

How to apply:

The deadline for receipt of applications is 15th October, 2008

To apply you can either apply online or download the University's application form from:

<http://www.admin.ox.ac.uk/postgraduate/apply/forms/>. You will need to submit references, transcript and a statement of research interests (in the slot marked "research proposal")

All applications are subject to a £25 application fee.

When you have submitted your application, will you please email Julie Sheppard: Julie@comlab.ox.ac.uk to inform her that you have done so and send a copy of your application to Julie.

If you have any questions about the applications procedure please email Julie@comlab.ox.ac.uk

Further information:

The objectives of the project at Oxford are to:

1. study the trade-offs between sensing coverage and network connectivity in the context of target detection and tracking by a group of UAVs;
2. design distributed search algorithms for dynamic environments where the requirements for coverage and connectivity continuously change over time, as UAVs discover partial information about target location;
3. extend distributed search algorithms to take into account context information (maps of the region, paths that the target is likely to follow) provided by experts via the ground stations;
4. take into account the geography of the environment and the presence of other vehicles when tasking the UAVs (path planning);
5. investigate the potential for using visual detection of aerial obstacles (sense and avoid), and other safety issues;
6. implement and evaluate search algorithms in a simulation environment, as well as using a real UAV test-bed, ;
7. present information in a coherent and easily comprehensible way to search teams and to the situation commander.

These objectives will be split between the students, with one considering objectives 1-3 and one objectives 4-7, although there may well be some overlaps (e.g., in objective 7). It is anticipated that the students will carry out a substantial part of the implementation on simulated and real UAV networks, and so will need to have strong coding and practical skills. The students will be trained to organize experiments, analyze results and write papers.

Further information on OUCL can be obtained from <http://web.comlab.ox.ac.uk/oucl/> and informal queries about the project can be sent to Niki.Trigoni@comlab.ox.ac.uk or Stephen.Cameron@comlab.ox.ac.uk.