



Introduction to ELGRA and SELGRA

RICARD GONZÁLEZ-CINCA

ELGRA President

JÉRÉMY RABINEAU

SELGRA President

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 & Hypergravity

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



International Space Station (ISS); Expedition 34 Flight Engineer Chris Hadfield (March 2013); The Space Shuttle Atlantis (February 2008)

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

Members and activities

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

Spreading information about announcements of opportunities, new platforms and space policy to its members

Organising scientific symposia and courses

Supporting members with research grants (ELGRA Prize) and access to microgravity platforms (ELGRA goes suborbital!)

Supporting students with specific activities (summer school), and participating in ESA educational programs

Biennial Symposium

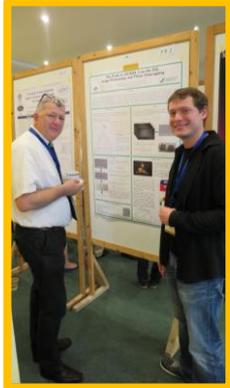
Antwerp 2011



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



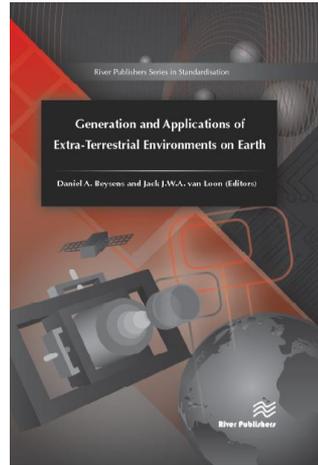
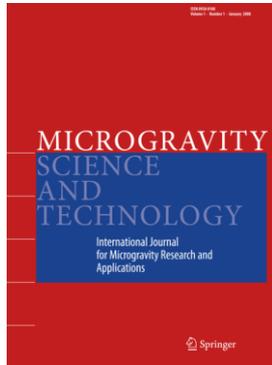
We use our web-based platforms (website, email, facebook, LinkedIn) and member newsletters to engage our members in announcements and opportunities, new platforms and space policies including:

- 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

ELGRA Newsletter/Magazine

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)



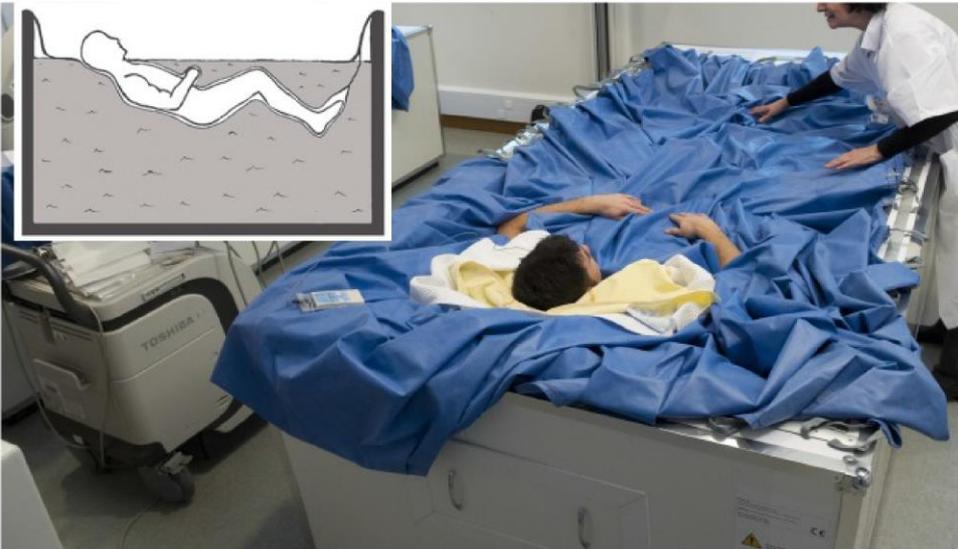
Student ELGRA - SELGRA



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



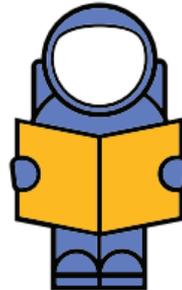
Dr Ilaria Cinelli (Italy & Ireland)

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).

*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**



Facilitating research collaborations

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



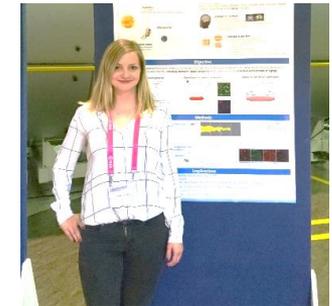
Creating grants to support conference attendance

- *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

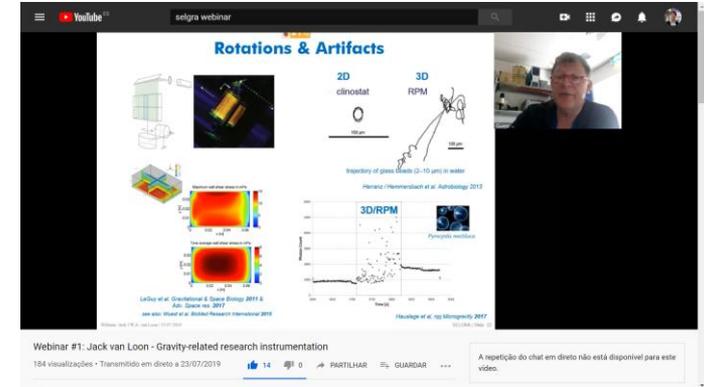
Bi-monthly Newsletter

- 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
- SELGRA

www.elgra.org/selgra

Online application
No membership fee

