



ΟΙ ΔΡΟΜΟΙ ΤΗΣ ΓΝΩΣΗΣ



National and
Kapodistrian
University of
Athens



European Union
European Social Fund



MINISTRY OF EDUCATION & RELIGIOUS AFFAIRS, CULTURE & SPORTS
MANAGING AUTHORITY

Co-financed by Greece and the European Union



Sciences and Technology

Summer Schools for Greek children, children from European high Schools and from Schools in America, Australia and Asia

The project "Academy of Plato: Development of Knowledge and innovative ideas" is co-financed from National and European funds through the Operational Programme "Education and Lifelong Learning"

The system of education

- The educational system is under the supervision of the State. The two main institutions responsible for implementing public policy in this critical sector are the Ministry of Education and Religious Affairs and the Pedagogical Institute.
- The literacy rate of the population exceeds 97%.
- Education is compulsory for 9 years, that is to say for children from 6 years old to 15 years old.
- The greek educational system is divided in three levels:
 - **Primary education** for 6 years (primary school), which is compulsory
 - **Secondary education** which comprises two stages:
 - ✓ The Gymnasium (or junior high school), of a three year duration, which is also compulsory
 - ✓ The Lyceum (or high school), also of a three year duration, which is not compulsory.
 - **Tertiary education**

The system of education

- Institutions: public and private.
- The post-secondary education includes Universities and Higher Institutes of Technology (Panepistimia-AEI) and Institutes of Higher Technical Education (TEI). The courses taught in these schools are totally free for all students, except for some postgraduate courses highly specialized, particularly in political science, economics, media and management. The entrance in third degree Education requires a competitive written examination that takes place each summer at national level.
- In addition, young Greeks often choose to study in universities abroad.

The Public Universities

- National and Kapodistrian University of Athens
- Athens University of Economics and Business
- Agricultural University of Athens
- Panteion University
- National Technical University of Athens
- University of Crete
- Technical University of Crete
- University of the Aegean
- University of Central Greece
- University of Ioannina
- Ionian University
- University of Macedonia
- University of Western Macedonia
- University of Patras
- University of Peloponnese
- University of Piraeus
- University of Thessaly
- Aristotle University of Thessaloniki
- Democritus University of Thrace
- Hellenic Open University
- Harokopeio University



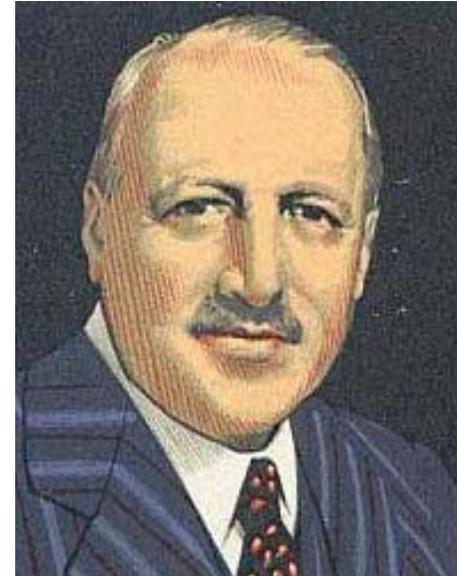
Research Instituts

- National Hellenic Research Foundation (www.eie.gr)
- Academy of Athens (www.academyofathens.gr)
- «Demokritos», National Center for scientific research (www.demokritos.gr)
- Foundation for Research and Technology (Crete) (www.ite.gr)
- Hellenic Center for Marine Research (www.hcmr.gr)
- Hellenic Pasteur Institut (www.pasteur.gr)
- National Observatory of Athens (www.noa.gr)
- Foundation of the Hellenic World (www.ime.gr)

Greek Innovations

- Test Pap

The Pap test was invented by Dr. Georgios Papanicolaou (1883-1962) to detect cancer of the uterus. Since the introduction of the Pap test, deaths caused by carcinoma of the cervix have been reduced by up to 99% in some populations wherein women are screened regularly.



Greek Innovations

- The submersible "Thetis" of the Hellenic Centre of Marine Research

It took its name from Thetis, one of the Nereids, daughters of Nereus, who in Greek mythology were goddesses of the sea.

It reveals the secrets hidden in the seas, at depths down to 610 meters below the surface, it dives in search of underwater volcanoes, coral gardens and wrecks.



Greek Innovations

- Low energy consumption vehicles

Meeting the need for environmentally friendly technology, students from the Technical University of Crete have created:

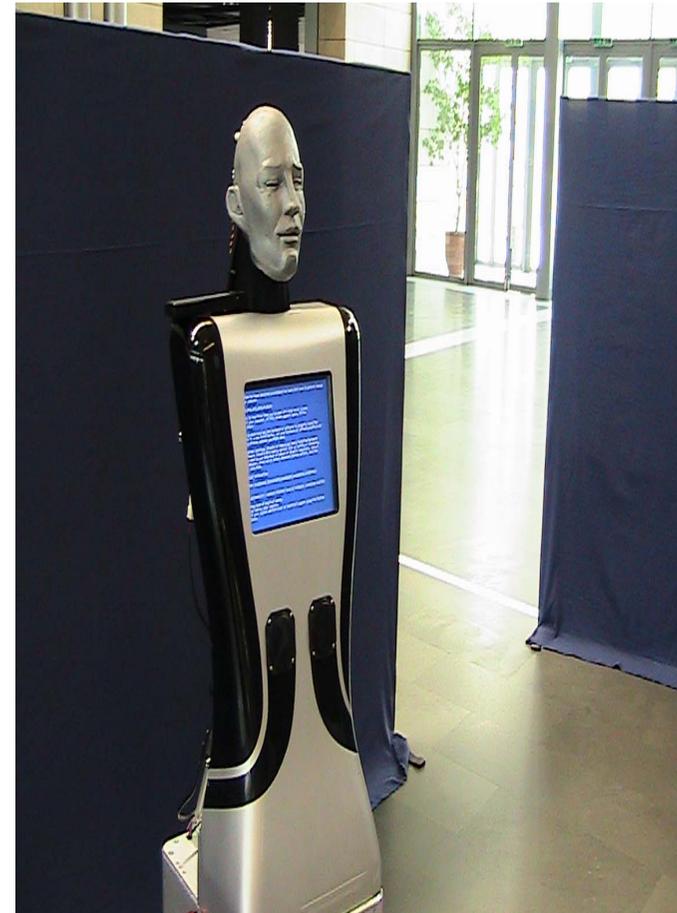
- A new fuel-efficient vehicle, which has a hydrogen fuel cell, powered by an electric motor (they won the 4th prize in the international competition Shell Eco Marathon 2012)
- A model solar car (they won the 2nd prize in the INTERREG IIIA program “Sun and Life - Greece Italy”).



Greek Innovations

- The robot Indigo created by the Foundation for Research and Technology of Crete for guided visits in cultural sites.

It is anthropomorphic,
it moves independently,
it understands the questions asked by the user
in natural language
and responds the same way,
based on the answers from the database
and improvising about the structure
of the response.



Greek Innovations

- The robotic bin for waste management
- The company Soukos Robots, based in Larissa, has invented a bin that stands like a tree, talks, automatically opens the slot and accepts waste.
- Already Larissa, Kilkis, Kavala, Halandri, Ilioupoli and many cities of Athens and Greece proceeded in the installation of automated garbage bins.



Greek Innovations

- **Korres products**

Created in 1996 by the Greek homeopathic pharmacist George Korres, the brand KORRES offers a complete range of natural skincare products enriched with active extracts of medicinal herbs without chemical substances, for maximum efficacy and optimum compatibility with the skin and environmentally friendly. The products are clinically tested under dermatological control.

Based on his pharmacy experience in over 3000 homeopathic remedies of herbal origin, Korres is focusing on primary and applied research on natural ingredients and formulas.

The Korres Research & Development laboratory is involved in European research projects, in association with international and Greek universities. Since 2009, it has been working closely with an independent International Scientific Committee.



The Greek scholars

- Constantin Carathéodory

Born on 13 September 1873 in Berlin and died on 2 February 1950 in Munich.

Greek Mathematician, author of important works in the theory of functions of a real variable, the calculus of variations, and measure theory.

His correspondence with Albert Einstein suggest that the work of Carathéodory helped shape some of Albert Einstein's theories.



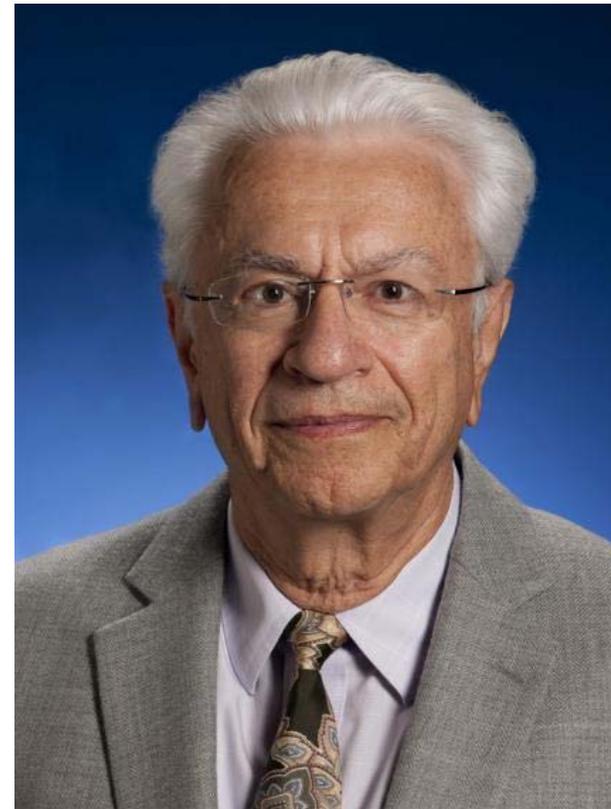
The Greek scholars

- **Dimitris Nanopoulos**
- His primary research field is the field of particle physics and cosmology. Among other things, his remarkable achievement is:
- In 2007, working on problems that arise when trying to build a Theory of Everything, he observed a delay in the arrival of photons, which means that the speed of light that Einstein considered constant and which made him formulate the famous equation $E = mc^2$ is not very likely so stable and so the theory of relativity can be questioned.



The Greek scholars

- **Stamatis Krimizis**
- Director of research programs in NASA.
- He has participated so far in all "unmanned" robotic missions in space. His latest project is to send a spacecraft towards the sun with the aim of coming as close as possible to the sun and collect useful information on solar radiation.



The Greek scholars

- Christos Papadimitriou

Professor and computer scientist. He currently works at Berkeley University, in California.

He won the Knuth prize (reward scientists who have made outstanding contributions in theoretical computer science) in 2002.

He is best known for his work in the fields of computational complexity, databases and combinatorial optimization.

He co-authored a paper with Bill Gates while Gates was studying at Harvard.

He also co-authored the graphic novel Logicomix with Apostolos Doxiadis.



The Greek scholars

- **Constantinos Daskalakis**
MIT
- His research area is algorithmic game theory, computational biology and applied probability.
- Why is he so well known?

He questioned the Nash equilibrium, which is traditionally used in game theory as a mathematical way of predicting the behavior of people in conflict situations. He showed that in complex systems the Nash equilibrium can be computationally unachievable.



The Greek scholars

- Vaso Apostolopoulou

Australia: Research on the vaccine against the breast cancer.

Her research was fruitful and in 2008 a large pharmaceutical company funded the production of the first vaccine against breast cancer. The results in patients treated were spectacular and the body reacted immediately by the production of T lymphocytes, which attack and destroy a large part of the tumor cells. Healing is not complete, but the vaccine confronts many of the effects of the disease and gives hope to millions of women.



The Greek scholars

- **Andreas Tzakis**

Director of the department of transplantations in the medical school of Miami.

He is the first surgeon who performed in the early 90s a successful baboon to human pancreas and liver transplant.

His name is written in the Guinness Book, because he transplanted for the first time in medical history seven organs.





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