

EMPLOYMENT HISTORY

JUNE 2017 to JANUARY 2019	Research Assistant at TECHNISCHE UNIVERSITÄT WIEN, Vienna, Austria PhD candidate and lead teaching assistant in the Vision for Robotics group, working on semantic segmentation and mapping for long-term autonomous robot operation.
OCTOBER 2016 to MAY 2017	STRANDS Project Research Associate at UNIVERSITY OF BIRMINGHAM, Birmingham, UK Assisted project partners with system integration. Facilitated robot deployment on-site and developed software tools for monitoring and running the system. Aggregated and improved project documentation.
MARCH to JULY 2016	Marie Skłodowska-Curie Early Stage Researcher at FRAUNHOFER IPA, Germany PhD candidate in environment modelling and motion prediction in dynamic environments as part of the Horizon 2020 SECURE project.
JULY 2015 to JANUARY 2016	Innovation Team Intern at YUJIN ROBOT CO., LTD, Seoul, Republic of Korea Python and C++ development in ROS for the GoCart logistics robot. Worked on behaviour trees and behaviour design, diagnostics, simulation layer implementation and module interfacing. Made contributions to several ROS packages.

EDUCATION AND QUALIFICATIONS

AUGUST 2013 to JUNE 2015	MSc Systems, Control and Robotics , Robotics and Autonomous Systems track KTH ROYAL INSTITUTE OF TECHNOLOGY, Stockholm, Sweden
SEPTEMBER 2009 to JUNE 2013	BSc Computer Science with Study Abroad , First Class Honours Top of graduating class (final year: 92%, weighted average: 89%) UNIVERSITY OF BIRMINGHAM, Birmingham, UK
SEPTEMBER 2011 to JULY 2012	Japanese Language Programme , Advanced Level Japanese Language Proficiency Test level N1 (90%) KEIO UNIVERSITY, Tokyo, Japan

ACADEMIC AND RESEARCH ACTIVITY

JANUARY to JUNE 2015	Master's Thesis: Feature-Feature Matching for Object Retrieval in Point Clouds Developed a system using PCL and ROS to extract features from point clouds, and find query objects in the resulting feature set. Performed an experimental evaluation to find good descriptors and interest point methods. Supervised by John Folkesson.
JULY to AUGUST 2014	Participant in Tohoku University Engineering Summer Programme (TESP) Attended lectures on several different areas related to robotics, and worked on a short project on obstacle avoidance for a tracked mobile robot. Participants were robotics students from across the world.
SEPTEMBER 2012 to APRIL 2013	Bachelor's Thesis: Time Delay Estimation in Gravitationally Lensed Photon Streams Developed a system to estimate characteristic functions of streams with weighted least squares techniques and compare them with probabilistic techniques to estimate the time delay. Supervised by Peter Tiño.
JANUARY to JULY 2011	Participant at Student Autonomous Underwater Competition - Europe (SAUC-E) Collaboration between the University of Birmingham and University of Southampton to prepare the Delphin AUV for the competition in July. Converted the control system from Matlab to ROS Python.
OCTOBER 2010 to JULY 2013	Founding member of Birmingham Autonomous Robotics Club Co-founded the club due to interest from computer science faculty and undergraduate students in solving robotics problems and increasing the profile of the field in the school.

TEACHING

JUNE 2017 to JANUARY 2019	Lead Teaching Assistant at VISION FOR ROBOTICS GROUP, TECHNISCHE UNIVERSITÄT WIEN Administering the <i>Machine Vision and Cognitive Robotics</i> and <i>Robotics and Computer Vision</i> courses. Updating and maintaining assignment content, managing tutors, grading assignments, and providing assistance to students
JANUARY 2013 to APRIL 2013	Robot Programming Demonstrator at UNIVERSITY OF BIRMINGHAM Answered questions from students about the implementation of various algorithms and the application of artificial intelligence techniques for use on LEGO NXT robots.
SEPTEMBER 2012 to DECEMBER 2012	Foundation Year Computer Science Demonstrator at UNIVERSITY OF BIRMINGHAM Helped foundation year students understand basic programming concepts, and evaluated their performance in assignments.
SEPTEMBER 2010 to APRIL 2011	Software Workshop (Java) Demonstrator at UNIVERSITY OF BIRMINGHAM One of five second year students selected to demonstrate for the First Year Workshop Java module. Provided advice on assignments, programming concepts, and the Java API.

BURSARIES, SCHOLARSHIPS AND AWARDS

JULY 2013	Computer Science Prize & Research Committee Project Prize Awarded by the University of Birmingham School of Computer Science to the highest scoring final year student, and for the best research-related final dissertation.
JANUARY to APRIL 2012	Japan Student Services Organisation Scholarship Short-term scholarship to support study in Japan.
JULY to SEPTEMBER 2011	Nuffield Undergraduate Research Bursary Bursary to support a summer research project to investigate particle filter localisation for AUVs.

PROGRAMMING AND SOFTWARE

Python, C++, ROS, git, Linux, \LaTeX

Public repositories at github.com/heuristicus

LANGUAGES

English (native), Japanese (fluent), Polish (bilingual)

REFEREES

Addresses and positions for referees are current. Bold text indicates where the person supervised me.

University of Birmingham
Nick Hawes
Associate Professor of Robotics
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Oxford Robotics Institute
23 Banbury Road, Felstead House
Oxford
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Technische Universität Wien
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Yujin Robot
Daniel Stonier
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