



# Gran Sasso Science Institute

Eugenio Coccia  
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The INFN center for advanced study and international PhD school *Gran Sasso Science Institute* has started its educational and scientific activities in October 2013, and is now entering his second year of life.



4 courses:

- *Astroparticle Physics*
- *Mathematics in Natural, Social and Life Science*
- *Computer Science*
- *Urban Studies*

36 PhD students selected in the first year 2013-2014

40 PhD students selected for this second year 2014-2015

Also appointed: 16 Post-docs with two-years research grants

**Director:** E. Coccia; **Coordinators:** F. Vissani (INFN), P. Marcati (U. L'Aquila), R. De Nicola (IMT), A. Calafati (U. Ancona)

**Scientific Committee:** F. Barca (MEF, Italy, Chair); R. Barbieri (SNS, Italy); B. Barish (Caltech, USA); S. Iammarino (LSE, UK); A. Quarteroni (Politech. Losanna, CH); A. S. Vincentelli (Berkley, USA). **1° meeting November 25, 2014.**

6 April 2009  
L'Aquila



Il 3 Luglio ed il 10 Settembre 2009 il Ministero dell'Economia e delle Finanze (MEF), in collaborazione con l'Organizzazione per la Cooperazione e lo Sviluppo Economico (OCSE), organizzò due incontri (Roma e Assergi) per discutere le politiche e le scelte strategiche necessarie a rilanciare, dopo il terremoto del 6 Aprile 2009, l'economia della città dell'Aquila.

Agli incontri parteciparono soggetti istituzionali, imprese, rappresentanti del mondo produttivo, accademico e della società civile.

Oltre alla necessità di garantire la ricostruzione materiale della città colpita dal sisma, l'evento catastrofico poneva importanti sfide inerenti il rilancio economico dell'area aquilana. Per rilanciare l'economia rinforzandone lo sviluppo futuro furono proposti diversi progetti.

Il GSSI fu considerato il progetto più importante e più credibile.

*OECD Report: SPREADING THE EAGLE'S WINGS SO IT MAY FLY:  
RELAUNCHING THE ECONOMY OF L'AQUILA REGION AFTER THE  
EARTHQUAKE, GOV/TDPC/RD(2009)8 (*

*<http://www.oecd.org/dataoecd/0/36/43307733.pdf>)([http://www.oecd.org/  
dataoecd/0/36/43307733.pdf](http://www.oecd.org/dataoecd/0/36/43307733.pdf)*

**BUILDING RESILIENT REGIONS AFTER A NATURAL DISASTER  
ABRUZZO 2030: ON THE WINGS OF L'AQUILA**

*The OECD-Groningen research team:*

*Lorenzo Allio (OECD),*

*Alberto Bazzucchi (CRESA),*

***Monica Brezzi (OECD),***

*Claire Charbit (OECD),*

*Alessandra Faggian (Ohio State University),*

*Simona Iammarino (London School of Economics),*

*Lelio Iapadre (University of L'Aquila),*

***Philip McCann (University of Groningen),***

*Joaquim Oliveira-Martins (OECD),*

*Andrés Rodríguez-Pose (London School of Economics),*

*Matthias Ruth (University of Maryland),*

*Maria Savona (University of Sussex),*

*Riccardo Scarpa (University of Waikato),*

*Marco Valente (University of L'Aquila),*

*Frank Vanclay (University of Groningen),*

*Paolo Veneri (OECD).*

Progetto iniziale GSSI  
presentato all'incontro:

**OCSE – MEF 3.7.2009**

Fatto proprio **dall'OCSE 10.9.2009**

Esaminato dal **Senato Accademico  
dell'Università dell'Aquila – 9.9.2009**

Altri passaggi:

**Ragioneria MEF - 2010**

**OCSE-Università di Groningen – 2010/11**

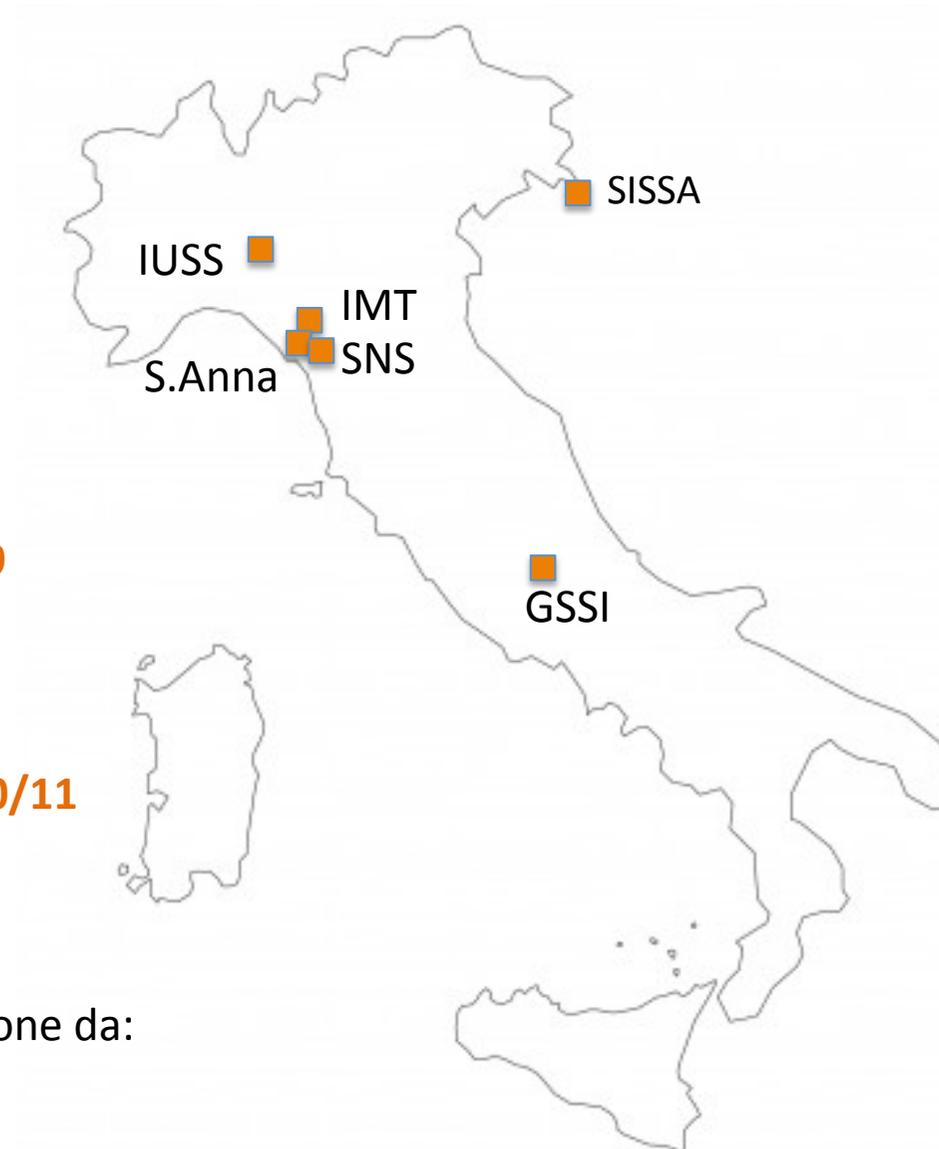
**Comitato Ordinatore – 2012**

Esaminato positivamente  
con piena disponibilità di Collaborazione da:

**SISSA Trieste**

**Sant'Anna di Pisa**

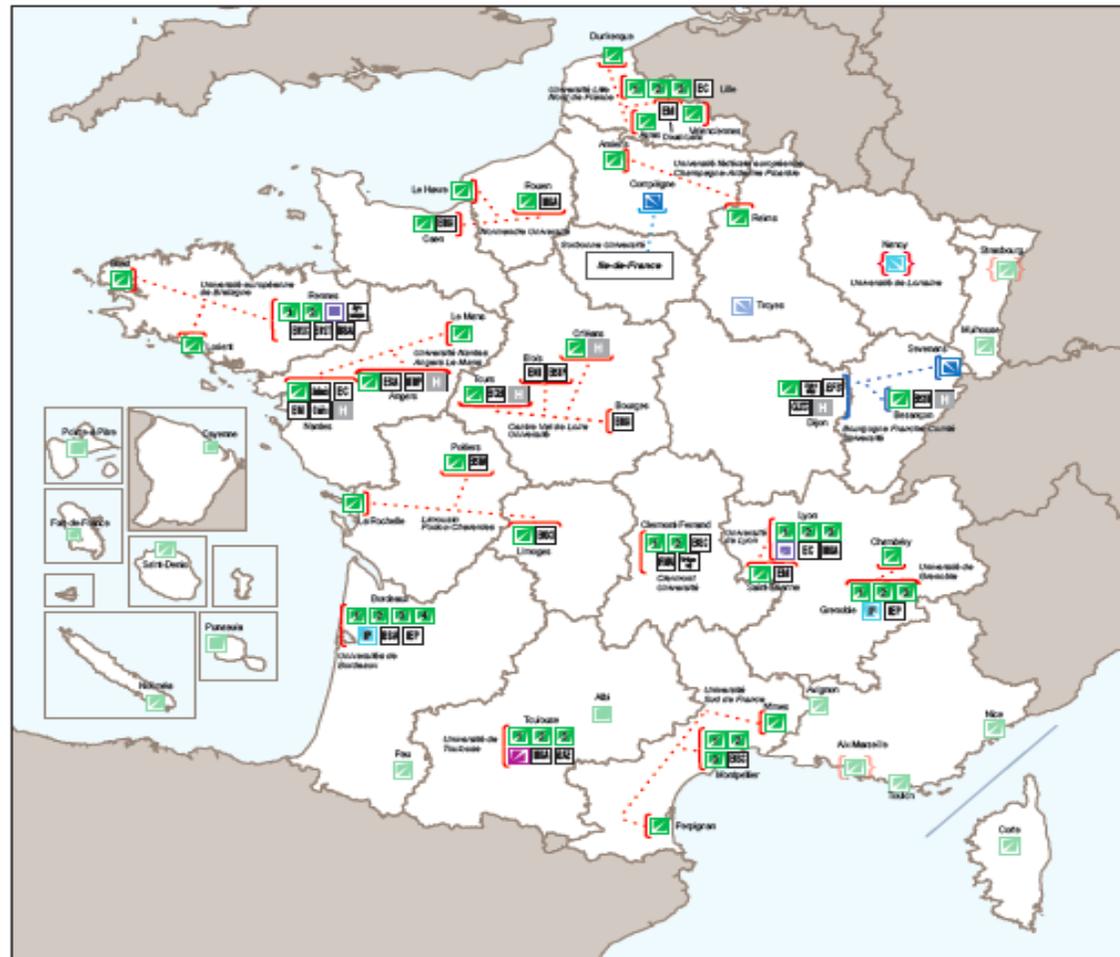
**IMT Lucca**



# Les pôles de recherche et d'enseignement supérieur

France has 20 "grand établissements" and 3 "écoles normales supérieures"

<http://bit.ly/ZPRQKY>



Pôles de recherche et d'enseignement supérieur (membres fondateurs)

]-.-.-[ EPCS (établissement public de coopération scientifique)

]---[ FCS (fondation de coopération scientifique)

Etablissement issu d'une fusion { }

Établissements d'enseignement supérieur

■ Universités

■ Universités autonomes

■ Universités de technologie autonomes

■ Instituts nationaux polytechniques autonomes

■ Grands établissements

■ Écoles normales supérieures - ENS

■ Écoles normales supérieures autonomes

■ Autres établissements d'enseignement supérieur

Autres établissements et organismes

▲ PRES FCS

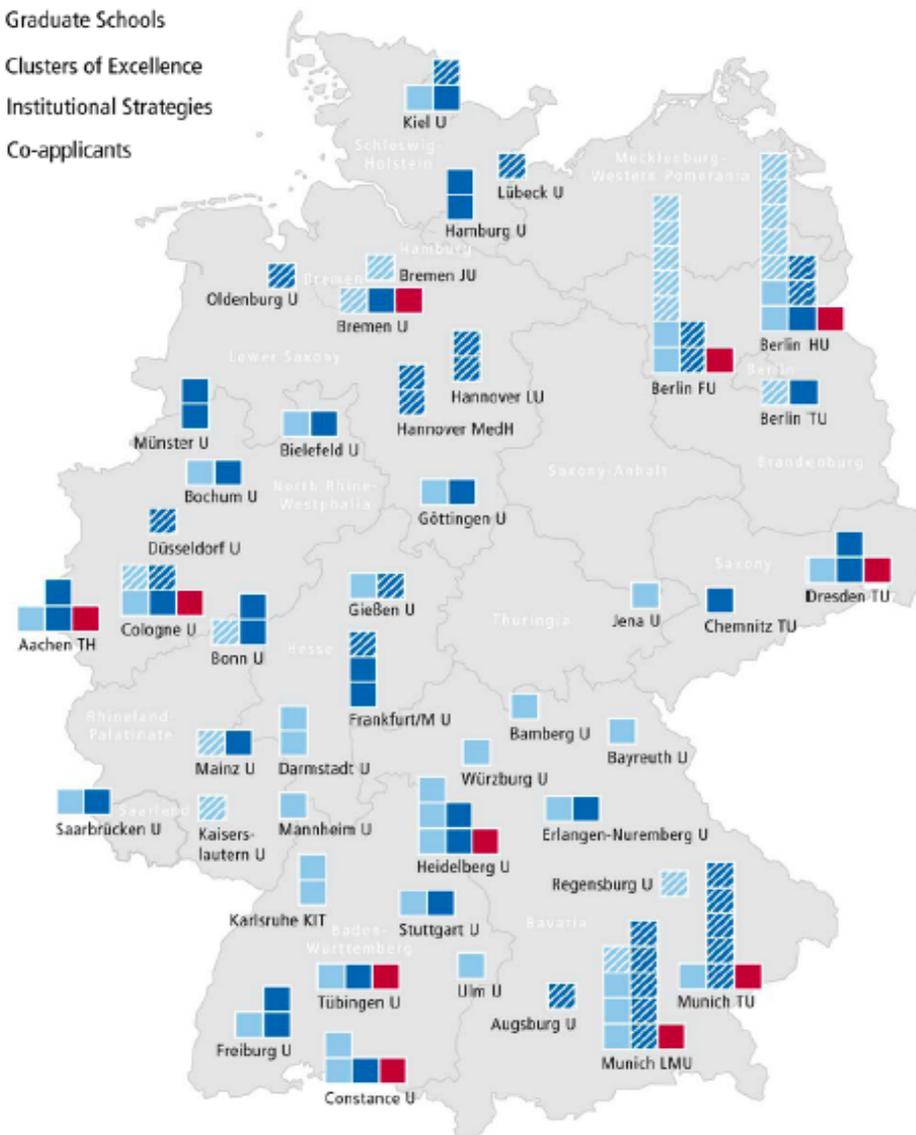
■ CHR, CHRU, CHU

■ Divers

- Graduate Schools
- Clusters of Excellence
- Institutional Strategies
- Co-applicants

Germany since 2000 has activated a series of PhD school in collaboration between Universities and research center, mainly Max Planck.

<http://bit.ly/17qUjOi> ).





Laboratori Nazionali del Gran Sasso



# UNITED STATES



# UCLA



# EUROPE



MAX-PLANCK-GESELLSCHAFT



# RUSSIA



# JAPAN

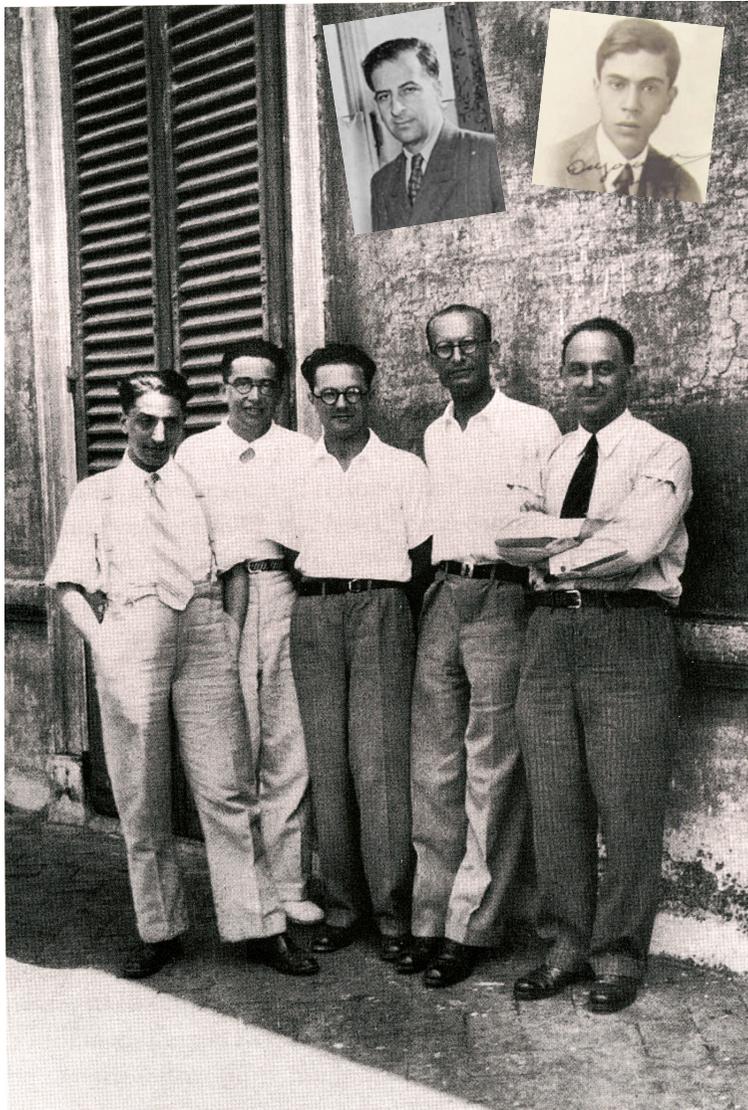


## Art. 31 bis Legge n. 35/2012

- La Scuola sperimentale di dottorato internazionale denominata Gran Sasso Science Institute (GSSI) è **un istituto di ricerca e istruzione superiore**.
- Lo scopo del GSSI è di realizzare a **L'Aquila** un polo di eccellenza scientifica internazionale, grazie alla valorizzazione di competenze e strutture altamente specialistiche già esistenti nel territorio, nonché di favorire l'attrazione di risorse di alto livello nel campo delle scienze di base e dell'intermediazione tra ricerca e impresa (**fisica, matematica, informatica, gestione dell'innovazione e dello sviluppo territoriale**) attraverso attività didattica post-laurea, e di formare ricercatori altamente qualificati.
- La Scuola ha come soggetto attivatore **l'Istituto Nazionale di Fisica Nucleare (INFN)** e opera in via sperimentale per un triennio a decorrere dall'anno accademico 2013-2014.
- Allo scadere del triennio, a seguito della valutazione dei risultati da parte dell'ANVUR, e previo reperimento di idonea copertura finanziaria, la Scuola, potrà assumere carattere di stabilità.

*Scientific thinking and invention flourish best where people are allowed to communicate as much as possible unhampered.*

Enrico Fermi



*Il gruppo dei ragazzi di via Panisperna è stato il primo vero gruppo di ricerca al mondo*

Gerald Holton, storico della scienza

Roma 1934. I ragazzi di Via Panisperna

Oscar D'Agostino, 33

Emilio Segrè, 29

Edoardo Amaldi, 26

Franco Rasetti, 33

Enrico Fermi, 33

+

Bruno Pontecorvo, 21

Ettore Majorana, 28

L'INFN si muove nel solco di una tradizione culturale aperta, e ha nel suo DNA la formazione di giovani in ambiente internazionale fatto di collaborazione, ricerca e innovazione.



# PhD

## Partner Universities

Physics

Mathematics

Computer  
Science

Social Sciences



Scuola Superiore  
Sant'Anna  
di Studi Universitari e di Perfezionamento



The Gran Sasso Science Institute

It is an international PhD school and a center for advanced studies in physics, mathematics, computer science and social sciences.

Its purpose is to form high level human capital, integrating education and research in a lively interdisciplinary environment.

**PRE-APPLICATION**

Organization

SEMINARS AND EVENTS

**Reconstruction of Abruzzo**

March 21st, L'Aquila. The Minister for Territorial Cohesion Fabrizio Barca explains all the activities that have been carried out for the...

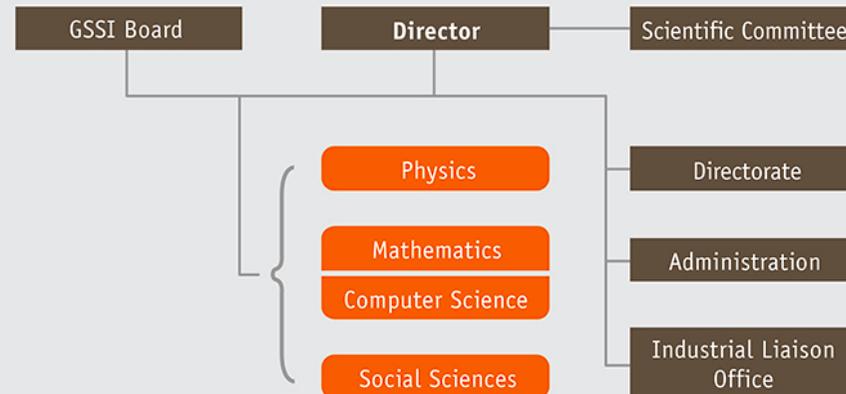
**Urban Laboratories**

April 26th. Public lecture of the Cities, health and well-being event series hosted by LSE Cities

ANNOUNCEMENTS

**EPS, HORIZON 2020 will be an opportunity**

The European Physical Society (EPS) has issued a statement on research and education opportunities for innovation in Horizon 2020.



G S  
S I

*107 persone = 79 studenti PhD + 16 Post-doc + 12 dip TD*  
*40% stranieri; Età media 29 anni*  
*+ circa 40 docenti italiani e stranieri in interazione dinamica*



**Directorate**

Eleonora Ciocca; Luisa Faccia; Irene Sartini;

**Administration**

Luciana Gentile, Head

Romina Mosca; Paolo Della Ventura; Anna Stella Cococcia; Enrico Di Bernardino

**Technical Staff**

Manuela Castagna; Andrea Meschini; Antonio Giampaoli (RSPP)

*Grazie LNGS*

*Grazie AC*

*Amministrazioni simili: GSSI 8; SNS > 200; Sissa > 100; IMT > 30*

## PhD in Astroparticle Physics



### Research lines

Neutrino Physics: nature, mass, oscillation

Dark Matter

Nuclear Astrophysics

High Energy Astrophysics

Gravitational Waves

Physics beyond the Standard Model

### Board of Professors

*Felix Aharonian (Max Planck and DIAS)*

*Frank Calaprice (Princeton University)*

*Eugenio Cocchia (U. Roma Tor Vergata and GSSI)*

*Guido Martinelli (SISSA)*

*Antonio Masiero (U. Padua and INFN)*

*Sergio Petrer (U. L'Aquila and GSSI)*

*Stefano Ragazzi (Mib and INFN)*

*Carlo Rubbia (CERN and GSSI)*

*Paolo Salucci (SISSA)*

*Goran Senjanovic (ICTP and GSSI),*

*Piero Ullio (SISSA)*

*Francesco Vissani (LNGS and GSSI)*

## PhD in Mathematics in Natural, Social and Life Sciences

- NON LINEAR PARTIAL DIFFERENTIAL EQUATIONS, FLUIDS AND WAVES
- STOCHASTIC PARTICLES SYSTEMS AND MACROSCOPIC LIMITS
- INTRODUCTION TO THE CONTINUUM MECHANICS OF SOLIDS, FLUIDS AND BIOLOGICAL MATTER
- NUMERICAL METHODS
- STOCHASTICS METHODS
- MECHANICS AND SIMULATION

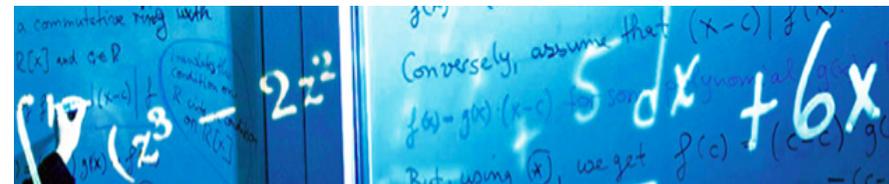
### Board of Professors

Pierangelo Marcati (Chair, U. L'Aquila and GSSI) Luigi Ambrosio (SNS Pisa), Stefano Bianchini (SISSA), Gianni Dal Maso (SISSA), Antonio De Simone (SISSA), Errico Presutti (GSSI)

+ A. Galves (U. São Paulo), G. Jona-Lasinio (U. Rome), C. Lubich (U. Tübingen), F. Otto (Max Plank Leipzig), G. Staffilani (MIT), L. Székelyhidi (U. Leipzig), C. Landim (IMPA, Rio de Janeiro), E. Löcherbach (U. Cergy-Pontoise, Paris), Y. Sinai (Princeton), M. E. Vares (UFRJ, Rio de Janeiro)

## PhD in Computer Science

- FOUNDATIONS OF (MODERN) NETWORKS
- SOFTWARE SYSTEMS AND SERVICES
- SPECIFICATION AND ANALYSIS OF CONCURRENT REACTIVE SYSTEMS



### Board of Professors

Rocco De Nicola (Chair, IMT and GSSI) Antonia Bertolino (CNR) Mariangiola Dezani (Università di Torino) Michele Flammini ((Università dell'Aquila) Paola Inverardi (Università dell'Aquila) Paul Spirakis (University of Patras)

L. Aceto (Reykjavik University)  
P. Crescenzi (University of Florence)  
U. Montanari (University of Pisa)  
D. Garlan (CMU, Pittsburgh)

## ***PhD in Urban Studies***

Research and post-graduate study at the GSSI's *Urban Studies Unit* focus on the long-term development trajectories of 'territorial systems', and 'urban systems' in particular (cities, metropolitan areas, metropolitan regions).

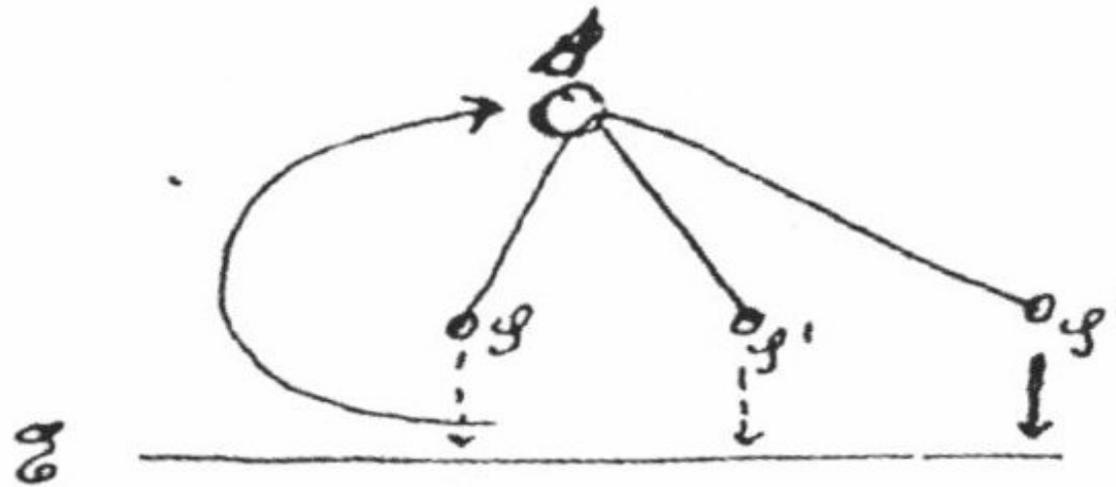
The evolution of the European urban system and territory is the main subject matter at *GSSI/Cities*. Yet urban and territorial issues in other regions of the world will be also addressed.



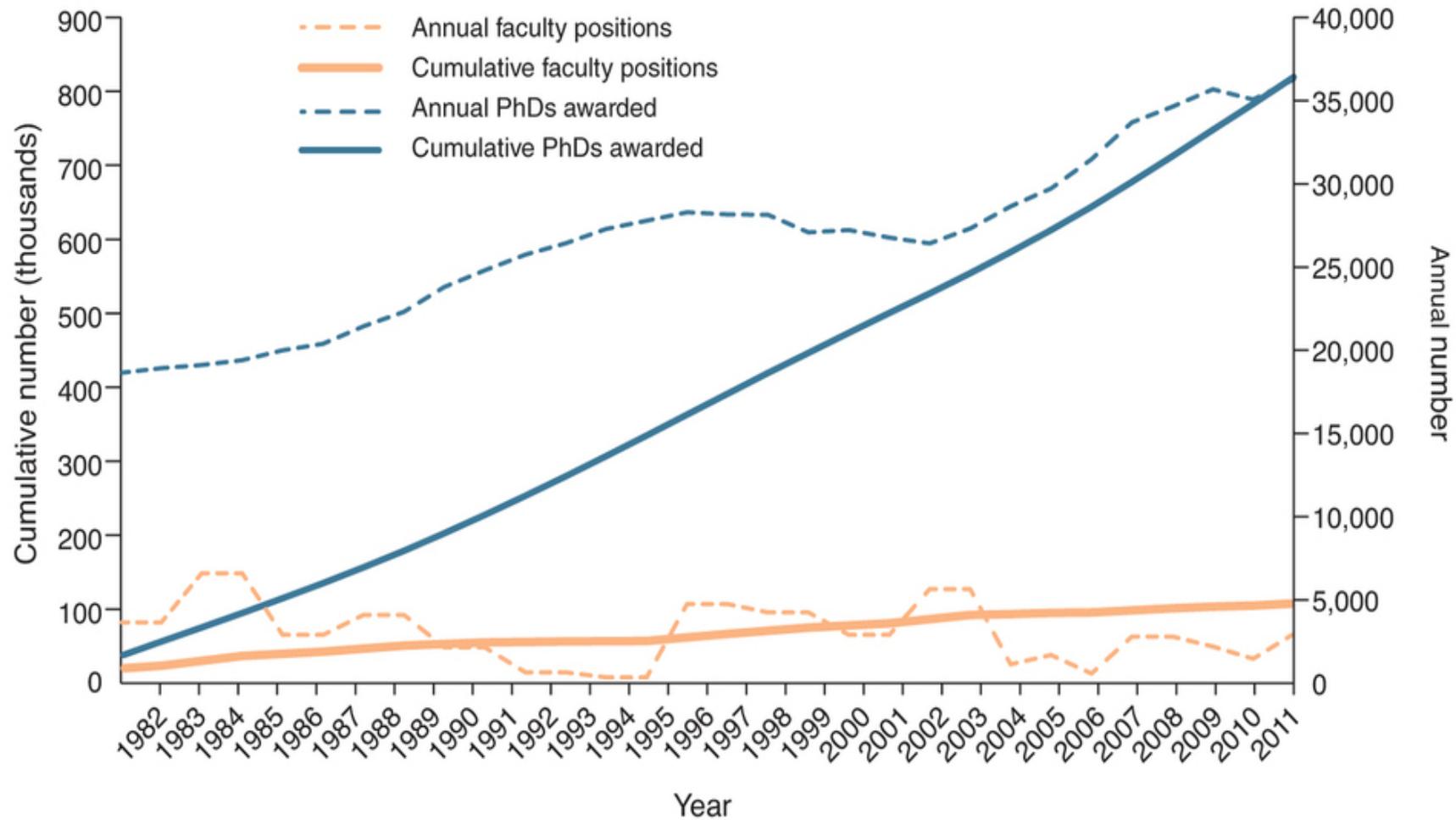
## **Board of Professors**

Antonio Calafati (U. Ancona), G. Barbieri (ISTAT), Nicola Bellini (Sant'Anna), Monica Brezzi (OCSE), A. Golini (Luiss), Simona Iammarino (LSE), Philip McCann (Groningen), A. Rodriguez-Pose (LSE), G. Serravalli (U. Parma)

# The science conceptual dimension

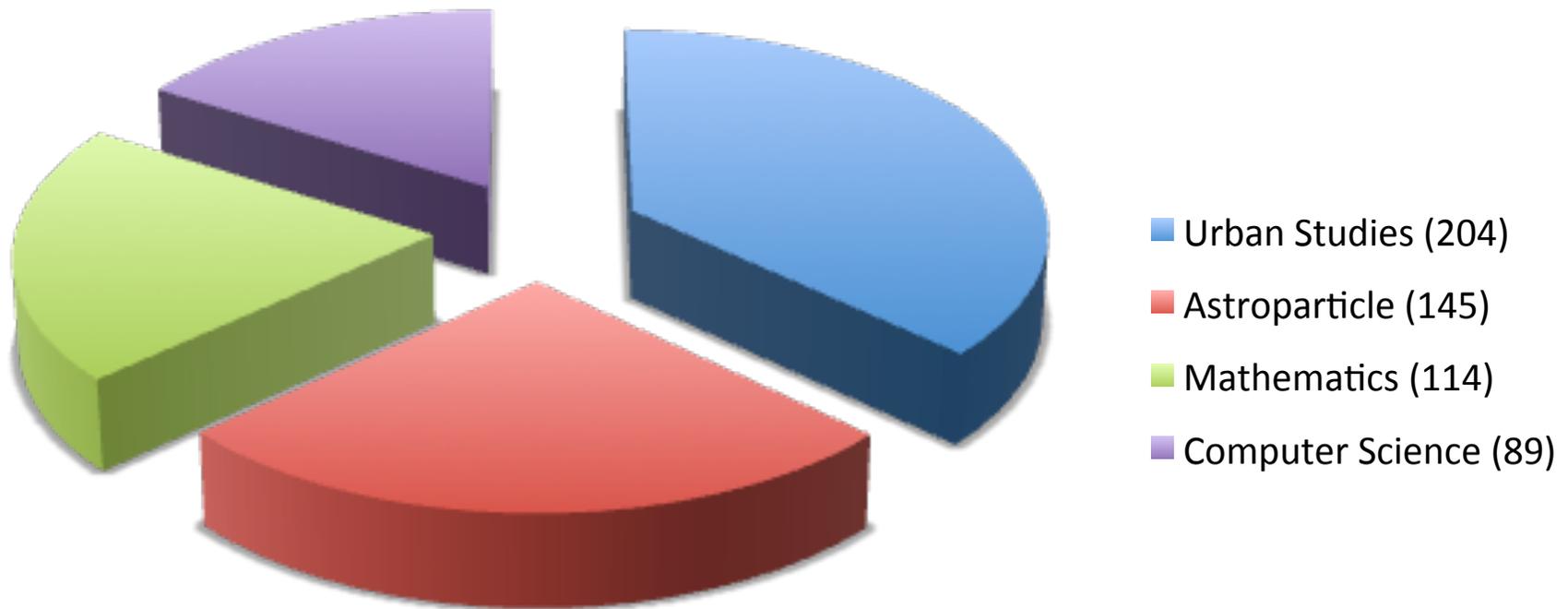


Albert Einstein, *letter to Maurice Solovine*, 7 maggio 1952

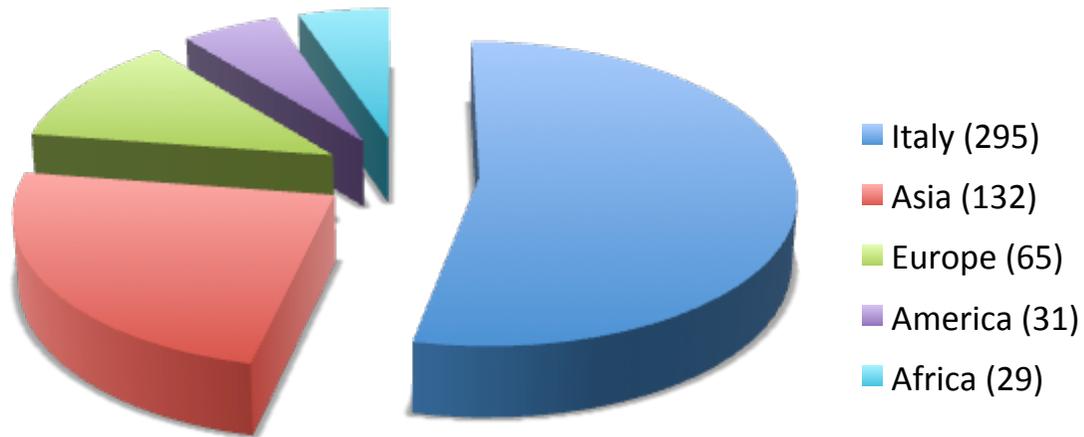


Call for applications published on  
June 3, 2013 deadline July 15

Applications: **552**



## Total applications by continent and gender



**Total number of countries 63**



# 36 PhD

## Italian Universities

University 'La Sapienza' Rome	6
University of L'Aquila	5
University of Bologna	3
University of Roma-3	2
University of Milano-Bicocca	2
University of Genova	1
University of Pisa	1
University of Ferrara	1
Polytechnic University Milan	1
<b>Total</b>	<b>22</b>

## Foreigner Universities

University of Saint Petersburg - Russia	1
Technical University Dresden - Germany	1
Comsats Institute of Information Technology Islamabad - Pakistan	1
University of São Paulo - Brazil	1
Fon University Prilep - Macedonia	1
University Nice Sophia Antipolis - France	1
University of Isfahn - Iran	1
Amrita University - India	1
King's College London - United Kingdom	1
Vrije University Bruxelles - Belgium	1
Tbilisi State University - Georgia	1
Yditepe University - Turkey	1
University of Strasbourg - France	1
University of Cardiff - United Kingdom	1
<b>Total</b>	<b>14</b>

*40% dei vincitori viene dall'estero*





## Joanne Ahern

She is an urban geographer with a keen interest in urban policy. Her research interests include terminally unfinished housing developments, the effects of the 2007 liquidity crisis on real estate internationally, gentrification, and public policy. She first completed her undergraduate BA in Geography and Economics at University College Cork in Ireland before moving to the UK. She then completed her MSc in Cities at King's College London where her research focused on the socio-political impact of public policy. She has also completed an MA in Urban and Regional Planning at the University of Westminster. Here her master's thesis focused on terminally unfinished housing developments in Ireland as a result of the financial crisis there. Through her research interests and studies in the UK and Ireland she has further developed a keen interest in comparative urban policy. Joanne is a member of both the Royal Geographical Society and Royal Town Planners Institute in the UK.



## Venkatapathy Subramanian

I was born and brought up in Coimbatore, a city in South India famous for its temples and educational institutions. I completed my Bachelors in Computer Application from Bharathiar University, Coimbatore. Later, I enrolled myself for Master in Computer Application at the prestigious Amrita University. I completed my Masters in 2010 with a thesis on 'Video Search Engine'. That is the starting point of my deep inclination towards research in CS. After a brief stint as Programmer Analyst at Cognizant Technology Solutions India, I joined Amrita University as a Research Associate at Amrita e-Learning Research Lab. For a year and a half, I was part of the team that developed A-VIEW (<http://aview.in>), an award winning indigenously built multi-modal, multimedia e-learning platform that provides an immersive e-learning experience that is almost as good as a real classroom experience. My research involved developing a smart video search engine for A-VIEW, which allow the users to search lecture videos based on the content of the video. During my this period, I mainly focused on developing a unique multi-dimensional data structure to represent the content of a video lecture and coming up with a ranking algorithm to retrieve the relevant videos based on the search query. Broadly, my main area of interest includes Information Retrieval, Data Structures, Internet of Things, and Machine Learning. I am also an avid supporter and user of Free and Open Source Software (FOSS). Apart from the professional interests, I am a regular practitioner of Yoga and Yogic sciences. Drawing inspiration from the lineage of seers of India, I try to infuse the Spirit of Service in everything I do, both personally and professionally.



**Lucia Ambrogi**

I have been studying Physics for five years. I got my Bachelor degree in December 2010, at the University of Bologna. I wrote my final report while working with the ANTARES group, for which I studied the atmospheric muon decoherence. It was my first step into Astroparticle Physics. Since then, I have cultivated my interest in this field with great passion. In summer 2011 I was in DESY Zeuthen as Summer Student. I took classes and I worked with CTA group. My task was to study how

the geomagnetic field affects the telescope angular resolution. This experience introduced me into the gamma-ray Astrophysics and I've been truly fascinated by it. I got my Master degree in April 2013, after 2 years attending the Particle Physics course. For the thesis task I joined back the ANTARES group in Bologna. This time I focused my studies on the possibility to detect showers induced by cosmic neutrinos. It was a unique chance to go deep into neutrino Physics and neutrino- based Astronomy. In summer 2013 I spent two months at Fermilab (Chicago, IL) as Intern working with ArgoNeuT and LarIAT experiments. This experience gave me the opportunity to get involved in the framework of neutrino Physics based on Liquid Argon TPC and understand how this kind of detectors work. In these years my interest in Astroparticle Physics has increased and my aim for the future is to keep on working on this fascinating field.



**Ilia Drachnev**

I was born in 1990 in Leningrad, USSR. I have been working in low-background group in PNPI

(St.-Petersburg Institute of Nuclear Physics) under patronage of prof. A.V. Derbin since 2009;

received my bachelor degree in 2011 and a master degree in 2013 in Saint-Petersbourg State

University. Graduate work experiments were preformed at PNPI facility Among those experiments were axion search with

a Si(Li) semiconductor detector in low-energy region, axion searches with HPGe

detector in the same region and axion search

with a BGO-crystal scintillation detector in MeV energy region. The theses appear to be "Search

for solar axions produced by axion-compton effect and bremsstrahlung" as for bachelor thesis and

"Search of solar axions" as for the master one. Currently I am joining Borexino collaboration. The sphere of my scientific interests concern

axion research as well as neutrino experiments.



### **Mutti-Ur-Rehman**

I am born in Pakistan in 1987. In 2007 I was enrolled at Punjab University Lahore (Pakistan), where I started studying for a B.Sc degree in Mathematics and Physics and completed it in 2009. During my studies at Punjab University I developed a strong interest in applied Mathematics. From 2009 to 2011 I have completed master degree (16 Years of Education) in applied Mathematics from International Islamic University Islamabad (Pakistan). From 2011 to 2013 I have completed master degree (18 Years of Education) in Computational Fluid Dynamics with

thesis title [Aerodynamic Characteristics of flow around an Inline Square Cylinder Array by using Lattice Boltzmann Technique], from department of Mathematics, COMSATS Institute of Information Technology Islamabad (Pakistan). Prior to taking up to GSSI PhD Mathematics Program, I was a PhD Student enrolled in 2013 at COMSATS Institute of Information Technology Islamabad (Pakistan)



### **Darko Bozhinoski**

I was born in Prilep, Macedonia in 1990. I studied at the Faculty of Informatics, FON University (Skopje, Macedonia) where in 2012 I received my Bachelor Degree in Information and Communication Technology and in 2013 I finished with my specialized studies in Computer Engineering. During my studies I was included in various different projects which gave me opportunity to develop different kind of skills. In 2011, I was appointed a Short Term Scientific Mission within the European COST program IC0904 where I spent two months in the Laboratory for Human Computer Interaction at Cyprus University of Technology. There, I was working together with Dr. Panayiotis Zaphiris on the WORLD (World Bank Random Linked Data) project which represented a cross-sector prototype of a web based service which uses the open data of World Bank and generates random information in the form of sentences combined with pictures, videos and maps. The final goal of the project was to make a model of a generator of intelligent information that

will be fully adaptable across different sectors and which will provide efficiency and effectiveness in gathering and presenting a lot of new information.

Additionally, I participated on a number of international ICT competitions where with various different projects I managed to win several prestigious awards:

Apps for Development, World Bank – “Popular Choice Award”, Washington, USA, 2011; (<http://goo.gl/v0bEJ>)

Apps for Climate Change, World Bank - “Popular Choice Award”, Washington, USA, 2012; (<http://goo.gl/s8j6f>)

European Youth Award - Winner in the category GO GREEN, Graz, Austria, 2012; (<http://goo.gl/VMZoh>)

World Youth Summit Award - Winner in the category GO GREEN, Montreal, Canada, 2012; (<http://goo.gl/RC1Wc>)

Incredible Green Contest - Bronze medal, ACER, Taipei, Taiwan 2013; (<http://goo.gl/rJ35eI>)

Currently, my research interests are mainly orientated to complex reactive systems in parallel and distributed environments which are using the shared computing power, storage, instruments and data through appropriate software that uses efficient parallel algorithm techniques extensively in order to maintain the ongoing interaction with the environment.

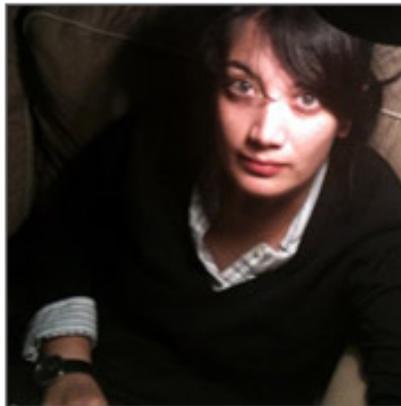


### **Simone Marcocci**

I was born in Savona where I lived and studied up through High School. I then moved to attend the University of Genova to study physics. There, I got my Laurea in Fisica in 2011 and my Laurea Magistrale in Fisica in 2013. I have worked as a member of the Borexino Collaboration since I started working on my master's thesis. Borexino is a huge and ultrapure solar neutrino detector. It is the best detector currently available in terms of radiopurity and thanks to this fact, it can explore the very low energy region of solar neutrino spectrum. Apart from the current solar neutrino physics phase, some developments for Borexino have been planned: in 2015 it will look for sterile neutrinos in the framework of the SOX project, giving an answer to the deficit in the neutrino flux observed by some

reactor experiments. As an additional future for Borexino there is also the possibility to redevelop the experiment, giving it a new purpose as a new generation neutrinoless double beta decay experiment. In fact, it is possible to dissolve gaseous xenon (enriched in the isotope Xe-136) inside Borexino's liquid scintillator in order to obtain a giant active mass experiment, also taking advantage of the extremely high radiopurity of the detector. The work I did for my master's thesis focused on the research and development of this type of experiment by creating a test chamber in Genova to study the optical properties of the scintillator charged with xenon at high pressure.

Apart from that, I am very keen on neutrino physics, physics beyond the Standard Model and ultra low background experiments. I also love skiing, and I love doing it literally everywhere: on stones, on grass and of course on snow! Especially, I like freeriding in powder snow. Fortunately I can survive in the summer, too, since I also like hiking in the mountains and I love riding r



### **Dicle Kizildere**

She was born in Seydisehir, Turkey. She received her Bachelor of Architecture degree from Istanbul Technical University (ITU) in 2007, and Master degree in Architecture (Urban Studies) from Yeditepe University, Istanbul in 2010, where she carried out a master thesis titled "Socio-Economic And Spatial Transformations in The Historical Centre of Istanbul After 1980: The Case Of Talimhane, Beyoglu." Her master thesis was granted with "Master Thesis Research Grant" award by Istanbul Metropolitan Municipality. Prior to taking up to GSSI Urban Studies PhD Program, she was a PhD candidate at Istanbul Technical University, Urban Regional Planning PhD Program. As an exchange student, she studied one year at the Manchester Metropolitan University. Between 2007-2013, she worked as research and teaching assistant at Yeditepe

University, Istanbul. Her main interests include urban renewal/regeneration and gentrification. Her other interests are flamenco, cajon, photography and tennis.

## Astroparticle Physics: Struttura dell'offerta didattica

Nel disegnare i percorsi formativi abbiamo sempre tenuto presente l'ambivalenza propria dei corsi di PhD, che da un lato possono avere ed hanno alti valori formativi, ma dall'altro sono e devono essere una introduzione diretta alla ricerca.

Tale ambivalenza va di pari passo con il carattere interdisciplinare della fisica astroparticellare, che contribuisce a rendere poco proponibile il modello di corso “generale” tipico della formazione accademica.

Per queste ragioni, abbiamo adottato corsi monografici snelli e ben focalizzati. Questo modello si è rivelato molto efficiente; gli studenti, alla prova dei fatti molto curiosi, aperti e preparati, sono stati molto pronti nel recepire le occasioni offerte da corsi di questo tipo.



Il contenuto di ogni singolo corso è descritto in dettaglio nel sito pubblicamente accessibile <https://gsbox.lngs.infn.it/> nel quale ogni docente può includere sillabo del corso, note del corso, programmi, links ad altro materiale, proporre esercizi o temi di ricerca.

cognome	nome	corso	da	a	durata
Aharonian	Felix	High Energy Gamma Rays	17/02/14	27/03/14	15h
Battistoni	Giuseppe	Interactions of Hadrons at High Energy	31/03/14	03/04/14	8h45m
Blasi	Pasquale	Physics and Astrophysics of Cosmic Rays	09/02/14	13/03/14	25h
Calaprice	Frank	Neutrino Physics - Experiments	28/10/13	21/11/13	17h30m
Caldwell	Allen	Statistics	28/10/13	07/11/13	10h
Capozziello	Salvatore	General Relativity	10/02/14	06/03/14	25h
Cremonesi	Oliviero	Neutrinoless Double Beta Decay	09/12/14	19/12/14	15h
Fafone	Viviana	Gravity Waves Detection - Experiments	20/03/14	27/03/14	6h15m
Iachello	Francesco	Aspects of Symmetry	25/11/13	28/11/13	10h
Kudryatsev	Vitaly	Neutrons and Background in Underground Labs	11/11/13	14/11/13	10h
Lipari	Paolo	High Energy Cosmic Neutrinos	17/03/14	23/03/14	10h
Marcucci	Laura	Nuclear Astrophysics	16/10/13	24/10/13	15h
Matarrese	Sabino	Cosmology	17/03/14	09/04/14	20h
Pandola	Luciano	Montecarlo Methods	09/12/13	12/12/13	10h
Petrera	Sergio	Basics of Particle Detectors	27/01/14	06/02/14	12h30m
Ragazzi	Stefano	Modern Detectors	27/01/14	06/02/14	8h45m
Senjanovic	Goran	Standard Model and Extension	21/10/13	16/01/14	32h30m
Tavani	Marco	Non-Thermal Processes in Astrophysics	27/01/14	06/02/14	13h45m

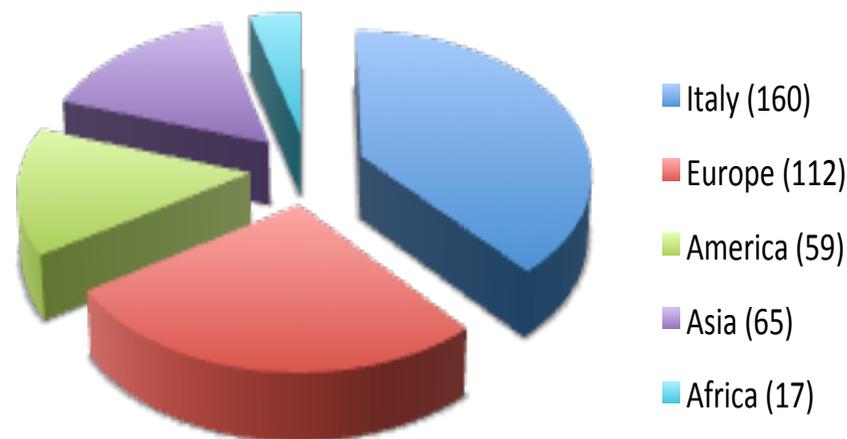
Each PhD students chose his project

## Astroparticle Physics



name	comes from	project	advisors
Marcocci Simone	Genoa U.	Borexino - Xe	Pallavicini - Ianni
Dell'Oro Stefano	Milan U.	Cuore	Cremonesi - Gorla
Boeltzig Axel	Dresden TU.	LUNA	Junker - Wiescher
Drachnev Ilia	S. Petersburg U.	Borexino – axions	Derbin - Ianni
D'Angelo Marta	Pisa U.	CR and Plasma	Blasi
Bossa Maria	Rome 3 U.	Dark Side	Galbiati - Grandi
Recchia Sarah	Rome U.	CR and Gravity	Blasi
Agostini Federica	Bologna U.	Xenon	Sartorelli, Senjanovic
Ambrogi Lucia	Bologna U.	VHE g and CTA	Aharonian - De Wilhelmi
D'Andrea Valerio	L'Aquila U.	GERDA	Cattadori - Pandola

# 16 Post-doc 411 applications



## Italian Research Institutions and Universities

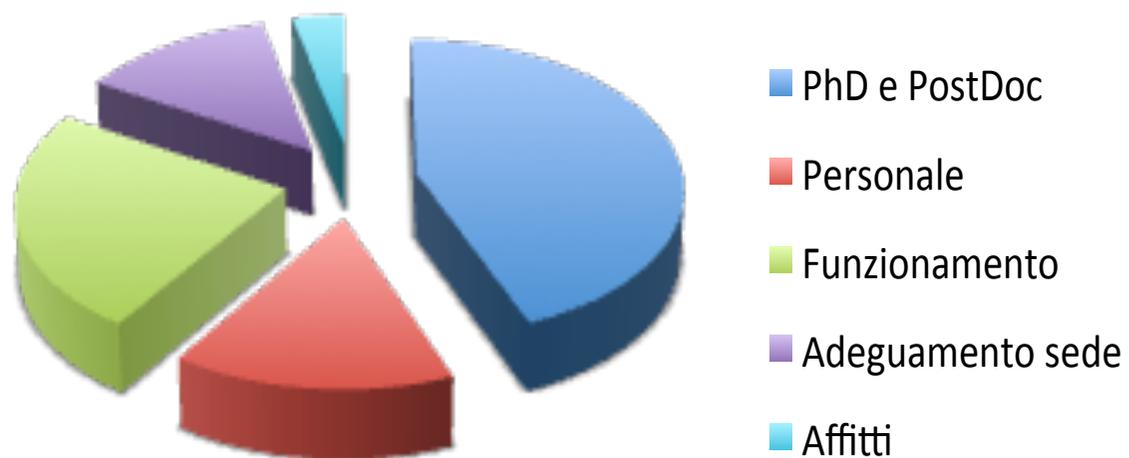
University of L'Aquila	2
Gran Sasso National Laboratory	2
University of Florence	1
Polytechnic University of Turin	1
University of Rome "La Sapienza"	1
University of Pisa	1
<b>Total</b>	<b>8</b>

## Foreigner Research Institutions and Universities

Ludwig Maximilians University, Munich - Germany	1
University Paris Diderot, Paris - France	1
University of Houston, Huston - USA	1
University of Oxford, Oxford - UK	1
University Pierre et Marie Curie, Paris - France	1
Barcelona Autonomous University, Barcelona - Spain	1
Uppsala University, Uppsala - Sweden	1
Adam Mickiewicz University, Poznan - Poland	1
<b>Total</b>	<b>8</b>

*50% dei vincitori viene dall'estero*

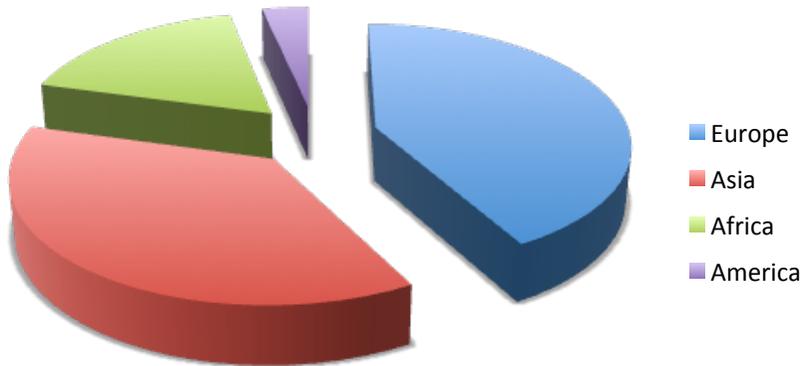
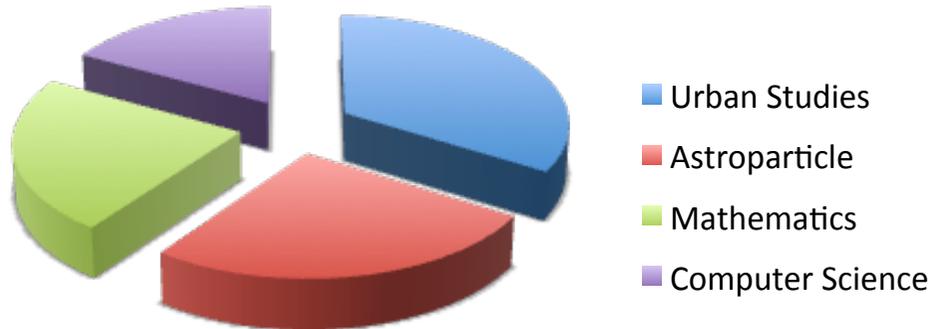
# Distribuzione della spesa A.A. 2013/14



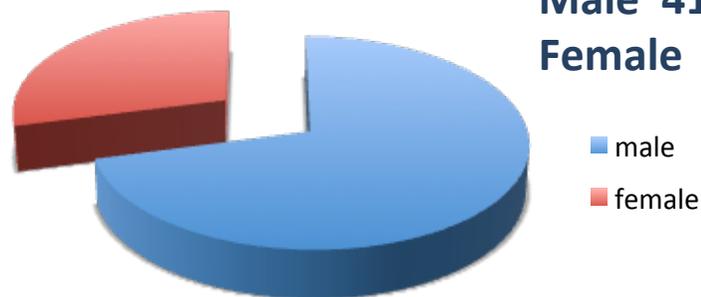
# A.A. 2014-2015

Applicants admitted to the selection procedure: 588  
from 811 applications

**Urban Studies 199**  
**Astroparticle 154**  
**Mathematics 135**  
**Computer Science 100**

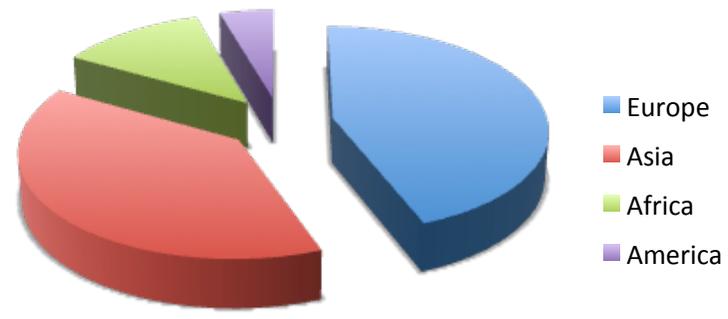


**Europe 247 (Italy 174)**  
**Asia 218**  
**Africa 103**  
**America 20**  
(applications from 51 different countries)



**Male 417**  
**Female 171**

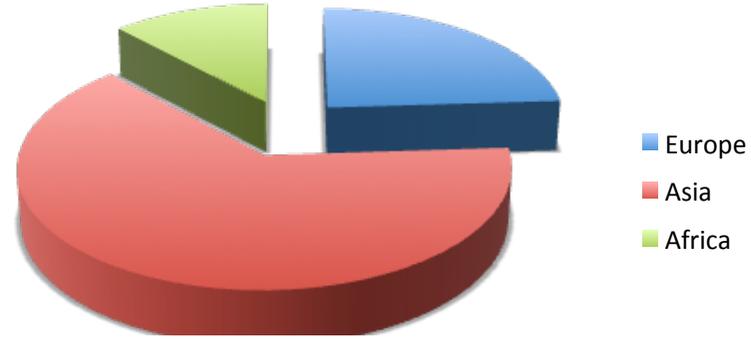
**Astroparticle 154**  
**Europe 68 (Italy 37)**  
**Asia 60**  
**Africa 19**  
**America 7**



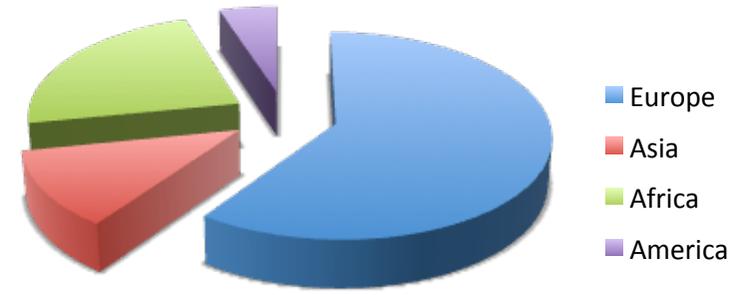
**Mathematics 135**  
**Europe 36 (Italy 30)**  
**Asia 70**  
**Africa 26**  
**America 3**



**Computer Science 100**  
**Europe 24 (Italy 12)**  
**Asia 64**  
**Africa 12**



**Urban Studies 199**  
**Europe 119 (Italy 95)**  
**Asia 24**  
**Africa 46**  
**America 10**



Università italiane		Università estere	
Roma La Sapienza	4	University of Athens (Greece)	2
L'Aquila	3	University of Warsaw (Poland)	2
Roma Tor Vergata	2	University of Banja Luca (Bosnia Erzegovina)	1
Bologna	2	Bauhaus University Weimer (Germany)	1
Milano	2	University of California Berkley (USA)	1
Torino	2	University of Bogotà (Colombia)	1
Roma Tre	1	University of Hanoi (Vietnam)	1
Milano Bicocca	1	University of Ho Chi Min City (Vietnam)	1
Napoli Federico II	1	Isfahan University of Technology (Iran)	1
Salento	1	University of Karachi (India)	1
Basilicata	1	University of Lyon (France)	1
		University of Mumbai (India)	1
		University of Munchen (Germany)	1
		University of Patras (Greece)	1
		University of Rio de Janeiro (Brazil)	1
		University of Strasbourg (France)	1
		University of Tbilisi (Georgia)	1
		University of Varna (Bulgaria)	1
Total	20	Total	20



## Highlights

Il GSSI ha partecipato con successo al programma EU "Marie Curie" con il proposal GRAWITON di "Early Stage Researchers". Tre giovani laureati stranieri, da noi selezionati, avranno un *grant* di 40,000 euro annui per tre anni e diverranno allievi del GSSI da questo anno accademico.

Con Decreto del Ministro della Coesione Territoriale, Antonio Calafati ed Eugenio Coccia sono stati nominati membri del *gruppo di lavoro con funzioni di studio in materia di politiche di sviluppo territoriale dell'Aquila e dei comuni del cratere sismico abruzzese*.

Il GSSI è tra i promotori dell'appena formato "Centro sulle Politiche Urbane", insieme con il Politecnico di Milano, il Politecnico di Torino, le Università di Bologna, IAUV Venezia, Napoli e Roma Tre. Verrà organizzata presso il GSSI la "Scuola estiva di politiche pubbliche" a giugno 2015 (in collaborazione con la Scuola di dottorato dello IUAV)

Dal 2015 il GSSI sarà la nuova sede della "Scuola di formazione per dirigenti degli enti di ricerca", evento tradizionale della comunità scientifica e amministrativa nazionale, che si è tenuta finora a Bressanone.

Dal 2014 GSSI è la sede della "Società Italiana di Relatività Generale e Fisica della Gravitazione".

Il Post-Doc del GSSI Catia Trubiani ha vinto il "Microsoft Research Award", di \$40,000, per lo sviluppo di software innovativo.

Il Post-Doc del GSSI Ivano Malavolta è l'autore dell'App, disponibile per telefoni e tablet, "LiveApp" sull'Aquila.

Oltre duecento pubblicazioni su rivista; quattro Allievi del GSSI hanno ricevuto premi per la migliore pubblicazione o comunicazione o poster a conferenze.



JRC SCIENCE AND POLICY REPORTS

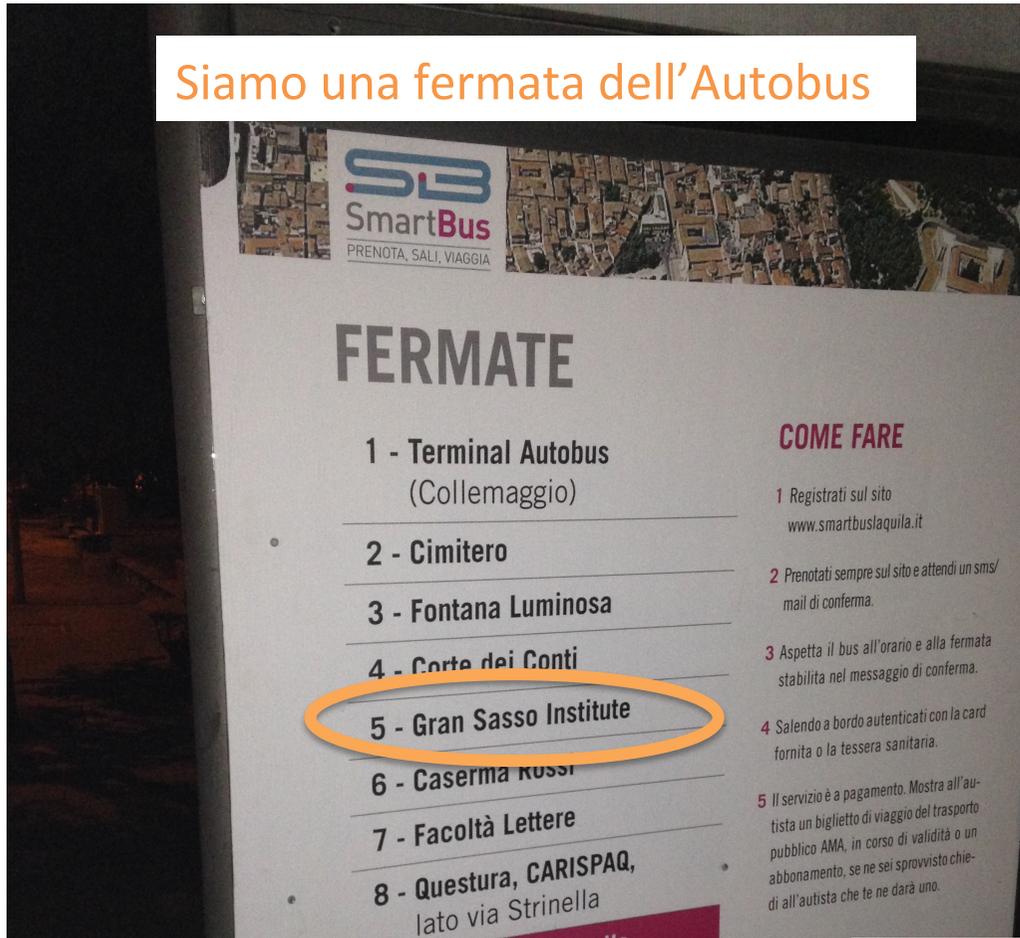
## ERAWATCH Country Reports 2013:Italy

The set up of the international doctoral courses Gran Sasso Science Institute (GSSI) by INFN (art. 31bis of Law 35/2012 funded by €12m a year for 2013-2015) may take advantage of the synergy of the Research Infrastructure located in Gran Sasso to attract foreign researchers and it is a relevant step in doctoral reform.

....

The accreditation from 2013 of English university courses and the doctoral reform significantly increased the attractiveness of the Italian R&I system for students and young researchers. Finally, existing Research Infrastructures and the synergy with doctoral schools, as in the case of the new doctoral school connected to the Gran Sasso Research Infrastructure may increase the number and the quality of foreign researchers in Italy.

Siamo una fermata dell'Autobus



*Splendida ed emozionante giornata venerdì.  
Ho accompagnato in città mio figlio e 2 suoi amici; c'era un casino di gente, mai vista L'Aquila così nemmeno prima del terremoto....  
Una giornata FANTASTICA di cui ancora si parla a casa e a scuola!!*

*Oggi mio figlio quando è rientrato da scuola mi ha detto "...devo studiare, in classe abbiamo deciso che nella vita vogliamo fare i ricercatori" grazie, grazie, grazie per esserci, venerdì avete regalato a questa città la speranza per il futuro...*



Fahrenheit  
Radio 3 Scienza  
Radio 3 Mondo  
Tutta la città ne parla



2015: Trasmissioni in diretta dal GSSI  
Tutti i giovedì  
Presentazioni di libri e dibattiti

L'AQUILA  
HAS LIVE APP

LAUNCH EVENT  
22TH OCT • 6.30 PM  
AUDITORIUM DEL PARCO

Il nostro post doc di Computer Science  
Ivano Malavolta è l'autore di Live App

L'AQUILA DEL FUTURO

*CULTURA, SCIENZA, SOCIETÀ*

Gssi, L'Aquila, gennaio 2015 (10:00 -18:00)

INTRODUZIONE: L'AQUILA DEL FUTURO COME PROGETTO NAZIONALE

L'AQUILA "CITTÀ DELLA CONOSCENZA": LE RAGIONI DI UN PROGETTO

LA COSTRUZIONE DEL FUTURO: PROGETTI ED EFFETTI

LA CITTÀ CHE VIENE: ATTESE, ASPETTATIVE E VISIONI

IL FUTURO DI L'AQUILA NEL FUTURO DELL'ABRUZZO

Una tavola rotonda

CONCLUSIONI (*Una sintesi e una traccia di lavoro futuro.*)

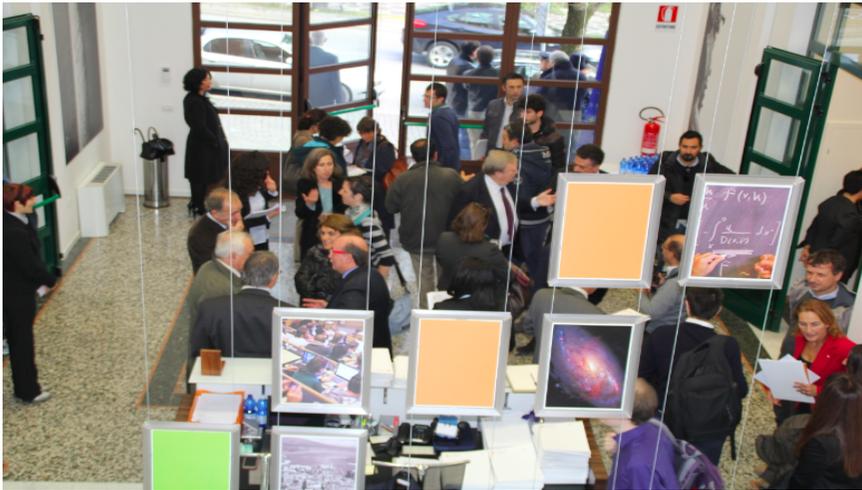
## *In progress*

- Approvazione norma GSSI (valutazione Anvur entro il 15 giugno 2015)
- Finanziamento (Regione + Miur + ...)
- Decreto di riconoscimento MIUR
- Dotazione docenti (punti organico)

**9 dicembre ore 10:00**

**Inaugurazione A.A. 2014-2015**

**Lectio Magistralis di Francesco Profumo**



G	S
S	I

.. forming high level human capital, integrating education and research in a lively interdisciplinary environment







**Scuole Superiori: Iscritti - a.a. 2012/2013**

[Visualizza singolo corso](#)

Scuola	Iscritti per a.a. d'iscrizione														Totale Iscritti		
	2012/2013		2011/2012		2010/2011		2009/2010		2008/2009		2007/2008		di cui Stranieri		Maschi	Femmine	Totale
	Maschi	Femmine	Maschi	Femmine	Maschi	Femmine	Maschi	Femmine	Maschi	Femmine	Maschi	Femmine	Maschi	Femmine			
Firenze - Istituto Italiano di Scienze Umane	3	3	10	3	32	18	0	0	0	0	0	0	6	2	45	24	69
Lucca - Scuola IMT AltI Studi	23	12	15	8	14	15	8	11	4	6	0	0	19	25	64	52	116
Pavia - Istituto universitario di studi superiori	13	10	17	9	12	8	0	0	0	0	0	0	17	5	42	27	69
Pisa - Scuola normale superiore	40	23	34	26	40	18	5	2	0	0	0	0	9	8	119	69	188
Pisa - Scuola superiore studi universitari e perfezionamento "S. Anna"	55	40	47	30	44	40	44	42	0	0	0	0	45	37	190	152	342
Trieste - Scuola internazionale superiore di studi avanzati	47	24	44	19	44	13	36	15	0	0	0	0	50	27	171	71	242

[Torna indietro](#)



**Banca Dati del Personale Docente a Contratto e Tecnico Amministrativo**

**Rilevazione 2013**

**Pisa - Scuola normale superiore**

**Modello F - Personale tecnico-amministrativo per area funzionale e tipologia di contratto al 31 dicembre 2013**

Ateneo	Area funzionale	Contratto di lavoro a tempo indeterminato		Contratto di lavoro a tempo determinato		Altre tipologie contrattuali		Totale
		M	F	M	F	M	F	
Pisa - Scuola normale superiore	Dirigenza amministrativa	0	0	1	0	0	0	<b>1</b>
Pisa - Scuola normale superiore	Amministrativa ed Amministrativa-gestionale	28	76	2	5	0	0	<b>111</b>
Pisa - Scuola normale superiore	Biblioteche	7	9	0	0	0	0	<b>16</b>
Pisa - Scuola normale superiore	Servizi generali e tecnici	11	16	0	0	0	0	<b>27</b>
Pisa - Scuola normale superiore	Socio sanitaria, Medico-odontoiatrica e Socio sanitaria	0	0	0	0	0	0	<b>0</b>
Pisa - Scuola normale superiore	Tecnica, Tecnico-scientifica ed Elaborazione dati	46	29	4	0	0	0	<b>79</b>
Pisa - Scuola normale superiore	Area non individuata	0	0	0	0	0	0	<b>0</b>

Scarica questa pagina in formato MS Excel



[Indietro](#)

**Banca Dati del Personale Docente a Contratto e Tecnico Amministrativo**
**Rilevazione 2013**
**Trieste - Scuola internazionale superiore di studi avanzati**
**Modello F - Personale tecnico-amministrativo per area funzionale e tipologia di contratto al 31 dicembre 2013**

Ateneo	Area funzionale	Contratto di lavoro a tempo indeterminato		Contratto di lavoro a tempo determinato		Altre tipologie contrattuali		Totale
		M	F	M	F	M	F	
Trieste - Scuola internazionale superiore di studi avanzati	Dirigenza amministrativa	0	0	1	0	0	0	<b>1</b>
Trieste - Scuola internazionale superiore di studi avanzati	Amministrativa ed Amministrativa-gestionale	13	44	0	7	1	1	<b>66</b>
Trieste - Scuola internazionale superiore di studi avanzati	Biblioteche	2	2	0	0	0	0	<b>4</b>
Trieste - Scuola internazionale superiore di studi avanzati	Servizi generali e tecnici	0	0	0	0	0	0	<b>0</b>
Trieste - Scuola internazionale superiore di studi avanzati	Socio sanitaria, Medico-odontoiatrica e Socio sanitaria	0	0	0	0	1	0	<b>1</b>
Trieste - Scuola internazionale superiore di studi avanzati	Tecnica, Tecnico-scientifica ed Elaborazione dati	18	7	2	1	2	2	<b>32</b>
Trieste - Scuola internazionale superiore di studi avanzati	Area non individuata	0	0	0	0	0	0	<b>0</b>

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**Banca Dati del Personale Docente a Contratto e Tecnico Amministrativo**

**Rilevazione 2013**

**Lucca - Scuola IMT Alti Studi**

**Modello F - Personale tecnico-amministrativo per area funzionale e tipologia di contratto al 31 dicembre 2013**

Ateneo	Area funzionale	Contratto di lavoro a tempo indeterminato		Contratto di lavoro a tempo determinato		Altre tipologie contrattuali		Totale
		M	F	M	F	M	F	
Lucca - Scuola IMT Alti Studi	Dirigenza amministrativa	0	0	1	0	0	0	<b>1</b>
Lucca - Scuola IMT Alti Studi	Amministrativa ed Amministrativa-gestionale	2	18	1	5	0	1	<b>27</b>
Lucca - Scuola IMT Alti Studi	Biblioteche	0	2	0	0	0	0	<b>2</b>
Lucca - Scuola IMT Alti Studi	Servizi generali e tecnici	0	0	0	0	0	0	<b>0</b>
Lucca - Scuola IMT Alti Studi	Socio sanitaria, Medico-odontoiatrica e Socio sanitaria	0	0	0	0	0	0	<b>0</b>
Lucca - Scuola IMT Alti Studi	Tecnica, Tecnico-scientifica ed Elaborazione dati	1	0	0	0	4	0	<b>5</b>
Lucca - Scuola IMT Alti Studi	Area non individuata	0	0	0	0	0	0	<b>0</b>

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[Indietro](#)