Work Experience

IUNE 2017 to Research Assistant at Technische Universität Wien, Vienna, Austria

Present 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 STRANDS Project Research Associate at UNIVERSITY OF BIRMINGHAM, Birmingham, UK

May 2017 Fixed term contract assisting project partners with system integration. Improved software tools and monitoring

to support robot deployment in an office. Aggregated and improved project documentation.

March to Marie Skłodowska-Curie Early Stage Researcher at Fraunhofer IPA, Germany

JULY 2016 PhD candidate in environment modelling and motion prediction in dynamic environments as part of the Horizon

2020 SECURE project. Left the post due to incompatibility.

July 2015 to Innovation Team Intern at YUJIN ROBOT Co., LTD, Seoul, Republic of Korea

January 2016 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 MSc Systems, Control and Robotics, Robotics and Autonomous Systems track

JUNE 2015 KTH ROYAL INSTITUTE OF TECHNOLOGY, Stockholm, Sweden

September 2009 to BSc Computer Science with Study Abroad, First Class Honours

June 2013 Top of graduating class (final year: 92%, weighted average: 89%)

UNIVERSITY OF BIRMINGHAM, Birmingham, UK

September 2011 to Japanese Language Programme, Advanced Level

> **JULY 2012** Japanese Language Proficiency Test level N1 (90%)

> > Keio University, Tokyo, Japan

ACADEMIC AND RESEARCH ACTIVITY

JANUARY to Master's Thesis: Feature-Feature Matching for Object Retrieval in Point Clouds

June 2015 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.

Participant in Tohoku University Engineering Summer Programme (TESP) July to

August 2014 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 Bachelor's Thesis: Time Delay Estimation in Gravitationally Lensed Photon Streams

APRIL 2013 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 Tiňo.

JANUARY to Participant at Student Autonomous Underwater Competition - Europe (SAUC-E)

July 2011 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 Founding member of Birmingham Autonomous Robotics Club

Co-founded the club due to interest from computer science faculty and undergraduate students in solving robotics **JULY 2013**

problems and increasing the profile of the field in the school.

TEACHING

June 2017 to Present	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	Robot Programming Demonstrator at University of Birmingham
April 2013	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	Foundation Year Computer Science Demonstrator at University of Birmingham
DECEMBER 2012	Helped foundation year students understand basic programming concepts, and evaluated their performance in assignments.
September 2010 to	Software Workshop (Java) Demonstrator at University of Birmingham
April 2011	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 Awarded to the highest scoring final year student in the University of Birmingham School of Computer Science
July 2013	Research Committee Project Prize Awarded for the best research related dissertation by the University of Birmingham School of Computer Science
January to	Japan Student Services Organisation Scholarship
APRIL 2012	Short-term scholarship to support study in Japan.
July to	Nuffield Undergraduate Research Bursary
September 2011	Bursary to support a summer research project to investigate particle filter localisation for AUVs.

Programming and Software	Languages	
Python, C++, ROS, git, Linux, LaTeX	English (native), Japanese (fluent), Polish (bilingual)	

Public repositories at github.com/heuristicus

Referees

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

University of Birmingham	Technische Universität Wien	Yujin Robot
Nick Hawes	Markus Vincze	Daniel Stonier
Associate Professor of Robotics	Associate Professor	${\bf Program\ Manager-Simulation}$
nickh@robots.ox.ac.uk	vincze@acin.tuwien.ac.at	d.stonier@gmail.com
Oxford Robotics Institute	Automation and Control Institute	Totota Research Institute
Oxiora Robotics Histitute		
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