Tristan Laidlow

Robotics Researcher

I am a research fellow in the Dyson Robotics Lab with Prof. Andrew Davison at Imperial College London.

My current research interests are in developing algorithms that enable robots to understand and interact with their environment. To this end, my research focuses on dense 3D reconstruction with geometric priors, efficient scene segmentation using neural fields, and learning robust object manipulation policies.

CONTACT

E-mail **t.laidlow15@imperial.ac.uk**

Website **tlaidlow.github.io**

LinkedIn **linkedin.com/in/tristan-laidlow**

Google Scholar **scholar.google.com/citations?user=bmOi48IAAAAJ**

EXPERIENCE

Dyson Research Fellow
Oct. 2019 – Present

Dyson Robotics Lab
Imperial College London, UK
Supervisor. : ProfAndrew Davison
Lead research projects developing state-of-the-art vision algorithms for robotic applications.

Graduate Teaching Assistant
Jan. 2016 – Apr. 2021

C333: Robotics
Imperial College London, UK
Assisted students in implementing filter-based navigation algorithms for mobile robotics.

Research Assistant
Apr. 2013 – Aug. 2015

Dynamic Systems Lab
University of Toronto Institute for Aerospace Studies, Canada
Established the foundations for a new aerial robotics research testbed and implemented a stabilizing controller for an aerial robotic platform using vision-based localization.

Research Assistant
Apr. 2012 – Aug. 2012

Technologies for Aging Gracefully Lab
University of Toronto, Canada
Developed a user interface for the Accessible, Large-Print, Listening and Talking (ALLT) e-Book Project for people with low vision or mobility impairments.

Strategic Information Analyst
Jan. 2009 – Aug. 2011

Interior Health Authority
Kelowna, British Columbia, Canada
Developed solutions for smoothing the use of hospital resources, reducing surgical cancellations, and lowering patient wait times by examining scheduling practices, analyzing patient data, and creating simulation models.

EDUCATION

2015 - 2019

Doctor of Philosophy (Computer Science)
Imperial College London, UK
Thesis: *Robust Multimodal Dense SLAM*
Supervisor: Dr. Stefan Leutenegger

2011 – 2015

Bachelor of Applied Science (Engineering Science)
Major: Aerospace Engineering, Minor: Robotics & Mechatronics
University of Toronto, Canada
Thesis: *Real-Time Motion Generation for Aerial Vehicles in Response to Musical Signals*
Supervisor: Prof. Angela Schoellig

2007 – 2008

Master of Science (Management Science)
Queen's University, Canada
Thesis: *An Adaptive Algorithm for the Optimal Order Quantity in the Non-Stationary Newsvendor Problem with Censored Demand*
Supervisor: Prof. Jeffrey McGill

2002 – 2007

Bachelor of Science (Economics)
University of Victoria, Canada
Thesis: *Using a Discrete-Event Simulation to Examine Emergency Department Congestion at Royal Inland Hospital*
Supervisor: Prof. Joseph Schaafsma

SKILLS

Programming **Python, C++, CUDA**
Deep Learning **PyTorch, TensorFlow**