WHAT IS EUHIT?

EuHIT integrates cutting-edge European facilities for turbulence research across national boundaries, in order to significantly advance the competitive edge of European turbulence research with special focus on providing the knowledge for technological innovation and for addressing grand societal challenges.

Current members of EuHIT include 25 research institutes and 2 industrial partners from 10 European countries. EuHIT is based on fourteen national turbulence research infrastructures, which – together with the knowledge developed upon them – are interconnected by a Networking Program and Joint Research Activities.

WHO CAN PARTICIPATE?

EuHIT offers free access to 14 leading European facilities in turbulence research and its applications. Not only does it cover the costs for infrastructure use, but it also grants support for travel and subsistence for visiting researchers.

The calls for proposals are opened every three months. For application deadlines visit our webpage, www.euhit.org.

Participating researchers can be from multiple institutions. The project leader and more than 50% of the participating team members must be from the EU or an associated state, other than from the state where the research infrastructure is located.

EuHIT RESEARCH INFRASTRUCTURES

1. Göttgen Turbulence Facilities, GTF
   Göttgen, Germany
   Free stream turbulence in closed flows. Ideal for study of turbulence at very high Re and Ra. Particle dynamics in simple and complex fluids. Highest Re and Ra at room temperature. Versatile installations possible. Accessible down to 1 mbar for astrophysics applications.

2. Grenoble Helium Infrastructures, GHI
   Grenoble, France
   Jet and von Karman flows with ultra high Re, both superfluid and normal turbulence measurements possible in the same experiment.

3. Barrel of Ilmenau, BOI
   Ilmenau, Germany
   Rayleigh-Bénard experiment with unrivalled spatial and temporal resolution.

4. Twente Turbulence Facilities, TTF
   Enschede, Netherlands
   Two-phase flow, active grid generated turbulence, TC flow in an unexamined parameter range at very high Re.

5. Center for International Cooperation in Long Pipe Experiments, CICLoPE
   Bologna, Italy
   Long Pipe. Ideal for the investigation of transition to turbulence and boundary driven turbulence.

6. High Rayleigh Number Cryogenic Facility, HRCF
   Trieste, Italy
   Convective turbulence with highest Ra with and without rotation. Low temperature PIV and optical access.

7. CERN Cryogenic Turbulence Facility, GReC
   Geneva, Switzerland
   Jet flow with ultra high Re, movable, fast response, hot and cold wire anemometry to resolve Kolmogorov length.

8. CORIOLIS Rotating Platform
   Grenoble, France
   Unique installation for the study of turbulence influenced by rotation and/or density stratification.

9. LML Boundary Layer Wind Tunnel
   Lille, France
   High Re number turbulent boundary layer, resolvable over all scales, unique optical access.

10. Czech Cryogenic Turbulence Facility, CCTF
    Prague & Brno, Czech Republic
    Liquid and superfluidic Helium flows can be studied, Rayleigh-Bénard convection under Boussinesq conditions.

11. Refractive Index Matched Tunnel, RIMT
    Erlangen, Germany
    Near wall measurements with optical measurement technique possible, inserted structures and be invisible.

12. Cottbus Turbulence Experiment Facilities, CoGeOF
    Cottbus, Germany
    Various rotating turbulence experiments in fluids, one pipe flow experiment, full set of flow measurement technique for geophysical flows.

13. Turin Rotating Platform, TurLab
    Torino, Italy
    Study of turbulence in presence of rotation and stratification. Ideal for oceanographic studies.

14. CINECA-DLTD, TurBase
    Bologna, Italy
    World’s largest databases freely available to the European turbulence community, easily accessible through communication networks.

PARTICIPANTS’ IMPRESSIONS

“Programs like EuHIT are extremely important for advancing our current knowledge in fluid dynamics. Laboratory facilities are not always easily accessible and are often quite expensive to run. EuHIT significantly facilitate access to laboratories, supporting experimental research.”

Alessandro Toffoli, Plymouth University, UK
Leader of the WinT Project

“The EuHIT formula gives a chance to perform unique experimental research for scientists from institutions where there is no access to the required equipment. The scientists, especially younger colleagues, may also benefit from establishing international contacts.”

Ewa Tuliszka-Sznitko
Poznan University of Technology, Poland
Leader of the RSC Project

“This project has been a great opportunity to strengthen collaborations with other groups inside the European Community and all the people in both institutions involved in EuHIT has been highly collaborative and has been a real pleasure to work with them.”

Javier Burguete, University of Navarra, Spain
Leader of the FIONA Project

“We recommend strongly the use of transnational facilities to our colleagues.”

Francesco Chilii
Ecole Normale Superieure de Lyon, France
Leader of the BoundRoughTTC Project

Read more at www.euhit.org/impressions