European Low Gravity Research Association

ELGRA was born on June 18th, 1979

From the idea of a group of scientists:
Prof. F. Bonde-Petersen, Denmark, Dr. Y. Malméjac, France,
Prof. L.G. Napolitano, Italy, Dr. J.F. Padday, UK, Dr. Stott, UK,
Prof. H. Weiss, Germany and Dr. H.S. Wolff, UK.

Aim: To form an Association **to foster the cooperation and the coordination** between them and to provide the ground-based expert advisory service for low gravity experiments.

Currently: 153 Regular Members, 6 Corporate Members and 268 Student Members
What is ELGRA

- A nonprofit international society of multidisciplinary character

- Devoted to the promotion of European Research in microgravity, modeled microgravity, and hypergravity conditions

- A platform for all scientists interested in life and physical sciences in space

ELGRA aims:

- To represent and strengthen the scientific community of altered gravity research

- To involve young people in space research by educational programs
Gravity related research

Microgravity & Hypergavity

- Fluids physics
- Materials science
- Combustion
- Human Physiology
- Space Analogues
- Cell biology
- Plant biology
- Countermeasures
- …….

Many of our members are very active in these fields!
Management Committee

Dr Ricard González-Cinca
Physics
President

Dr Philip Carvil
Human Physiology
Vice-President

Dr Christian Lockowandt
Microgravity Sc Instrumentation
Secretary

Dr Thorben Könemann
Drop Tower Operation
Treasurer

Dr Eric Falcon
Fluid Dynamics
Member

Dr Elisa Raffaella Ferre
Cognitive Neuroscience
Member

Prof Marcel Egli
Biomedical Science
Member
ELGRA members are:

- **individuals engaged** in scientific research under altered gravity conditions
- scientific **institutions or companies** with interests in altered gravity research

ELGRA acts:

- Co-operating with Institutions and Agencies in the organization of scientific events
- Organising scientific symposia and courses
- Supporting members with research grants (ELGRA Prize) and access to microgravity platforms (ELGRA goes suborbital!)
- Spreading information about announcements of opportunities, new platforms and space policy to its members
- Supporting students with specific activities (summer school), and participating in ESA educational programs
Biennial Symposium

Antwerp 2011

Vatican 2013

Granada 2019

Corfu 2015

Juan-les-Pins 2017
The ELGRA Medal

The ELGRA medal is attributed during the symposia by the ELGRA Management Committee to members for their exceptional services to our community and/or outstanding scientists in the field of microgravity life sciences, physical sciences and technology.
Communications

We use our web-based platforms (website, email, facebook, LinkedIn) and member newsletters to engage our members in announcements and opportunities, new platforms and space policies including:

- Contacts with ESA and National Agencies
- Contacts with other scientific associations (e.g. ASGSR, COSPAR, JASMA, etc.)
- Present ELGRA activities in conferences and other contexts
- EU Programmes (Horizon Europe)
- Facebook and Linkedin group
Communications

Post Symposium, all attendees including students are invited to submit their manuscript to the journal Microgravity Science and Technology
More information at

www.elgra.org
What is SELGRA?

SELGRA is the student arm of ELGRA

Network of students interested in gravity-related research (more than 260 members)
Student ELGRA - SELGRA

President: Jérémy Rabineau (France / Belgium)
Vice-President: Dawid Przystupski (Poland)
Communications Officer: Tânia Ribeiro (Portugal)
ELGRA Liaison: Philip Carvil (UK)
Committee Members:
Agata Górska (Poland)
Daniel Carvalho (Portugal / Netherlands)
Miguel Ferreiral (Portugal / UK)
Examples of immediate past members

Dr Loïc Treffel (France):

Subject: Back pain in space

Thesis: Spine changes, muscle atrophy and postural consequences after real or simulated microgravity exposure.

Main results: IVD Disc swelling / decrease in muscle tone / postural disturbances => as risk factors of herniated disc development on earth
Examples of immediate past members

Dr Ilaria Cinelli (Italy & Ireland)
Ilaria Cinelli researches in electro-mechanical computational modelling of brain tissue. She is actively involved in Mars analogue mission studying human performance and factors in extreme environments. (Picture credit: Smiley Stevens).
Commitments

We aim to create a network of students doing research in gravity-related fields

- Facilitating communication of gravity-related research
- Supporting international education & research activities
- Providing career enhancing opportunities for our members
Activities

• Find a team for new projects
• Establish new collaborations between institutions
• Access to an extended network of experts in gravity-related fields

Facilitating research collaborations

Creating grants to support conference attendance

• Usually 2 calls per year
• Conference must be in Europe
• Topic of research must be gravity-related
• Grants up to €700
Conference Grants 2018-2019

• 9 grants awarded to students from 5 countries
• SELGRA present in the following conferences:
  • Cognitive and Motor Functions of the Vestibular System conference
  • ISGP & ESA Life Sciences Meeting 2018
  • 69th International Astronautical Congress
  • 15th Symposium on Advanced Space Technologies in Robotics and Automation
  • 26th ELGRA Symposium and General Assembly
• More grants coming soon, so make sure to apply!
Glide Your Experiment! Challenge

- Glider-based parabolic flights (5.5 s of μg)
- SELGRA will support the travel and accommodation of one team
- Can cover travel and accommodation costs up to 500€ per team member
- More information: https://lide.space
Additional Activities

Social Media
• Facebook, Twitter, YouTube, Instagram, LinkedIn

Bi-monthly Newsletter
• Article
• Student opportunities
• Upcoming news and events
• Member of the month

Webinars

Participation in scientific events/conferences

Collaboration with ESA during gravity-related research summer school and training weeks
How to Join

StudentELGRA
SELGRA
www.elgra.org/selgra

Online application
No membership fee