduli Spaces, Gaussian Processes and Multimodal Sensor Data. RSS 2014 Workshop: Information-based Grasp and Manipulation Planning, Berkeley, USA, [2].
- Hang, K., Li, M., Stork, J. A., **Bekiroglu**, Y., Billard, A., and Kragic, D., Hierarchical Fingertip Space for Synthesizing Adaptable Fingertip Grasps. ICRA 2014 Workshop: Autonomous Grasping and Manipulation: An Open Challenge, Hong Kong, China, [5].
- **Bekiroglu**, Y., Detry, R., & Kragic, D., Grasp Stability from Vision and Touch. IEEE IROS 2012 Workshop: Advances in Tactile Sensing and Touch-based Human-Robot Interaction, [3].
- **Bekiroglu**, Y., Song, D., Wang, L. & Kragic, D., Learning Task- and Touch-based Grasping, IEEE IROS 2012 Workshop: Beyond Robot Grasping - Modern Approaches for Dynamic Manipulation.
- **Bekiroglu**, Y., Detry, R. & Kragic, D., Joint Observation of Object Pose and Tactile Imprints for Online Grasp Stability Assessment, IEEE ICRA 2011 workshop: Manipulation Under Uncertainty, [3].
- **Bekiroglu**, Y., Laaksonen, J., Jørgensen, J. A., Kyrki, V. & Kragic, D., Learning grasp stability based on haptic data, Robotics: Science and Systems (RSS) 2010 workshop: Representations for object grasping and manipulation in single and dual arm tasks, [12].

BOOK CHAPTER

- Marturi, N., Rastegarpanah, A., Rajasekaran, V., Ortenzi, V., **Bekiroglu**, Y., Kuo, J., Stolkin, R., Towards advanced robotic manipulation for nuclear decommissioning, Robots Operating in Hazardous Environments, InTechOpen, 2017, [10].

OTHER

- Learning a generative model for robot control using visual feedback, N., Gothoskar, M., Lázaro-Gredilla, A., Agarwal, **Bekiroglu**, Y., D., George, arXiv preprint arXiv:2003.04474, 2020, [2].
- **Bekiroglu**, Y., Haschke, R., Karayiannidis, Y., Mariolis, I., McIntyre, J., Malec, J., Remazeilles, A., [SARAFun, Smart Assembly Robot with Advanced FUNctionalities](#), H2020, Impact, Volume 2017, Number 5, June 2017, pp. 67-69(3), [1].
- Pokorny*, F. T., **Bekiroglu***, Y., Pauwels, K., Butepage, J., Scherer, C., Kragic, D., CapriDB - Capture, Print, Innovate: A Low-Cost Pipeline and Database for Reproducible Manipulation Research, arXiv preprint arXiv:1610.05175, 2016.
- Caccamo, S., **Bekiroglu***, Ek, C., Kragic, D., Active Exploration Using Gaussian Random Fields and Gaussian Process Implicit Surfaces, ArXiv preprint arXiv:1802.04642, 2016.
- Smith, C., Karayiannidis, Y., Bekiroglu, Y., Pauwels, K., Kragic, D., [Tracking and State Estimation of Manipulated Objects - ROBOHOW.COG:D4.3](#), Technical Report, 2015.
- Smith, C., Karayiannidis, **Bekiroglu**, Y., Kragic, D., [Multisensory exploration - ROBOHOW.COG:D4.2](#), Technical Report, 2013.
- **Bekiroglu**, Y., [Learning to Assess Grasp Stability from Vision, Touch and Proprioception](#), 2012, PhD Thesis, ISBN 978-91-7501-522-4, [6].
- Detry, R., Zillich, M., Richtsfeld, A., Prankl, J., Roa, S., Zurek, S., **Bekiroglu**, Morwald, T., Vincze, M., Kragic, D., Wyatt, J., Kruijff, G.-J., [Qualitative models of object behaviour, and grasping of novel objects - CogX:D2.5](#), Technical Report, 2012.
- Zillich, M., Zurek, S., Kopicki, M., Stolkin, R., **Bekiroglu**, Detry, R., [Manipulation of previously unseen objects - CogX:D2.4](#), Technical Report, 2011.

- Zillich, M., Prankl, J., Vincze, M., **Bekiroglu**, Y. Kragic, D., Zurek, S., Stolkin, R., [Representation of Gaps in Object Knowledge - CogX:D2.3](#), Technical Report, 2010.
- **Bekiroglu**, Y., Elementary grasping actions for grasping polyflaps, 2009, technical report, Skolan för datavetenskap och kommunikation, Kungliga Tekniska högskolan, TRITA-CSC-CV, 1653-6622 ; 2009:4, Stockholm.
- Zillich, M., Vincze, M., Mörwald, T., Richtsfeld, A., Zhou, K., **Bekiroglu**, Y., Kopicki, M., [Representations of 3D shape for manipulation - CogX:D2.1](#), Technical Report, TU Wien, 2009.
- **Bekiroglu**, Y., Nonstationary Feature Extraction Techniques for Automatic Classification of Impact Acoustic Signals, Degree project, Dalarna University, 2008, [1].
- **Bekiroglu**, Y., İnsan Yüzleri Arasındaki Benzerliğin Temel Bileşenleri Aracılığı ile Araştırılması (Face Similarity Analysis using Principal Components), Karadeniz Technical University, Turkey, 2007, [1].
- Method and System For Robot Control Using Visual Feedback, Patent application based on the work at Vicarious (VICR-P17-US), filed on 13 Nov 2020, application number: 17/098,111, under review.

OPEN ACCESS DATABASES

- [Real and simulated tactile data from grasping experiments with the Schunk Dexterous hand](#)
- [Capture, Print, Grasp, Share: A Low-cost Pipeline enabling Reproducible Robotic Manipulation Research](#)
- [Visual and Tactile 3D Point Cloud Data from Real Robots for Shape Modeling and Completion](#)

GRANTS

- EU funded project SARAFun: Smart Assembly Robot with Advanced Functionalities, 4 037 267 Euro.
- DORA - Dexterous Robot Assistant (funding granted covering 2 years of postdoc salary and 4 years of a PhD student salary), Chalmers AI research center, Gender Initiative for Excellence.
- AIMCoR - AI-enhanced Mobile Manipulation Robot for Core Industrial Applications, in collaboration with Volvo, Chalmers AI research center.
- WARA-Robotics, a mobile manipulation project in collaboration with ABB Corporate Research, Ericsson, and Algorix, KTH, Lund University, Örebro University, Linköping University, supported by Wallenberg AI, Autonomous Systems and Software Program - WASP, Sweden.

PUBLICATION STATISTICS SUMMARY

- The number of citations is indicated at the end of the references. Citation statistics is provided from [Google Scholar](#) in May 2021. The total number of citations and the h-index are 958 and 16 respectively. In addition, other database records can be reached via [dblp](#), [Scopus](#) and [ORCID - 0000-0002-2597-6013](#).

CONTACT DETAILS

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