



**Call for students to participate to the
Corinth Rift Laboratory school 2019**

CRL School 2019

Corinth Rift Observatory



Dear Student,

In the wider region of the Corinthian Gulf, a concerted effort is taking place for more than 30 years, for the advancement of understanding of geophysical processes (eg. earthquakes, landslides, tsunamis). Over time, extensional deformation rates of up to 15 millimeters per year are observed, between the North and South coast of the Corinthian Gulf, a phenomenon unique in Europe and in the world for areas beyond tectonic boundaries. A part of the North Corinthian Gulf land (coastal areas of southern Fokida) is subsiding and the South (coastal areas of northern Achaia) is uplifted. In the Corinthian Gulf, strong and destructive earthquakes have been recorded since antiquity, with the most recent earthquake of Aegion in 1995. The area is being studied by research teams from all over Europe.

For the fullest and most thorough study, a large number of instruments (seismometers, accelerometers, geodetic GPS receivers, etc.) have been installed, equipped with telemetry and are fully operating. Furthermore, about 40 seismographs, 30 permanent geodetic stations have been installed in the area from Lefkada to Galaxidi (north) and Kefalonia to Aigio (south). Seismological stations that record ground motion and GPS geodetic stations that measure ground deformation are being exploited to better understand the geo-tectonic background of the wider region.

At the same time, data from earth observation satellites with frequent acquisitions are being obtained. Terrestrial and satellite observations are exploited in research projects and studies that cover many scientific fields and leads to an in-depth understanding of the geophysical processes taking place.

A common site of research activities in the area is the Corinth Rift Laboratory (CRL). Its members are from Greece, the National and Kapodistrian University of Athens, the National Observatory of Athens, the University of Patras and the Harokopio University of Athens. From the French side, the École Normale Supérieure Universities of Paris, Nice, Strasbourg, Savoie Mont Blanc and the Institut de Physique du Globe de Paris. The University of Prague is also a member. The Corinthian Gulf has been included within the framework of the pan-European observation infrastructure of the Eurasian Tectonic Plate (EPOS program) as a Near Fault Observatory.

In 2016, the 1st CRL Summer School was held.

The aims of the school are:

- Students with different backgrounds from different universities, to get acquainted with the research and related activities carried out in the scientific fields of Seismology, Geophysics and Geology, especially for the natural laboratory of the Corinthian Gulf
- To bring the research/university community together with secondary school teachers to enrich their knowledge in the thematic fields aiming to more efficient and targeted training
- To disseminate popular knowledge about the thematic areas in local society and local authorities
- To intensify the osmosis and collaborations among researchers / professors from different scientific fields on the thematic objectives of the Gulf of Corinth Observatory

School activities are:

- Introduction to the science of seismology and seismicity in the Corinthian Gulf with presentations of researchers / professors as well as students and teachers of secondary education.
- Instrumental measurement of seismicity and visits to seismological stations in the area.
- Measurement of ground deformation by geodetic GPS, field work and visiting GPS station of the area.
- Measurement of ground deformation by satellite microwave radar (SAR interferometry, SENTINEL mission, GEP-TEP and its application to the CRL), with presentations also in the laboratory

- Geological observations (geotectonic, geomorphology, coastal and marine geology) on- and off-shore, decoding the knowledge that they provide us
- Seismic Hazards and Impact on Engineering Geology, the case of Rio - Antirion Bridge

Between September 20th and 24th, 2019, the 4th CRL School will be held, in Nafpaktos, Greece. Among others, demonstrations of a seismograph operation for secondary education students, demonstration of scientific instruments, educational on- and off-shore activities as well as presentations / lectures by distinguished national and foreign scientists will be carried out to the participating students and teachers as well as to the general public.

The summer school is mainly addressed to postgraduate and doctoral students. This year's school will select 15 students from Greek and foreign universities as well as 10 teachers of secondary education. The school is free of charge for all participants, with the subsidy of students and secondary school teachers supported by the European Geosciences Union. The subsidy for the students is 150€ which covers more or less the cost of accommodation and meals.

Information about the CRL, as well as the complete program and material for the past summer schools can be found at the link <http://crlab.eu>.

For further information, you can also contact Annita Panteleli by e-mail: apanteleli.crl@gmail.com

Applications are accepted from June 1st to June 15th, 2019.

Interested parties can sign up using the following link:

https://docs.google.com/forms/d/19Ubj_KjTuUnO8U3suq4qZxRWuGXX4MKgmSduCZRYkOs/