



UNIVERSITÀ DI PISA

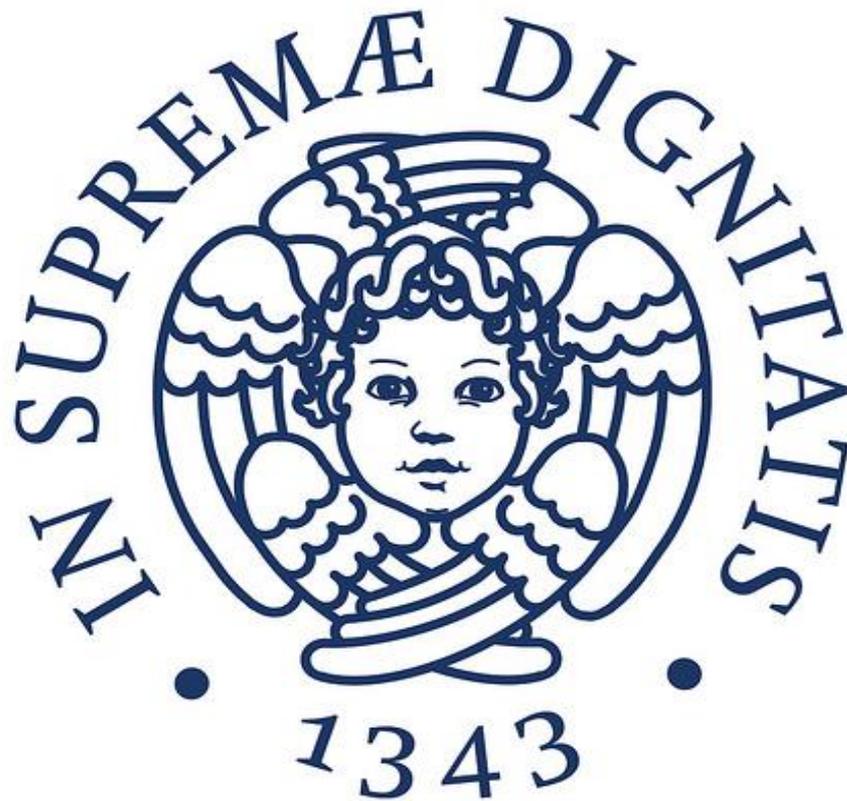
EDUCATION AND RESEARCH

INTERNATIONALISATION and EXCELLENCE

Where we are, where we are going to

Dr. Paola Cappellini
Head of International Cooperation

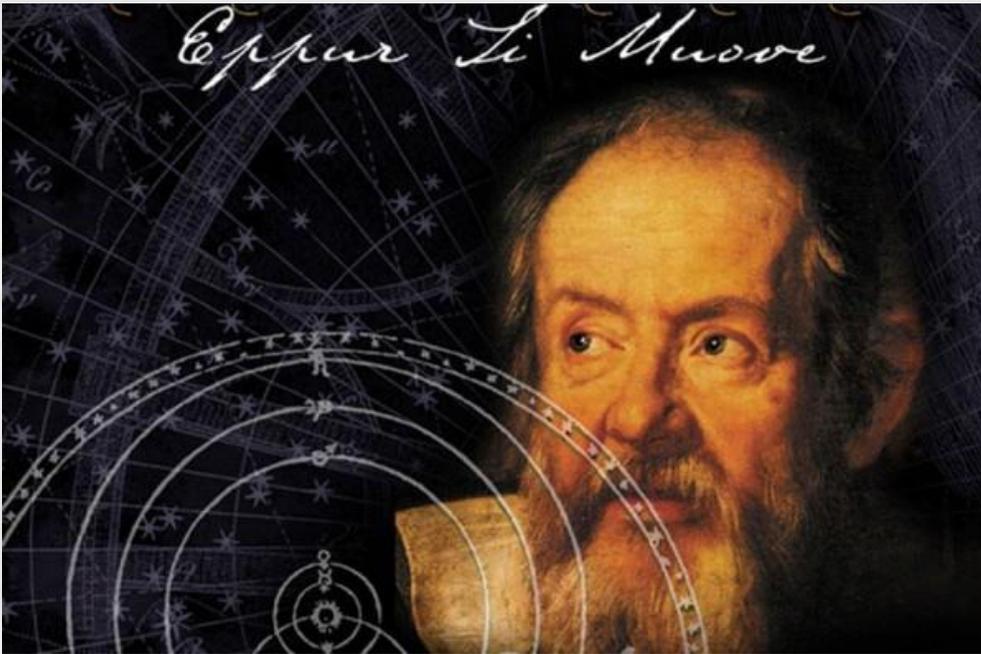




SYMBOL of UNIPI
CHERUB
MEANS MAXIMUM INTELLIGENCE



PAST GLORIES



GALILEO GALILEI

The “father of modern Physics, modern Astronomy and modern Science”

Improved the telescope, Supported the Heliocentrism

Student and professor in Pisa, 1589

ULISSE DINI

Mathematician and politician

Inventor of the Theory of Functions of Real Variables

Student and professor in Pisa, 1866



ANTONIO PACINOTTI

Physicist

Inventor of the engine and the dynamo direct current

Student and professor in Pisa, 1881



NOBEL PRIZES

GIOSUÈ CARDUCCI (1906, Literature)

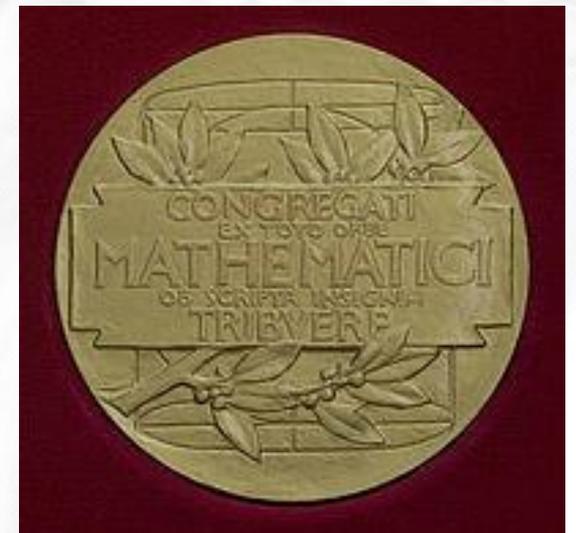
ENRICO FERMI (1938, Physics)

CARLO RUBBIA (1984, Physics)



FIELDS MEDAL

ENRICO BOMBIERI (1974, Mathematics)



PERSONALITIES

GIOVANNI GRONCHI President of the Republic of Italy, 1955-1962

CARLO AZEGLIO CIAMPI President of the Republic of Italy, 1999-2006

GIULIANO AMATO Italian premier 1992-1993, 2000-2001

ENRICO LETTA Italian premier, 2013-2014

MARIA CHIARA CARROZZA Minister for Education, Universities and Research, 2013-2014

MARIO MONICELLI Film Director, and six times Oscar nominee

PAOLO E VITTORIO TAVIANI Film Director, Palme d'Or at Cannes, Golden Bear Berlin, Golden Lion Venice

ANTONIO TABUCCHI Writer

TIZIANO TERZANI Journalist and writer

ELIO TOAFF Chief Rabbi of Rome from 1951 to 2002

ANDREA BOCELLI Classical tenor and winner of several world music awards

THE UNIVERSITY OF PISA IN THE ACADEMIC RANKINGS

ARWU

UNIPI is one of the **top 200** Universities in the World and ranks amongst the **top 8 in Italy**.



ACADEMIC
RANKING OF
WORLD
UNIVERSITIES
2015

QS TOP UNIVERSITIES

5 STARS in Research, Innovation, Access

4 STARS in Teaching, Internationalisation, Facilities

2016 QS World University Rankings according to SUBJECT

51-100 in both Physics and Mathematics

It also ranks amongst the top

101-151 in Computer Science, Pharmacy and Statistics

151-200 in Medicine, Philosophy, Modern Languages



PISA, a CAMPUS CITY

<https://www.youtube.com/watch?v=lxSsxVuz30o>

- ✓ Founded in 1343
- ✓ 20 departments
- ✓ 13 museums
- ✓ 19 libraries
- ✓ 273 laboratories
- ✓ 1 campus in Lucca
- ✓ 1 campus in Livorno
- ✓ 100.000 inhabitants
- ✓ 56.000 students
- ✓ 8.352 freshmen
- ✓ 3.400 international students
- ✓ 3.500 professors and admin. staff



ACADEMIC PROGRAMMES

Bachelor's Degrees : **58**

Master's Degrees : **64**

Long single-cycle Degree : **8**

PhD : **31**

Third cycle specialisation/Residency programmes: **68**

One-year specialisation (including an MBA): **55**

Summer Schools: **27**

A RESEARCH UNIVERSITY WITH 20 DEPARTMENTS ACROSS 6 AREAS

- Natural Sciences
- Health Sciences
- Humanities
- Social Sciences
- Engineering
- Agricultural Sciences and Veterinary Medicine

INTERNATIONAL STUDENTS

2000 ca. enrolled for a full degree programme

700 ca. mobility students - incoming

850 ca. mobility students - outgoing study/work placement

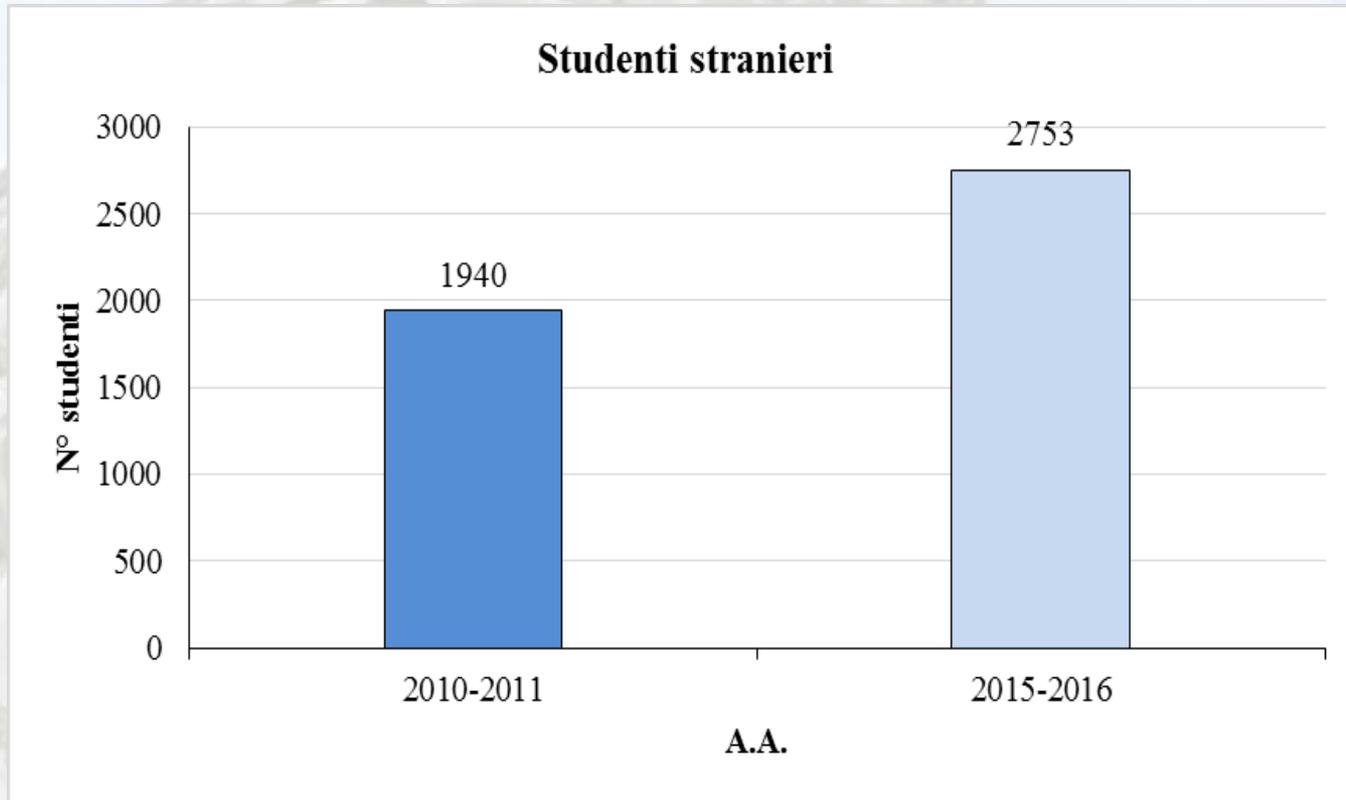
700 ca. students enrolled for Summer Schools



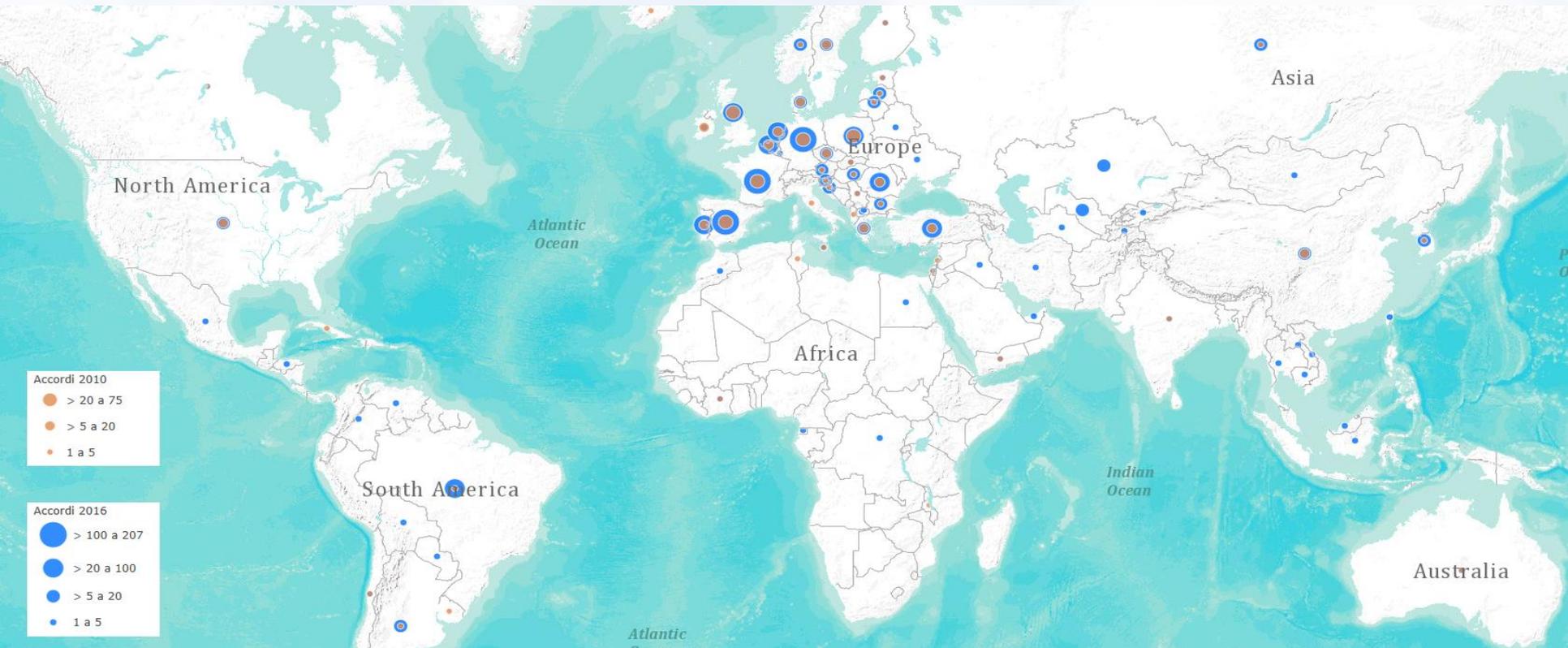
INTERNATIONAL STUDENTS

Very high increase in these last years:

+ 41,90%.



INTERNATIONAL COOPERATION



800 Erasmus bilateral agreements
220 additional cooperation agreements
10 International education and training projects (LLP, Erasmus +)
16 double degrees and 5 double PhD



PROGRAMMES HELD IN ENGLISH

BACHELOR'S DEGREE:

In either:

- History
- Philosophy
- Cultural Heritage Studies
- Discipline of Entertainment and Communication

Year 1: International Programme in Humanities (taught in English)

Years 2 & 3: taught in Italian



PROGRAMMES HELD IN ENGLISH

MASTER'S DEGREE PROGRAMMES

- Aerospace Engineering
- Bionics Engineering
- Business Informatics
- Computer Engineering
- Computer Science
- Computer Science and Networking
- Economics
- Embedded Computing Systems
- Materials and Nanotechnology
- Nuclear Engineering
- Neuroscience

PROGRAMMES HELD IN ENGLISH THAT LAST ONE YEAR OR LESS

- One-year specialisation programmes
- MBA in Business Administration
- International Programme in Humanities (IPH)
- Free Mover (single courses)

- Summer/Winter schools
www.unipi.it/summerschool



INTERNATIONAL FOUNDATION YEAR

Set up in 2016

The Foundation Year (FY) is a one-year programme taught in English which bridges the gap between High School and University studies. This programme equips students with the appropriate academic grounding for an Italian degree at the University of Pisa.

This programme is aimed at:

- **International students** who have 11 years of schooling and have successfully completed High School
- **American students** who have not taken Advanced Placement (AP) courses during the last year of High School nor have attended 2 years of College

COURSES ORGANIZATION

I TERM

- Classes from Mid-September/Mid-December(12 weeks)

EXAMS

- January - February (3 sessions)

II TERM

- Classes Mid-February/Mid-May (12 weeks)

EXAMS

- June-July (3 sessions)

EXCELLENCE

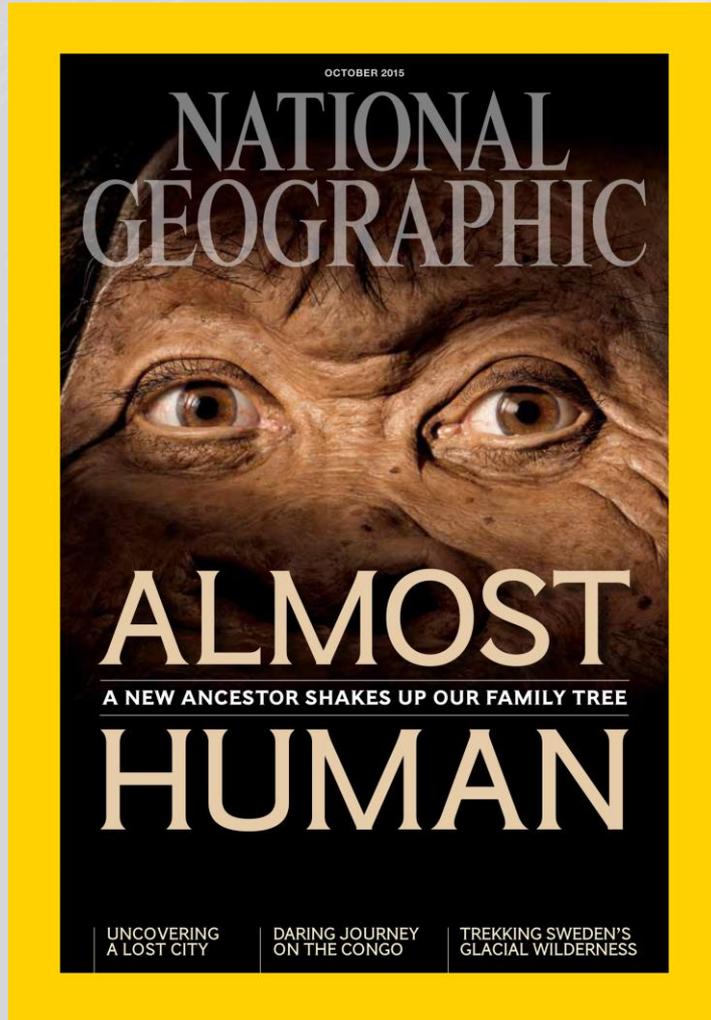
achieved through: education, research, innovation

Giving an insight into the areas of excellence
at the University of Pisa is like
travelling into time and science
from prehistory to the future

Some examples of research that have been carried out
by the University of Pisa and are now worldwide famous...



Let's start from one of the most recent achievements,
which is also one of the most ancient findings!



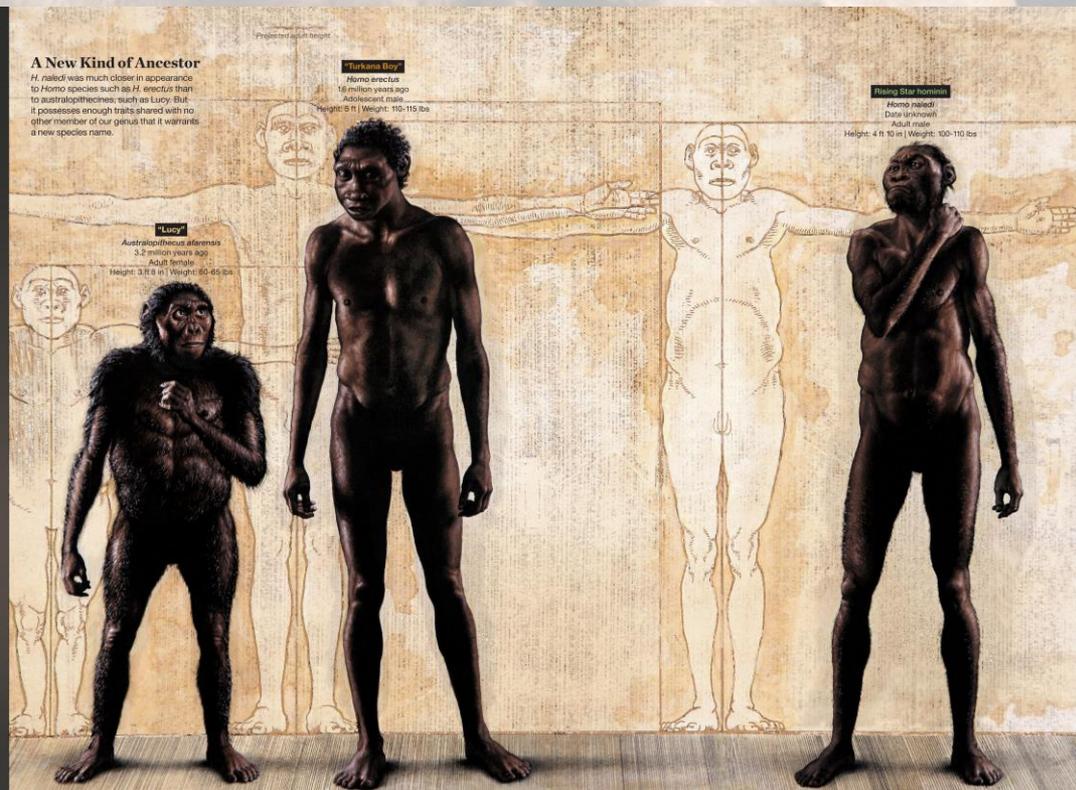
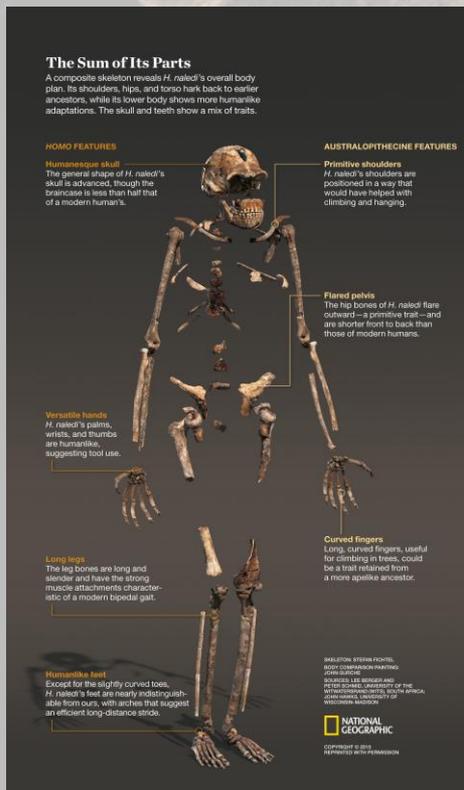
THE DISCOVERY OF HOMO NALEDI

- The new human species discovered in a cave in South Africa.
- A revolution of what has been known about the origin and the evolution of our species.
- Research funded by National Geographic (amongst others).

Damiano Marchi, UNIPI anthropologist and part of the international team of scientists, studied the remains of the hominid.

Marchi has contributed to the study focusing on the lower limb of our ancestor thus revealing anatomical characteristics.

As a result, his research has contributed to the understanding of the lifestyle, illnesses and habits of the time, adding precious details to international research.



With a leap into the
future...

We welcome **WALKMAN**

The humanoid robot

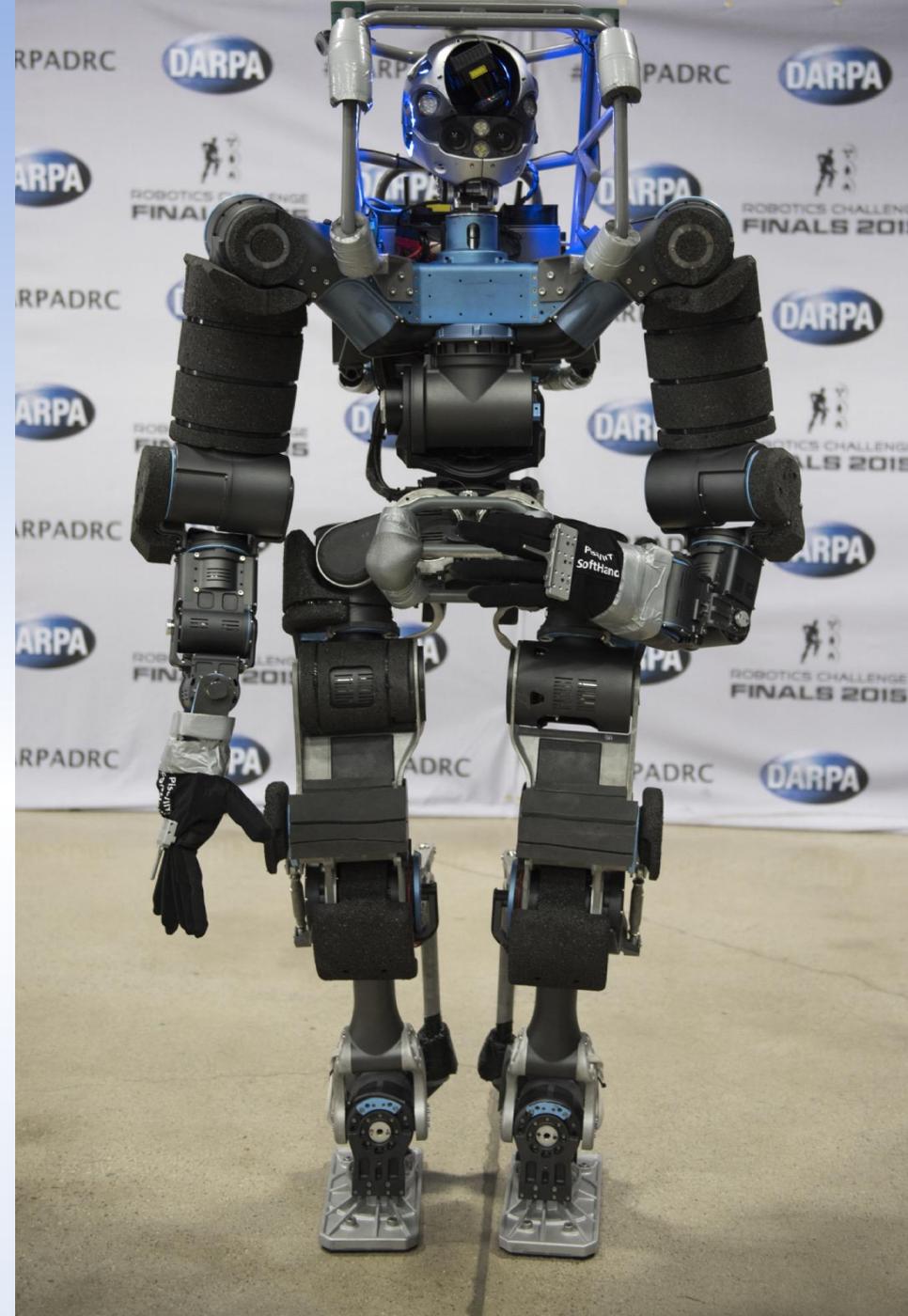
designed by researchers at the **CENTRO
PIAGGIO** of the University of Pisa

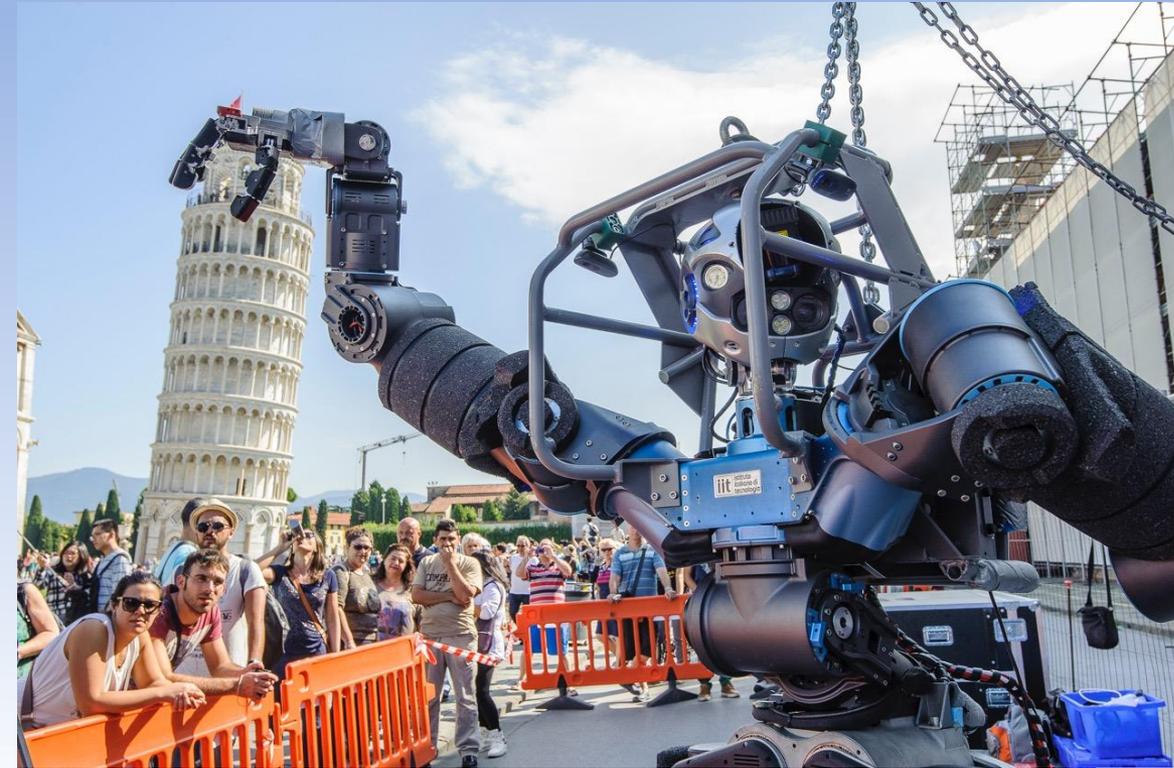
*together w/IIT (Italian Institute of
Technology) in Genoa*

Protagonist of the international
competition

DARPA Robotics Challenge 2015

Los Angeles





*1.85 meters tall
100 kilos weight*

Able to walk, open doors and use tools.

Designed to intervene, as a human, in extreme scenarios, such as a nuclear disaster.



Between these two extremes, there is an extensive amount of additional research

For example...

ONE OF THE OLDEST SCHOOLS OF ARCHAEOLOGY

Ippolito Rosellini (UNIPI professor), at the beginning of the 1800s he led an expedition to ancient Egypt with *Jean-François Champollion*. He was the first person to **decipher hieroglyphics**.



The picture painted from Angelelli represents the Franco-Tuscan expedition
(Firenze, Soprintendenza Archeologica della Toscana)

We still have archaeological missions in Egypt where the excavations are concentrated near Luxor.

Archaeologists continue to dig the **GRAVE HUY**

Huy was an ancient high priest devoted to the cult of the deified pharaoh king Amenophis

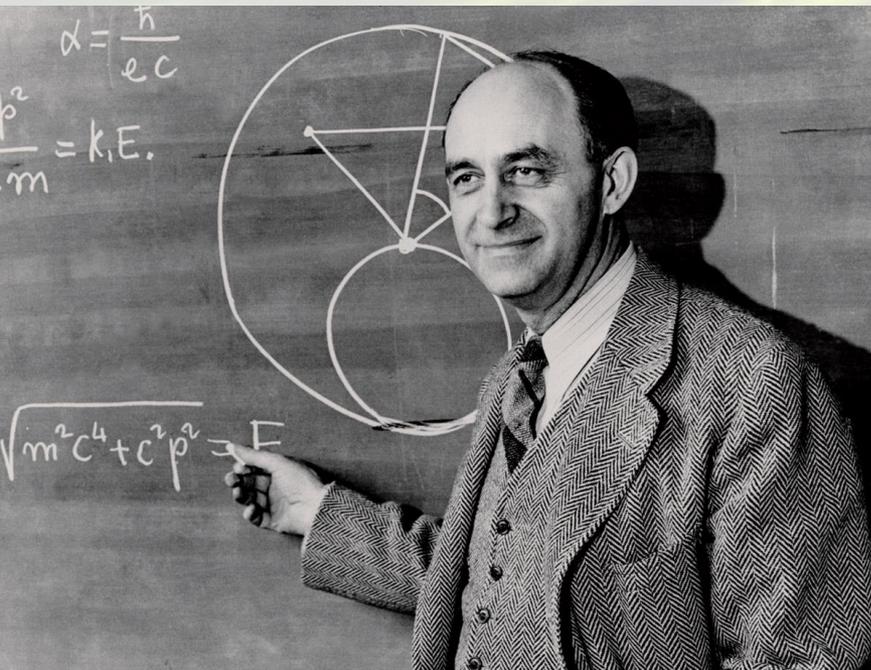


SCHOOL OF PHYSICS

According to the 2016 QS World Rankings,
Physics at UNIPI is amongst the top 51-100

Most likely this is thanks to our tradition and
history in this field.

A tradition that starts from *Galileo* up to *Enrico
Fermi* and *Carlo Rubbia*, both **Nobel Prize
winners** in Physics in 1938 and 1984
respectively.



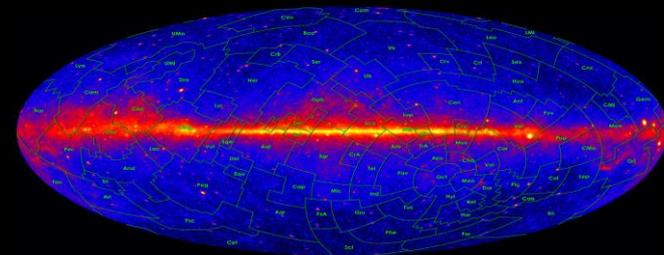
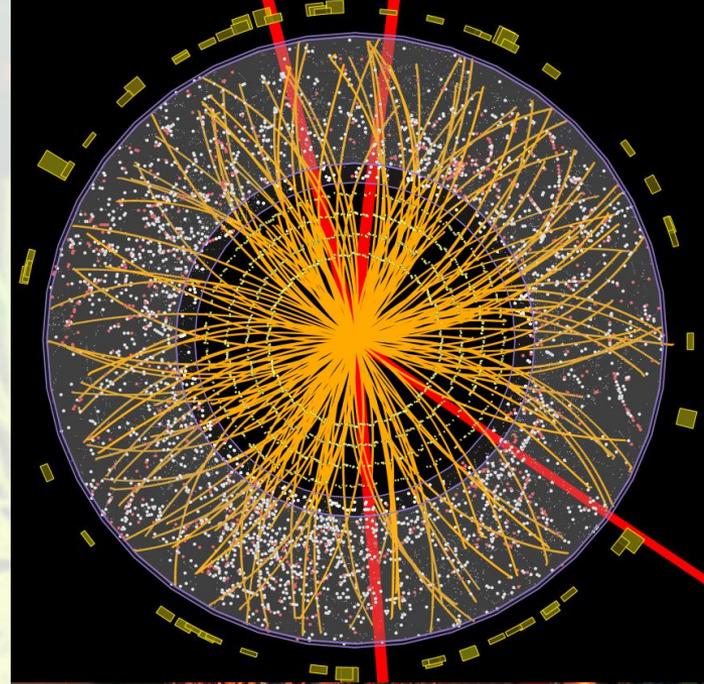
Recently (dec.2015), prof. G.Tonelli was involved in a very famous discovery

the **HIGGS BOSON**

(Nobel Prize for Physics to both Peter Higgs and Francois Englert).

Prof.Tonelli was head of the main experiment at CERN in Geneva that led to the discovery of the so-called "God particle", experimentally confirming the insights of the two winners.

Today many scientists from Pisa are engaged in the work at CERN which promises to achieve other important objectives.



11 February 2016: a historic date for
Physics and Science in general.

Official announcement of the discovery of

GRAVITATIONAL WAVES

The existence of gravitational waves was predicted almost exactly a century ago (in Nov.1915) when Albert Einstein illustrated his general theory of relativity.

The news can aspire to the title of “discovery of the century”, and the researchers who participated in the experiments to a future Nobel Prize in Physics.

15 June 2016: second event produced by the fusion of two black holes (1,4 billions years ago)

LIGO detectors

(Washington State and Louisiana)

and **VIRGO** in Pisa

The Virgo Collaboration comprises 180 scientists from 13 institutions in France, Italy and

the Netherlands.

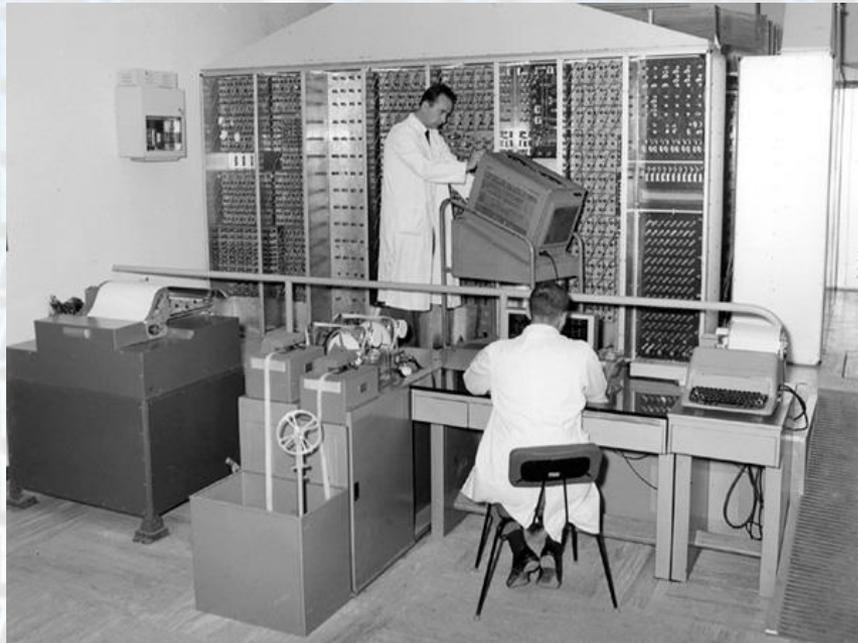


The University of Pisa is considered

THE CRADLE OF COMPUTER SCIENCE

1955 - the first electronic computer was designed and built in history.

1969 - the first degree in Computer Science was established in the whole of Italy.



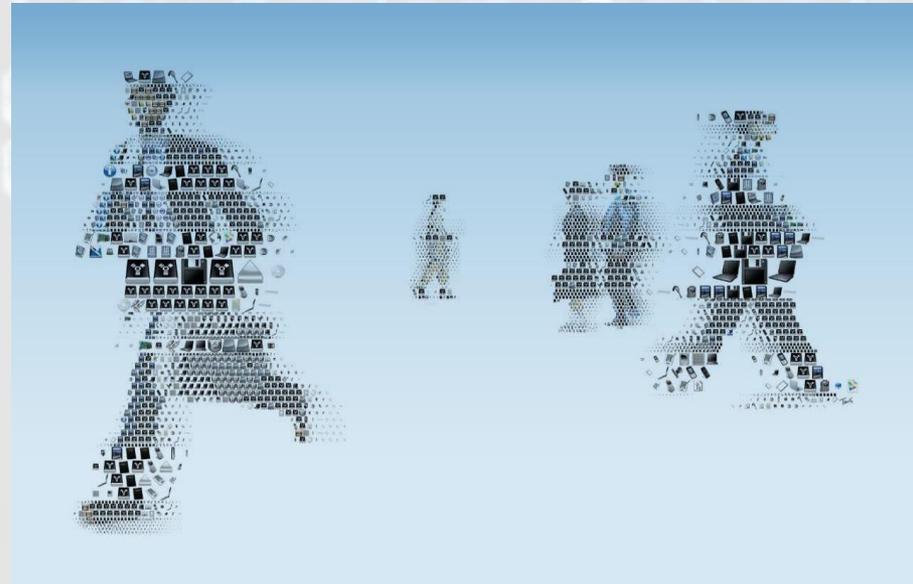
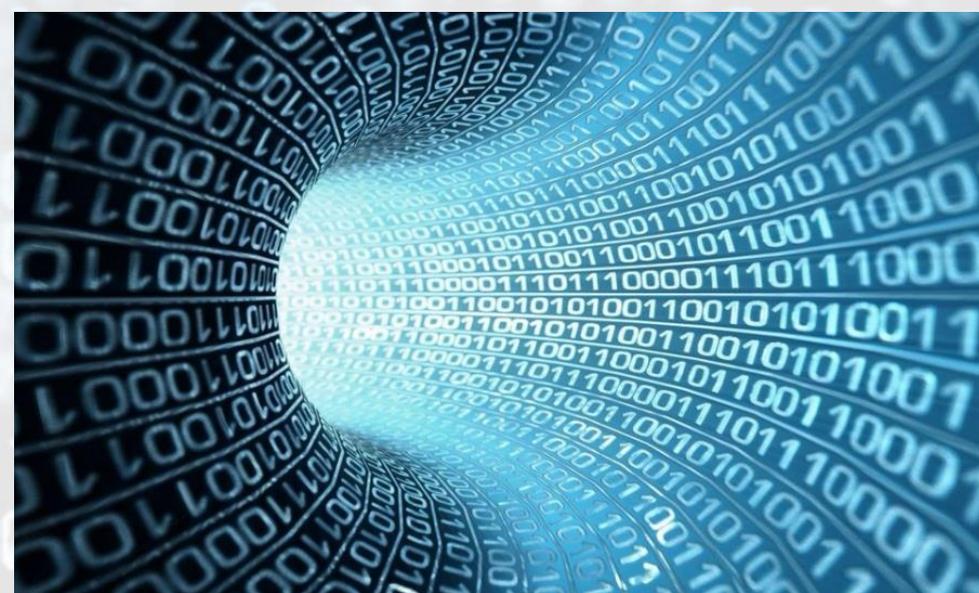
Today, excellence in this field of study continues and evolves with time.

One of the largest centres in Italy for the study of

BIG DATA

and the training of "data scientists":

This gives professionals the opportunity to analyse the digital traces we leave when surfing the net. If analysed anonymously, this may reveal data and information on how society, economy and how our lifestyles continue to change.



UNIPI new Interdepartmental Centre

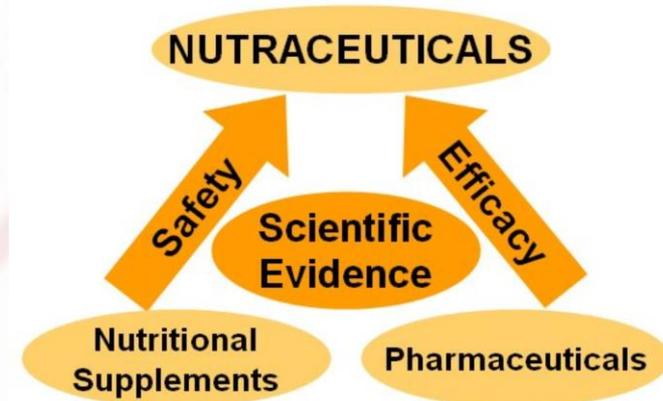
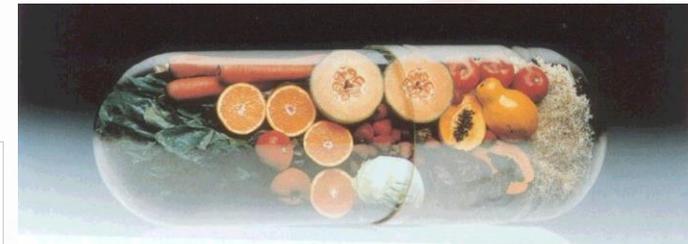
NUTRAFOOD

Nutraceuticals and food for health

Coordinates all the scientists working on the issues of food, nutrition, nutraceuticals and health.

More than 170 professors from different departments including Health Sciences, Biology, Veterinary Sciences and Food and Agricultural Sciences.

Presented at the Italian Pavilion at Milano EXPO 2015



Last but not least.. **MEDICINE**

Let's start from the very past

ANDREAS VESALIUS

(Prof. at UNIPI 1542-44)

Often referred to as
the founder of modern
human anatomy

Anatomist, physician,
author of

**DE HUMANI
CORPORIS FABRICA**

one of the most
influential books on
human anatomy

NELLA SCUOLA MEDICA DI PISA
INSEGNARONO ANATOMIA

ANDREA VESALIO 1542-1544
REALDO COLOMBO 1545-1548
GABRIELLO FALLOPPIO 1548-1551
MICHELANGELO ANGELI 1552-1555
ANTONIO PONZANELLI 1557-1563
ANTONIO VENTURINI 1567-1585
GIOVANNI RUSCHI 1586-1616
FRANCESCO BARTOLETTI 1619
PIETRO RUSCHI 1616-1625
G. ANDREA DANI 1626
G. BATISTA BELLAVITA 1627-1629
G. BATISTA RUSCHI 1633-1629
G. FRANCESCO RIDOLFI 1650-1652
TOMMASO BELLUCCI 1655
CLAUDIO AUBER 1656-1658
GIOVANNI FINCH 1659-1663
CARLO FRACASSATI 1665-1668
LORENZO BELLINI 1668-1703
GIUSEPPE ZAMBECCARI 1704-1729
DOMENICO GOTTI 1729-1754



And now into the future...

UNIFI is one of the **10 CENTRES IN THE WORLD** allowed to issue the license to operate with the **DA VINCI ROBOT**

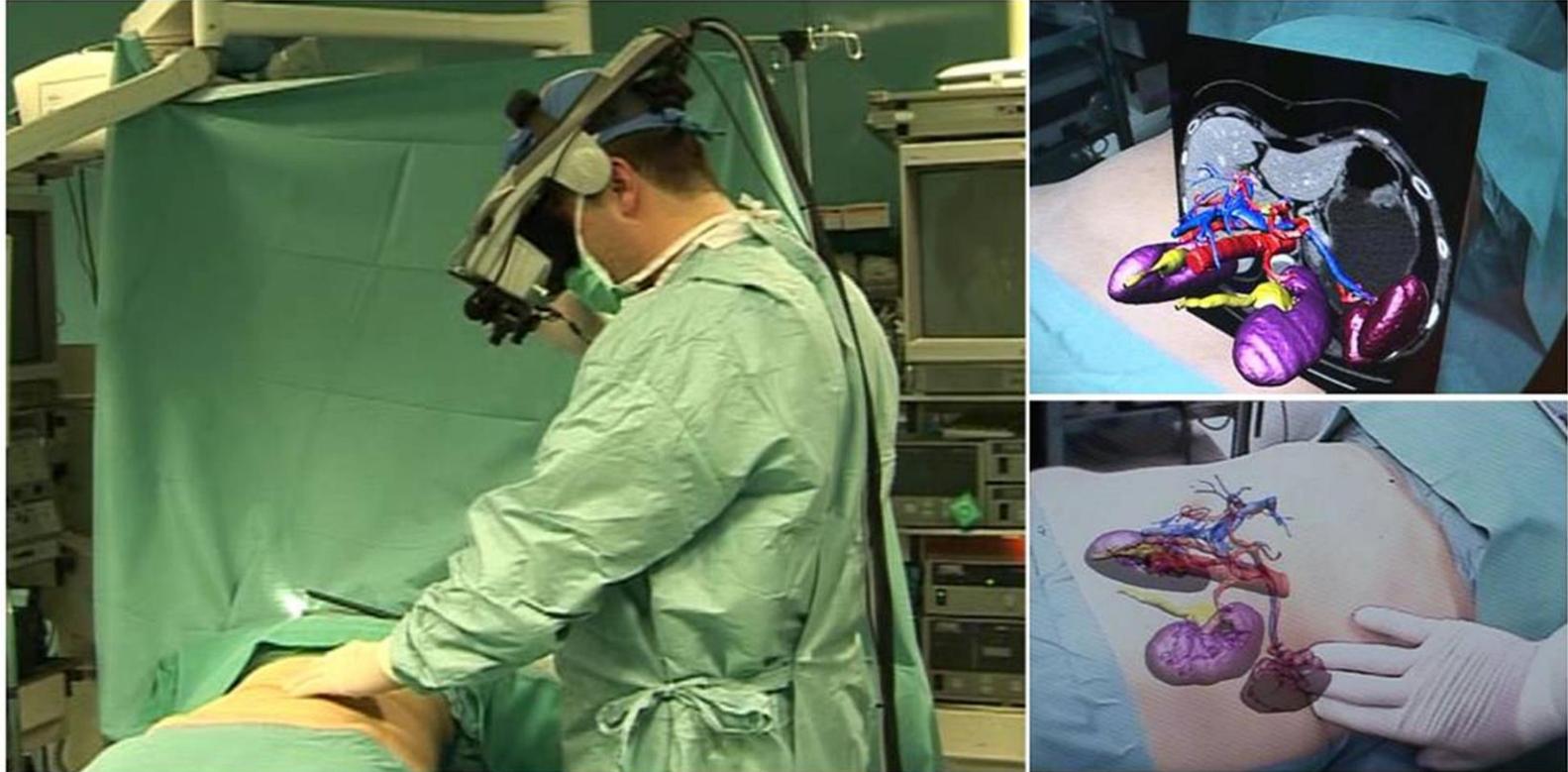
The system of robotic surgery is at the forefront of international surgery in different specialties from urology to gynecology, from general surgery to heart surgery until transplant surgery.

The robot is used both to operate on patients and to train students.



EndoCAS Excellence Center (www.endocas.org)

First Italian center to be accredited by the **American College of Surgeons** (ACS) as Focused Education Institute



The American College of Surgeons, founded in 1913, is one of the most prestigious American institutions with scientific and educational purposes aimed at improving the quality of the care of the surgical patient by setting high educational and practical standards for surgeons in training.



UNIVERSITÀ DI PISA





Thank you!

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