

40 YEARS FORTH

A Research Center of Excellence



science
research
technology
education
innovation

FORTH

A Research Center of Excellence

Description

The Foundation for Research and Technology - Hellas (FORTH) was founded in 1983. It is one of the largest Research Centers in Greece with well-organized facilities, highly qualified personnel and a reputation as a top-level Research Institution worldwide.

FORTH comprises 10 Research Institutes conducting specialized scientific research in strategic high-added value sectors, focusing on interdisciplinary research and development (R&D) activities in areas of major scientific, societal and economic impact, such as: Lasers and Photonics, Microelectronics, Advanced Materials/ Nanotechnology, Molecular Biology and Genetics, Human Genomics, Biotechnology, Precision Medicine, Systems Biology, Bioinformatics, Computer Science, Data Science, Robotics, Telecommunications, Information Systems, Applied and Computational Mathematics, Chemical Engineering Sciences, Energy, Environment, Human and Social Sciences, Astrophysics and Space Sciences.

FORTH cooperates closely with prestigious Academic and Research Institutions in Greece and abroad, and takes a significant interest in the education and training of young scientists and in the exploitation of research outcomes.

Today, FORTH plays a substantial role in the planning and implementation of Smart Specialization Strategies (RIS3) in Greece.

Research Institutes

in Heraklion

- Institute of Electronic Structure and Laser (IESL)
- Institute of Molecular Biology and Biotechnology (IMBB)
- Institute of Computer Science (ICS)
- Institute of Applied and Computational Mathematics (IACM)
- Institute of Astrophysics (IA)

in Rethymnon

- Institute for Mediterranean Studies (IMS)

in Patras

- Institute of Chemical Engineering Sciences (ICE-HT)

in Chania

- Institute of Geoenergy (IG)

in Ioannina

- Biomedical Research Institute (BRI)

in Athens

- Greek Institute of Human Genomics (GIHG)

Units

- Crete University Press (CUP)
- PRAXI Network
- Science and Technology Park of Crete (STEP-C)



FORTH researchers have received major Awards and Distinctions from International and National Scientific Societies and Organisations, indicatively:

- European Research Council
- American Physical Society
- Optical Society of America
- Royal Society of Chemistry
- Russian Optical Society
- European Society of Rheology
- European Science Foundation
- FENS-Kavli Network of Excellence
- AXA Research Fund
- Academia Europea
- European Molecular Biology Organization
- Helmholtz Association
- Bodossakis Foundation
- Empirikion Foundation
- American Association for Aerosol Research
- American Institute of Chemical Engineers
- Euroscience
- Association for Computing Machinery
- European Association for Artificial Intelligence
- European Research Consortium on Informatics and Mathematics
- European Institute for Health Records
- Society for Medical Innovation and Technology
- Galien Foundation
- Alexander von Humboldt Foundation
- Hellenic Federation of Enterprises
- IBM
- Getty
- Ericsson
- Microsoft

10 Research Institutes

3 Units

Presence in 8 cities of Greece

41 ERC Grants

180 Marie Curie Grants

Ranked 1 st

■ among the Research Centers in Greece, in all comparative evaluations conducted by international committees

■ by the European Commission, among all Greek Research Centers & Universities

■ in Nature's INDEX, among all Research Institutions in Greece

■ in Greece, in the Ranking Web of Research Centers (Webometrics 2017, 2018, 2019)

The People (2022)

Members: 1,592

Researchers: 113

Collaborating Faculty Members: 181

Fellowships/year (incl. postdoctoral): 554

Research associates, technical and administrative personnel: 744

The Research (2012-2022)

Publications: 8,565

Citations: 156,951

h-index: 135

FORTH in Numbers



Laser in Heritage Science

The Institute of Electronic Structure and Laser (IESL) has developed modern laser-based technologies for the study and preservation of Cultural Heritage objects and Monuments. Most importantly, a novel laser-based system – a worldwide innovation – was developed and utilized for the cleaning of the Parthenon West Frieze and the Acropolis sculptures, which received the 2012 Keck award by the International Institute for Conservation of Historic and Artistic Works (IIC). The laser system, which utilizes two different beams, one in the UV and one in the IR, with a controlled intensity ratio, is both effective and safe for the ancient masterpieces. This innovative technology led to the establishment of a joint research lab (NIKI) with the Palace Museum of the Forbidden City in Beijing.

Characterization of Atmospheric Pollution Sources with Airship

Among large European projects coordinated by the Institute of Chemical Engineering Sciences (ICE-HT), there was the first ever study of air pollution above a continent, using an airship carrying high-tech research equipment. The acquired measurements led to the discovery of chemical processes taking place above ground and the quantification of the pollution transferred from country to country, while certain, currently under-estimated, air pollution sources were identified as significant (biomass burning, meat grilling, forest fires etc.). The results of the study are used by the EU to establish rules for limiting atmospheric pollution.

Significant Innovations



Contributions to the European Processor for Competitiveness, Security, and Sovereignty

Digital processors control everything in our Information Society, so Europe seeks self-sufficiency in high-end processor chips via its *European Processor Initiative* (EPI) flagship project, in order to secure competitiveness, security, and sovereignty in this critical infrastructure. Greece contributes to EPI - ranking 5th among all European states in terms of budget - in simulations, hardware design for RISC-V accelerators, chip bring-up, Linux system software, and MPI runtimes. This contribution of Greece is provided by the Computer Architecture and VLSI Systems (CARV) Laboratory of FORTH's Institute of Computer Science (ICS), where the first prototype of the European Processor was built and ran a programme for the first time in September 2021.

Portable Molecular Diagnostic System

Researchers at the Institute of Molecular Biology and Biotechnology (IMBB) pioneered the development of a portable molecular diagnostic device for performing DNA tests for healthcare and agro-food safety. Based on a patented methodology, nucleic acid detection takes place in a simple, rapid and cost effective manner, thanks to the use of a portable 3D-printed device that allows real time isothermal amplification of the genetic target and quantitative detection via a tablet. The innovation, exploited by a spin-off company (BIOPIX DNA TECHNOLOGY), was selected for funding (€2.4 million) by the EU as a response to the COVID-19 pandemic and the need for diagnostic methods outside the lab. The device and two assays (COVID-19 and influenza) have received certification and are now in the market in Europe and S. Africa. The latter is in line with the researchers' vision to develop methods for global diagnostics.





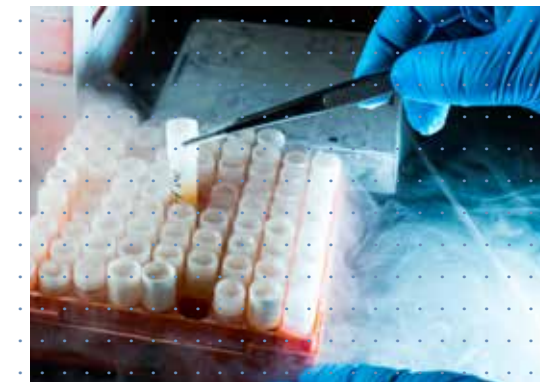
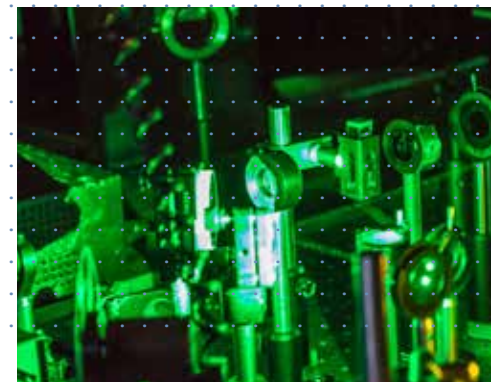
Research
Institutes

1. Institute of Electronic Structure and Laser

IESL, founded in 1983, has established its international presence by performing high quality fundamental and applied research in the areas of Laser Science, Photonics and Biophotonics, Micro/Nano-electronics, Soft Matter Science, Nano-/Bio-Materials and Metamaterials.

IESL is an active partner within the Programme of European Research Infrastructures: since 1990, IESL has been operating the Ultraviolet Laser Facility, part of LASERLAB EUROPE, whereas it participates in the infrastructures: IPERION SH (Heritage Science), SSHOC (Humanities), EUSMI (Soft Matter), NFFA Europe (Nanoscience) and ACTFAST 4.0 and 4R (Photonics for SMEs or Researchers).

Moreover, IESL participates in the Extreme Light Infrastructure (ELI) and in the European Research Infrastructure for Heritage Science (E-RIHS), in the framework of the ESFRI roadmap. Important scientific achievements by IESL personnel have led to International Awards and distinctions from major International Societies.



2. Institute of Molecular Biology and Biotechnology

IMBB was founded in 1983. Its mission is to pursue cutting-edge research and promote scientific excellence in the field of Molecular Biology and Biotechnology, as well as, exploit and translate knowledge; also, to provide high quality training and mentorship for graduates, PhD students and postdoctoral fellows to foster their career growth.

IMBB is one of the most prominent life science Research Institutes in Greece, with an outstanding record of scientific achievements, state of the art infrastructure and a broad range of research, innovation and educational activities.

Its research is currently organized in the following thematic directions: Structural Biology, Biophysics - Nanobiotechnology, Neuroscience, Immunity, Evolution, Development & Cell Biology, Gene Regulation & Epigenetics, Plant & Plant-Microbe Biology, Insect Biology and Vector Borne diseases.

IMBB has been operating substantial research units, such as the Animal House and Genome Editing Core Facility, the Bioimaging, and the Biotechnology Facilities. Since 2020, IMBB has been a member of EU-LIFE, an alliance of 15 leading Biomedical Research Institutes of Europe, that operate with similar principles and common procedures.



3. Institute of Computer Science

Since its establishment in 1983, ICS has been conducting basic and applied research in Information and Communication Technologies (ICTs). A major activity of ICS is the study, design and implementation of systems in the broader spectrum of ICTs for the development of the Information Society, and the advancement of science for the benefit of Society, Economy and Public Administration.

The main directions of research in ICS are the following: Computer Architecture, High-Performance Computing, Distributed Systems, Computer Networks & Telecommunications, Systems and Network Security, Information Systems, Human-Computer Interaction, Signal Processing, Computational Vision, Robotics, Artificial Intelligence, Computational Biomedicine. Cross-disciplinary research directions include Ambient Intelligence, Data Science and Advanced Hybrid Imaging Systems, whereas application areas of strategic importance comprise Space and Defense Technologies, Cultural Informatics and E-health applications and services. ICS is a member of ERCIM and W3C.



4. Institute of Applied and Computational Mathematics

IACM was established in 1985 and it is the only Research Institute on Applied and Computational Mathematics in Greece. It focuses on the development of mathematical and computational methods to address interdisciplinary problems.

The Research Activity of IACM is centered around the following key areas: Applied Analysis and Modeling Division (Groups: Applied Analysis, Mesoscale & Continuum Modeling, Molecular Modeling), Numerical Analysis and Computational Science Division (Groups: Data Science, Computational Biomechanics, Scientific Computing and Software Development, Laboratory: Statistical Learning Laboratory) and Applied Science Division (Groups: Wave Propagation, Regional Analysis, Computational Neurosciences, Computational Pharmacology, Socio-Education Research and Innovation, Laboratories: Coastal & Marine Research Laboratory, Remote Sensing Laboratory).



5. Institute for Mediterranean Studies

IMS was founded in 1985 to promote research in humanities, social sciences and the application of science and technology to cultural heritage. It is the most successful Research Institute of its kind in Greece, having received 7 ERC grants for historical research during 2016-2022, while managing another 30 research projects from national, European and private funds. Its researchers have established international networks with 80 Universities and research centres around the world. It has a specialized library and archive material.

IMS research is organized on the following thematic axes: Mediterranean Economic and Social History, Mediterranean and Black Sea History of Cities, Diaspora and Immigration, Ottoman History, Maritime History, History of Technology, History of Art, History of Theatre, Image, Sound and Movement, Ancient Greek and Byzantine Studies, Geographical Information Systems and Remote Sensing in Archaeology and Environment.



6. Institute of Chemical Engineering Sciences

ICE-HT was established in 1984 at Rio-Patras, as an independent Research Institute (initially under the name *Institute of Chemical Engineering and High Temperature Chemical Processes*).

In 1987 it became one of the founding Institutes of FORTH. ICE-HT conducts basic, applied and technological research in a wide range of fields in chemical engineering sciences, and provides specialized services to academia and industry, in the context of three main Research Areas, namely

- Nanotechnology / Advanced Materials,
 - Energy / Environment,
 - Biosciences / Biotechnology
- and their interfaces (e.g., nanobiotechnology, materials and devices for the energy transition, simulators and algorithms for environmental applications, biofuels, systems biology, metabolic engineering).

The Institute responds to modern societal challenges in the sectors of energy, environment and health, and encourages exploitation of research results through patents, licensing and spin-off companies.



7. Institute of Astrophysics

IA, the only Institute in Greece dedicated exclusively to Astrophysics, was established at FORTH in 2018, as an evolution of the successful research activities of the Astrophysics Group, taking place in Crete for more than 30 years, in strong collaboration between the University of Crete and FORTH-IESL.

The main research infrastructures have been operating in Crete at Skinakas Observatory since 1986, when it was founded jointly by FORTH, the University of Crete and the MaxPlanck Institut für Extraterrestrische Physik in Germany. The Observatory is located at an altitude of 1,750 m in the Psiloritis area. It is internationally recognized for the excellent observing conditions of the site, as well as the state-of-the-art available instrumentation. This enables IA to perform cutting edge basic research, as well as, contribute to applied research and services in the fields of secure laser telecommunications and space surveillance and tracking.



8. Institute of Geoenergy

IG was founded in 2019 in Chania to promote basic and applied research on the transition towards cleaner forms of energy and the alleviation of environmental degradation.

IG is comprised of 3 Divisions:

- Fossil Fuels and Carbon Management: exploration of geological formations and development of technologies for carbon dioxide capture, utilization and storage (CCUS).
- Environment and Circular Economy: bioremediation technologies, transport and fate of persistent pollutants, environmental impact assessment, materials, and energy reuse technologies.
- Green Energy: hydrogen production and storage in geological media, geothermal energy, and green fuels.

IG constantly enhances its research infrastructures and also focuses on the study of high-enthalpy geothermal field.

IG has recently secured funding to establish a Research & Innovation Center on Sustainable Energy Transition (R&I SET), which will draw interdisciplinary competences by a number of FORTH's Institutes.



9. Biomedical Research Institute

BRI was founded at Ioannina in 1998 and joined FORTH in 2001. The Institute consists of 18 research teams focusing on basic molecular and cellular biology areas of biomedical research, such as Stem Cell Biology, Early Embryonic Development, Regenerative Medicine, Vascular Biology, Cancer Biology, Neurobiology, Nuclear Organization and Epigenetics, Biology of Insecticide Resistance, Biomedical Technology, Genetics and Epidemiology.

As BRI is located in the campus of the University of Ioannina (Uoi), and 14 group leaders of BRI have joint affiliations with Uoi, the Institute has a long tradition in connecting research and training activities at the academic environment.

BRI is equipped with high-end microscopy facility, unique in Greece, which includes STED super-resolution and Total Internal Fluorescence microscopy and shares with Uoi a synergistic range of research facilities.



10. Greek Institute of Human Genomics

The Greek Institute of Human Genomics was established in 2022 in Athens, and it is the only in Greece exclusively in the field of Genetics and Genomic Research. Its mission is to conduct high quality, competitive, cutting-edge research in the field of human genetics and to provide services utilizing the diversity of local genomic variants and the history of the Greek population, aiming to improve public health.

GIHG will help to integrate Greece in this rapidly developing scientific field, and will support the Greek biomedical ecosystem, combining genetics and genomics with computational and clinical research. It aspires to become a world leader in research on genetic diversity and its connection with various monogenic and multifactorial diseases, as well as, to encourage synergies with other research fields and scientists abroad.



Units



Crete University Press

CUP was founded in 1984, initially financed by a grant from the Pancretan Association of America, and has since been operating, under the umbrella of FORTH, as a non-profit, self-funded publishing house. It publishes books for students, scientists and the average reader, covering the fields of natural, formal and social sciences, arts and humanities.

Furthermore, since 2015, CUP has been providing free online courses through the Mathesis programme, placing emphasis on the joy of learning and insisting on the highest quality standards, with a view to keep Greece abreast of the evolving changes in worldwide education. It is based in Heraklion, Crete, while maintaining offices and a bookshop in Athens.



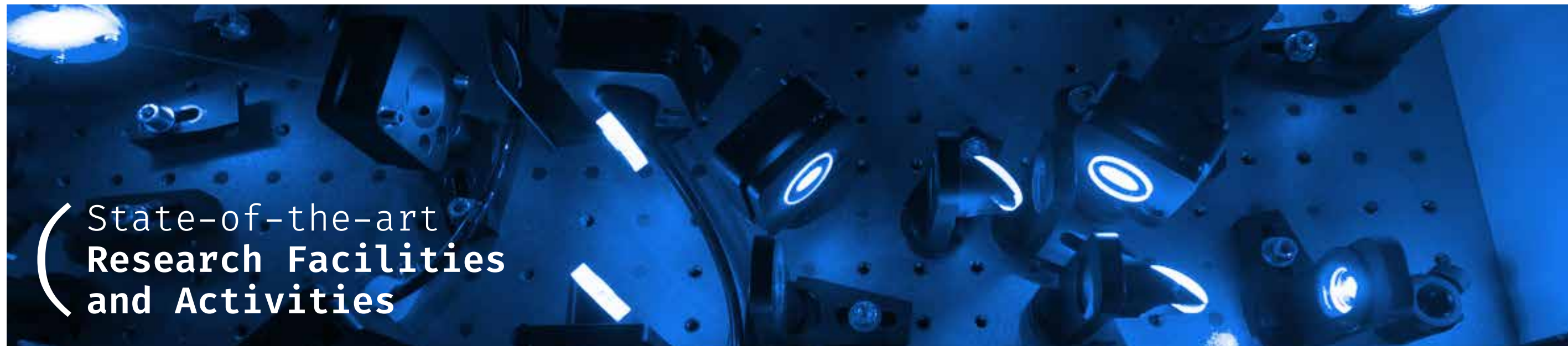
PRAXI Network

PRAXI Network is the Technology Transfer Unit of FORTH. Established since 1991, it has expanded its positioning in 5 major cities in Greece (Athens, Thessaloniki, Heraklion, Volos, Patras). PRAXI Network is dedicated to assisting researchers, research organizations and small and medium-sized Greek enterprises (SMEs) in their technology transfer and innovation-related endeavors. By linking research and industry, it promotes innovation and entrepreneurship not only in Greece but also abroad, through transnational cooperations. Alongside, it contributes to the design and implementation of national and regional policies, mechanisms and tools to support and finance innovation. Its activities follow the European standards, as it comprises a member of the European Technology Transfer Offices Circle, the coordinator of the Greek part of Enterprise Europe Network, the founder and facilitator of 4 technology oriented clusters, an official National Contact Point for Horizon Europe and the Greek leader for the activities of the UNESCO Chair on Futures Research.

Science and Technology Park of Crete

The Science and Technology Park of Crete (STEP-C) was founded in 1993 with the aim of promoting research, innovation and entrepreneurship. It occupies a large area of approximately 4,000 sq.m. on FORTH campus, with more than 100 offices and laboratory spaces, in which innovative start-up and spin-off companies are incubated and supported.

The main objectives of STEP-C include technology transfer and commercial exploitation of research outcomes; assessment and management of intellectual property rights; promotion and support of academic entrepreneurship; support of innovative start-ups hosted at the Incubator, and promotion of tailor-made training to students, researchers and business executives. STEP-C is a full member of the International Association of Science Parks and Areas of Innovation (IASP) and a founding member of the Greek and European EURAXESS Network of the European Commission.



State-of-the-art Research Facilities and Activities

- **Highly specialized Research Facilities** in Forefront Technologies, which participate actively in the Programme of European Research Infrastructures, in the areas of Ultraviolet Lasers, Cultural Heritage Science, Soft Matter, Nanosciences and Photonics innovation solutions for SMEs and Researchers. Almost 5,000 days of access have been provided to more than 700 researchers from all over the world, within this Programme.
- **“Skinakas” Observatory**, the most productive in the country, which operates in collaboration with the University of Crete, providing the best observing conditions in the Mediterranean Basin. The Observatory offers open days to the public during the summer months.
- **Joint Research Laboratory** with the Palace Museum of the Forbidden City in Beijing (NIKI), for technology transfer on the conservation of monuments and Art masterpieces.
- **The 1st Ancient DNA Analysis Lab** in Greece, one of the few in Europe.
- **1st AXA Chair Grant** in Greece, in Epigenetics research.
- **International Associated Laboratory “MINOS”** in collaboration with CNRS and Aix-Marseille University.
- **Genomics Analysis Center** with applications in Biomedicine, in Cultural Heritage and in Agrifood sector.
- **The first Metabolomic Analysis in Systems & Network Biology Laboratory** in South-Eastern Europe, contributing to technologies & applications in Precision Medicine and Agriculture.
- **Biomedical Imaging Unit** equipped with PET/CT (unique in Crete), in collaboration with the Medical School of the University of Crete and the University Hospital of Crete.
- **Animal (mouse) & Genome Editing Core Facility**, with substantial contributions to the promotion of biomedical science, including production of transgenic/genetically modified mice, as well as, in-house supplying and breeding for basic and translational research. The unit provides high-standard services towards 25 biomedical research groups, executed by a team of 11 highly skilled and experienced personnel in a modern up-to-date facility.
- **Ambient Intelligence (Aml) Programme**, a long term horizontal interdisciplinary RTD Programme, aiming at developing and applying pioneering human centric Aml technologies and Smart Environments in everyday life.
- **Data Science Programme** for addressing challenges related to the management and analysis of very large volumes of heterogeneous data in various domains.
- **Computational-Mathematical Intense Data Modelling Unit** for Materials science and Bio-Medical applications in collaboration with the National Technical University of Athens.
- **One of the few worldwide and unique in Southeast Europe Micro-PET/MRI facility** for preclinical research enabling high-precision imaging diagnostics and molecular-level research in drug design.
- **ERA Chairs** in Biodiversity Computing and Astro-Informatics.
- **FORTH Graphene Centre**, the main pillar for graphene research in Greece, which actively participates in the Graphene FLAGSHIP - Europe's biggest ever research initiative.
- **World-class center (C-STACC)** for air quality and climate change research, serving as a consultant and providing atmospheric chemical transport models to several countries and international authorities.
- **Cutting-edge technology** & expertise in fuel cells, soil pollution monitoring and remediation, hydrogen & renewable fuels production and CO₂ capture.
- **The first laboratory in Greece with ISO 9001:2015 certification** on Metabolomic and Bioinformatic analyses.
- **Computational predictive-modelling activities** for geophysical and environmental flows.
- **The first Laboratory in the Eastern Mediterranean area** offering ground based & satellite remote sensing, prospection and GIS management of cultural heritage monuments, sites protection and environmental resources.
- **Advanced super-resolution microscopy**, equipped with STED and TIRF microscopes which are unique in the country. Joint microscopy facilities with the University of Ioannina.
- **The first stem cell unit** in the country, established at Ioannina.
- **Brain organoids unit**, for basic and applied biomedical research applications using patient stem cells.
- **Mouse phenotyping**, allowing thorough and multifaceted behavioral assessment of mouse models.
- **The only research unit in Greece** exclusively dedicated to the systematic study of Ottoman history.
- **The only El Greco Centre** of Art History in the Mediterranean.
- **The Largest archive for Neohellenic Theatrical performances** in the Eastern Mediterranean from 1830s to 1930s.
- **The only Centre of Maritime History** in Eastern Mediterranean.

Education & Advanced Training

FORTH:

- awards more than 500 fellowships per year to undergraduates, Master's and Doctoral students, Postdocs and trainee scientists.

- participates in interdisciplinary graduate programs:

“Photonics and Nanoelectronics”, “Bioinformatics”, “Brain and Mind”, “Molecular Biology and Biomedicine”, “Ottoman History”, “Theatrical and Cinema Studies” and “Data Analysis and Machine -Statistical Learning” (with the University of Crete).

“Nanotechnology for Energy Applications” (with the University of Crete and the Hellenic Mediterranean University).

“Biomedical Engineering” (with the University of Crete and the Technical University of Crete).

“Cell Molecular Biology and Biotechnology” (with the University of Ioannina).

“Microsystems and Nanodevices” (with the NTUA, NCSR “Demokritos”/INN, NHRF/TPCI).

FORTH Researchers teach in many graduate programs offered by Greek Universities.

- organizes an annual series of advanced seminar lectures on cutting-edge research fields, in Physics, Chemistry, Biology, Mathematics and Computer Science, in collaboration with the Alexander S. Onassis Public Benefit Foundation, providing advanced education and training to Greek and International undergraduate students.



- supports secondary education initiatives for student career advising and interaction with research labs in Greece. Each year, more than 1,100 high school students visit FORTH premises and become acquainted with its scientific activities.

- is visited by 2,500 people every year, during the “Researcher’s Night”, an initiative of the European Commission taking place in parallel in 300 European Cities, celebrated on the last Friday of September.

- organizes annual summer schools, certified seminars and conferences and has trained more than 15,000 scientists in new technologies.

- has established the Crete University Press (CUP), with 820 titles published to-date (35 publications/year), 2,700,000 copies sold (150,000/year) and 24 Awards. CUP Books have been adopted as textbooks in 3,100 university courses across the country. Crete University Press has established the “Mathesis” Open Online Courses, with more than 120,000 registered students to-date (<https://mathesis.cup.gr/>).



Employment & Entrepreneurship

FORTH:

- has directly or indirectly created >1,400 highly skilled jobs through its activities.

- has contributed to the “brain gain” by attracting or collaborating with numerous talented new scientists who currently work as Researchers, University Professors and Collaborating Faculty Members at FORTH.

- established and developed the first Technology Park in the country, located in Patras, currently supervised by GSRI.

- established the Science and Technology Park of Crete which hosts and supports start-up companies.

- established the PRAXI Network which has contributed to more than 1,000 research and technology cooperation agreements with Greek and International companies and Organizations.

- has created, supports and fosters innovation clusters in various research & technology sectors (Hellenic Bio Cluster, Hellenic Digital Health Cluster, Hellenic Photonics Cluster, Innovation Greece).



- has developed scientific and technological collaborations with more than 300 companies.

- has developed and supported several spin-off companies.

- operates the European Digital Innovation Hub in Smart Health, offering state of the art services to the Greek entrepreneurial community active in the e-health sector.

- coordinates the “gnOsi Technology Transfer Network”: the largest network of technology transfer offices in Greece, aiming to strengthen technology transfer mechanisms within the collaborating Universities and Research Centers.

- promotes conference tourism: ~30,000 overnight stays per year.

- directly supports the local economies of the Regions of Crete and Western Greece with ~3 M€ per year.





Contributions to the societal & regional Development

FORTH:

- **provides support to the local regional and municipal authorities;** has contributed to the design of the Research and Innovation Strategies for Smart Specialization (RIS3) in the Regions of Crete, Western Greece and Epirus.
- **contributes to the design and implementation of regional research and innovation strategies and tools,** by participating in the Regional Councils for Research and Innovation of the Regions of Crete, Western Greece and North Aegean.
- **has developed IoT infrastructure and intelligent technologies** contributing to the smart city vision of the Municipality of Heraklion.
- **has developed interactive systems,** online services and smart environments that contribute to the improvement of urban quality of life, as well as, specialized systems and services for the elderly and disabled people.
- **has established health information infrastructures** in hospitals and medical units in various Greek Regions.
- **provides air pollution measurement services and** electromagnetic radiation measurement services from mobile phone antennas in urban environments.
- **contributes to the reduction of the virus dispersion** in the community, as in the case of SARS-CoV-2, through the creation of diagnostic tests, shields for the medical personnel, and recommendations for caution measures to prevent airborne transmission.
- **participates in the development and operation of the Greek “Safeline”** which responds to reports for illegal online content.
- **has developed new materials and technologies for the protection of artwork;** has contributed to the analysis, diagnosis and conservation of Cultural Heritage objects and monuments, as well as, to the evaluation of climate change effects on Monuments like Knossos and Castello a Mare (“Koules”) in collaboration with Heraklion Ephorate of Antiquities.
- **cooperates widely with cultural Institutions** for the promotion of Greek culture, history and traditional products.
- **actively participates in the Entrepreneurship and Development Alliance** in Western Greece.
- **creatively cooperates with the Patras Science Park** for the exploitation of research results and promotion of innovation.
- **actively participates in the Competence Centers established** in the Region of Western Greece and the Region of Crete in the fields of additive manufacturing and agrofood respectively.
- **cooperates with major power companies for the biotransformation** of greenhouse gas effluents into fuels and useful chemicals.
- **has developed technologies for waste/soil/water remediation and valorization.**
- **has developed online databases of pesticide resistance** (Galanthus) and Mosquito Vectors (VectorMap-GR), invaluable informatics tools supporting farmers and Public Health operators to control agricultural pests and mosquitoes/vector borne diseases, respectively.
- **has carried out research on the history of the cities** of the Eastern Mediterranean and the Black Sea Aegean and Ionian island communities (18th-20th centuries) and has formed large databases on agricultural and industrial production, on trade, shipping and population structure.
- **is actively involved with supervising the system of Model and Experimental Schools** of all levels within the Region of Crete.
- **participates in outreach activities towards high school and lyceum students** on issues of current technological interest, transferring state of the art research to education.
- **organizes conferences, open events and lectures** communicating its scientific accomplishments to the public.

FOUNDATION FOR RESEARCH AND TECHNOLOGY - HELLAS

Our Vision

To create and maintain an environment that fosters **Learning, Research and Innovation** as pillars for Regional, National and European socio - economic growth.

• EDITION 2023

FOUNDATION FOR RESEARCH AND TECHNOLOGY - HELLAS


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