## Access and training

We offer training for staff, students and external partners in drone industry applications and software skills, scientific data acquisition, management and geospatial data analysis.

We are happy to discuss support for individual projects and to explore how Omnidrome can share its knowledge and expertise to support your business or organisation.

Join us in building an exciting network of collaborators, new partnerships and research opportunities associated with drone applications, development, and testing for land, water and particularly arial drones, robotics, and autonomous vehicles.

### Contact us

Please contact us to discuss access and projects.

The Omnidrome team:

- **Professor Jürgen Adam,** Director of Omnidrome
  Jurgen.Adam@rhul.ac.uk

- **Dr Adrian Palmer**, Omnidrome Operations Manager
  A.Palmer@rhul.ac.uk

- **Dr Tom Korff**, Knowledge Exchange Manager
  Tom.Korff@rhul.ac.uk

- **General enquiries**
  Omnidrome@rhul.ac.uk

**Royalholloway.ac.uk/research/omnidrome/**

# Omnidrome
Research and Innovation Centre

ROYAL
HOLLOWAY
UNIVERSITY
OF LONDON

# Welcome to Omnidrome

The Omnidrome Research and Innovation Centre is a hub for world-leading research, innovation, education and knowledge exchange for air, land, and water-based drones, robotics and autonomous vehicles.

Omnidrome applies Royal Holloway's research expertise in air, land and water-based drones, and acts as a springboard for engagement with industry partners, local government, non-governmental organisations, and commercial partners. We seek to grow a diverse and multidisciplinary community of researchers, educators and technical experts with interests in R&D and application of drone technology in the areas of:

- Robotics, artificial intelligence (AI), and information security of autonomous vehicles
- Drone and sensor technology
- Scientific monitoring of environmental, ecological, geographical, geological systems and human environments
- Culture, arts and humanities



### Our location

Omnidrome is based at Royal Holloway, University of London on the main campus in Egham, Surrey – 40 minutes by train from central London and just seven miles from Heathrow Airport, with excellent road and transport links.

# Infrastructure

### Testing and training facility

The Omnidrome testing and training facility is a purpose-built hangar measuring 25 meters wide by 35 meters long and 10 meters high. The facility enables critical commercial and academic research potential and momentum for drone and software testing in real time locations and environments. It allows operators to develop and test specialist and experimental drones and software in a controlled, safe space, without disruption to the local environment or residents. Our next stage of development incorporates a camera tracking system for flight analytics and indoor GPS signal repeaters.



### Technical equipment

Omnidrome has a versatile inventory of aerial drones, tracked and wheeled robots, floating and submersible robots, plus a wide range of sensors, robotic elements, and supporting equipment. This includes a Pixkit autonomous vehicle development platform, unique in the UK.

### Support vehicle

A customised support vehicle to transport drone and robotic equipment, also acts as a self-contained command and operations centre.

### Expertise

Our team of researchers have extensive experience and expertise in air, land, water-based drone technology and monitoring, robotics and AI of autonomous vehicles. Current research includes drone hardware and sensor equipment, software and cyber security, and geospatial monitoring and analysis of natural and man-made environments. We also have corresponding expertise in such areas as international law of autonomous systems, global social justice, media arts and drone cinematography, virtual reality, and human-environment interaction through technical interfaces.

# Partnerships



We welcome opportunities to explore partnerships with academic collaborators, government partners, businesses, and industry partnerships, including joint research bids, Knowledge Transfer Partnerships and student project opportunities addressing real-world challenges and applications.

Sectors include:

- Drone and AV communications and security, and power system optimisation
- Environmental and geospatial monitoring including infrastructure surveys
- Biodiversity surveys and agri-tech monitoring
- Search and rescue, disaster response and law enforcement
- International regulations and social justice of autonomous systems

We believe that industry partnerships and academic research relating to the Omnidrome programme can directly address specific sector challenges, deliver innovative solutions, workflow efficiencies, and economic benefits.

A partnership with Royal Holloway can open up opportunities to apply for funds as part of research bids and Knowledge Transfer Partnerships as well as securing specific academic expertise.



Contact us about opportunities to become part of our community.