

Jeremy Cox

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Education

Tertiary

- **Combined Bachelor of Engineering (Aeronautical (Space)) and Bachelor of Science (majoring in physics and computational science)** coursework completed 2012-2017, University Of Sydney.

Secondary

- Higher School Certificate. North Sydney Boys High School, 2006-2011. ATAR: 93.25

Projects

- **Honours thesis project 2017: Adapting UAV Control for Latency.** Supervisor: KC Wong
Development of a predictive augmented reality flight aid. For this project I developed a solution concept, implemented and flight tested a working system. I gained experience in flight platform development, system identification, real time system modelling, performance conscious coding, image warping. See the results: youtu.be/MB5OZrL7JwQ
- AIRUS international quadrotor flight project Sydney Technical Lead 2015-present. Flight of quadrotors via control signal running over the internet. Implementing a system to fly a vehicle over the internet. Issues uncovered from this project formed the basis of my thesis project. This project involved working and communicating with team members both locally and internationally. I worked with ardupilot, px4, MAVLink in this project.
- Senior Physics Special Project 2015 semester 1. Supervisor: Mike Wheatland. Topic: Lattice Boltzmann Method for Hydrodynamic and Magnetohydrodynamic flows. Researched and implemented statistical numerical methods from literature and verified performance.
- Physics Talented Student Program (TSP) project 2013 semester 2. Supervisor: Iver Cairns. Topic: Attitude perturbations of the i-INSPIRE satellite.
- Physics TSP project 2012 Semester 2. Supervisor: Iver Cairns. Topic: Low thrust low Earth orbit maneuvers for nanosatellites
- Physics Olympiad Tutor at North Sydney Boys High School, March-August 2013. For this position I taught material for the Physics Olympiad (a competition for high school students).

Other experience

- UAV Technology Intern April 2018 – July 2018 at Carbonix. Working on quadplane transitioning vehicles
- Zero Robotics Mentor 2016-2017 and Regional Lead Mentor 2017-present. The ZR program is a high school coding competition. In 2016 I mentored a high school team, monitoring, advising and answering their technical questions and saw them to placing 2nd in the finals. In 2017 I was promoted to a paid role managing the mentors and program as well as running workshop events and the finals event.
- Member of Scouts Australia 2001-present (excluding 2009). Currently member of 1st Kissing Point Rover Crew, where I have held the following committee positions: Fundraiser 2012, 2018, Activities coordinator 2014, 2017, Treasurer 2015, 2016. Scouting presents many initiative and leadership challenges, including organisation of camps and activities, working under the bureaucracy, developing people skills including working with youth members, risk management.