FORTH - ICS

Foundation for Research and Technology – Hellas (FORTH)

Institute of Computer Science (ICS)



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[Heraklion · Crete]



FORTH

FOUNDATION FOR RESEARCH AND TECHNOLOGY - HELLAS

Forty-two years of building research institutions that outlast the grants that started them; and returning more to the state than what it puts in.

A public Research Centre for Knowledge and Innovation

Three directives, and one thing that holds them together.

01 Targeted scientific research

Concentrated in selected strategic areas of high added value, rather than spread thin across everything.

02 Training and education

Highly skilled human resources, developed through close institutional links with universities.

03 Exploitation of scientific outcome

Knowledge and innovation treated as drivers of economic development, not by-products of research.



FORTH HEADQUARTERS · HERAKLION, CRETE

Emphasis on
EXCELLENCE

Ten institutes and units, across eight cities

Headquartered in Heraklion, with a national reach that took four decades to build.



FACTS & FIGURES

The People

As of 31 December 2025.

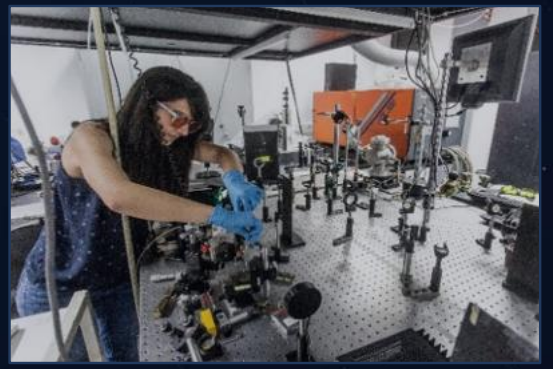
1,670

MEMBERS

Across ten institutes and units, in every discipline FORTH works in.

Researchers	118	PhD & MSc Fellowships	373
Collaborating University Faculty	209	Technical Personnel	508
Post-doctoral Researchers	267	Administrative Personnel	195









FORTY-TWO YEARS OF GROWTH

FORTH annual budget, 1983 – 2025

Nine funding sources, tracked every year since the foundation was created.



◆ International competitive funding is the largest single band in most years since 1990.

≈€2.8M

IN 1983

The foundation’s first full year of operation.

≈€67M

IN 2025

After a peak above €73M in 2023.

24×

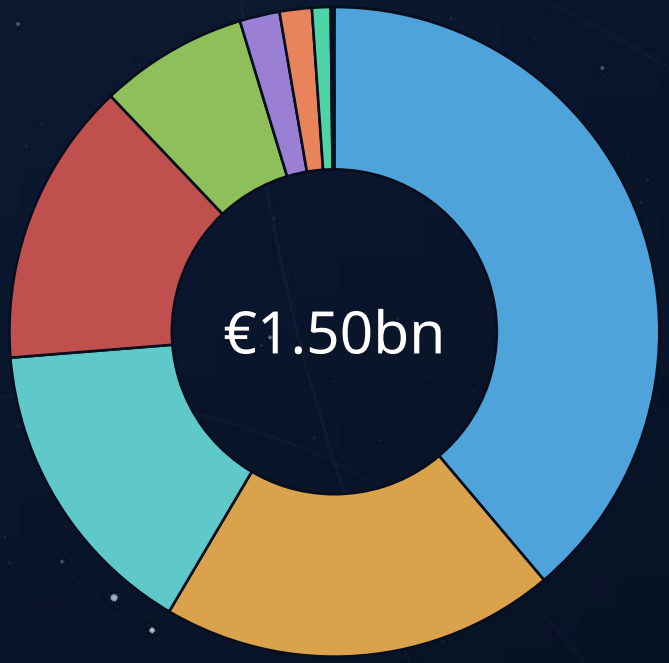
GROWTH

Compounded across four decades.

FORTY-TWO YEARS OF FUNDING

€1.5 billion raised since 1983

Where it came from and what the Greek state actually paid.



SOURCE	EURO	SHARE
International Competitive	582.616.819	39%
State Contribution	294.712.068	20%
Matching Funds	228.629.746	15%
Services	212.915.016	14%
ΕΣΠΑ (HRDF)	110.750.786	7%
Stocks	29.862.521	2%
HFRI	23.994.311	2%
RRF	13.846.068	1%
Various private funds	1.429.699	0%
Other National	1.290.425	0%
TOTAL	**1.500.047.459**	100%

The state gets more back than it puts in: The €295M of Greek state funding is less than the VAT and taxes paid on income from competitive grants and services, before counting 60,000 m² of buildings and the value of research equipment.

The FORTH model of technology transfer

A route from public research funding to companies, patents and industrial contracts.

FORTH

Headquarters in Heraklion · institutes and units in 8 cities



Basic & applied research

Funded by the government, the EU, international organisations and the private sector.

Incubator →

Knowledge dissemination · technology transfer →

Commercialisation →

STEP-C SCIENCE & TECHNOLOGY PARK OF CRETE

praxi help-forward network

SPIN-OFF COMPANIES

and industry collaboration

Collaboration with national and international companies · **Over 100 patents filed**

THE HOST INSTITUTE

Institute of Computer Science

Founded in 1983 as one of FORTH's three original institutes, alongside IESL and IMBB.

1983
FOUNDED

500+
STAFF MEMBERS

€20M
AVERAGE ANNUAL RESEARCH BUDGET

75%
OF IT FROM EUROPEAN PROJECTS

100+
SCHOLARSHIPS AWARDED EACH YEAR

- The largest research institute in Greece in information and communication technologies.
- Basic and applied research across the whole ICT spectrum, in eight laboratories.
- Strong interdisciplinary collaboration with all FORTH institutes.
- Proven success in innovation and entrepreneurship; FORTHnet, CodeBGP, OramaVR.
- Pioneer in introducing the Internet to Greece, in 1984.
- Consistently rated excellent in every research-institute evaluation by the GSRI.
- A significant international player, outward-facing, with active partnerships abroad.

The broader ecosystem. FORTH and the University of Crete are among the top Greek organisations in European research funding (over €400M), and hold 46 of the 102 ERC grants ever awarded in Greece.

1984

ICS brought the Internet to Greece.

One year after it was founded, the institute connected the country to the network that would define the next four decades. It has set a clear precedent for other initiatives: put the infrastructure in Crete first, and the ecosystem follows.

1983 founded · **1984** Internet reaches Greece · **1995** FORTHnet spun out









FROM THE ICS ARCHIVE

Eight laboratories, one institute



Computer Architecture and VLSI Systems



Computational BioMedicine and Center for E-Health Applications



Computational Vision and Robotics



Distributed Computing Systems and Cybersecurity



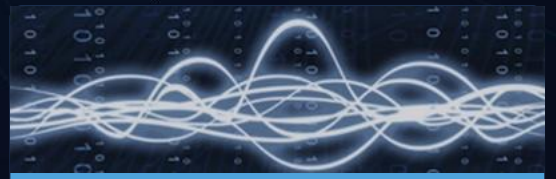
Human Computer Interaction Laboratory



Information Systems Laboratory and Center for Cultural Informatics



Telecommunications and Networks



Signal Processing Laboratory



Ambient Intelligence Programme



Registry of [.gr] Domain Names



Department of Systems and Networks

- 8 research laboratories
- 3 units

PROVEN TRANSFER

From the laboratory to the market

ICS has done this repeatedly, including one exit to a global acquirer.



TELECOMMUNICATIONS

Forthnet

Spun out of ICS to become the first commercial Internet service provider in Greece, and for years the country's principal route online.

Greece's first ISP



MEDICAL XR · SPIN-OFF

OramaVR

Virtual-reality systems for surgical training. Its platform builds high-fidelity medical XR simulations eight times faster, at one-eighth the cost of current industry standards.

8× faster · ⅛ the cost



NETWORK SECURITY · SPIN-OFF

Code BGP

SaaS for network automation and security, with open-source tooling to detect and mitigate BGP prefix-hijacking attacks.

Acquired by Cisco / ThousandEyes

SPACE ✦ Crete

CRETAN CENTRE OF EXCELLENCE IN EMERGING SPACE TECHNOLOGIES

SHAPING THE FUTURE FROM CRETE

Co-funded by the European Union

€35M ◆ STARTING JANUARY 2027





Information Systems Laboratory

Why do we organize this event?

- We developed the first ontology – Clio - in use in a real system back in 1992 (38 years ago)!
- Clio evolved and led to CIDOC CRM, an ISO standard ontology for cultural documentation, used in over 100 projects, and almost all countries in the Northern Hemisphere are involved in its evolution
- It became a national standard in China a few years ago
- It is at the “heart” of the ongoing European Cloud for Cultural Heritage
- A similar trajectory has been followed for marine species data
- The MarineTLO ontology has been used in numerous European Research Infrastructure projects and adopted by UN FAO

Research Directions

- Integration of Ontologies / Knowledge Graphs with AI
- Automating the mapping of data sources to ontology-based data sources
- Text-to-SPARQL query generation / Text-to Knowledge Graph generation
- Retrieval Augmented Generation over documents and Knowledge Graphs
- Quantum Computing and Knowledge Graphs

Research Directions

- Socio-Cognitive Logic-based Agents exhibiting commonsense reasoning ability and behavior – applications in Cognitive Robotics
- Epistemic Action theories for dynamic environments
- Knowledge evolution and belief revision
- Computational argumentation and dialogue systems
- Counterfactual Explainability in GNNs / stability guarantees
- NLP: bias and deception detection in text