Physics		
Cycle	XXXVII	
Director	Prof. Eleonora Luppi - Department of Physics and Earth Sciences – eleonora.luppi@unife.it	
Duration	3 years	
Partner Institution	- Italian Institute for Nuclear Physics (Istituto Nazionale di Fisica Nucleare – INFN) - H.Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences (IFJ PAN), Kraków, Poland - University of Science and Technology of China (USTC) School of Physical Sciences	
Curriculum	No	
Research Topics	http://www.unife.it/studenti/dottorato/corsi/riforma/physics	
Qualification required for admission	Italian degree known as "Laurea specialistica/magistrale" or a degree awarded prior to approval of Ministerial Decree D.M. n. 509 of 3 November 1999, updated with D.M. n. 270 of 22 October 2004, n. 270; Master's (second level) degree, or an equivalent foreign academic qualification awarded abroad.	
Available Positions		
Positions with Scholarship	Regular positions	11
	Reserved positions for Candidates coming from foreign Institutions	1
Positions without Scholarship	Regular positions	2
	Reserved positions for Candidates coming from foreign Institutions	1
Positions reserved to candidates belonging to specific categories	Reserved positions for candidates holding a foreign government scholarship or a scholarship funded by international mobility programmes	**2**
	Total number of available positions:	**17**

Kind of Financial Support		
N°	*Financial support*	*Research Topic*
2	Università degli Studi di Ferrara	-
2	Italian Institute for Nuclear Physics (Istituto Nazionale di Fisica Nucleare – INFN)	-
1	Italian Institute for Nuclear Physics – Legnaro (Istituto Nazionale di Fisica Nucleare – INFN)	Nuclear Physics and Nuclear Technologies
1	Co-financed by INFN-FE and Università di Ferrara	Development of radiation detection systems operated on Unmanned Aerial Vehicle (UAV)
1	Co-financed by Fondazione Bruno Kessler - FBK and Università di Ferrara	Artificial intelligence methods for data analysis in gas sensing application
1	Co-financed by Dept. of Physics and Earth Sciences and Università di Ferrara	Cosmology and fundamental physics from cosmic microwave background polarization and large scale structure
1	Co-financed by Dept. of Physics and Earth Sciences and Università di Ferrara	Development and characterization of germanium based anodes for lithium ion batteries
1	Co-financed by Dept. of Physics and Earth Sciences and Università di Ferrara	Development of innovative photon detectors for particle physics and life sciences
1	Financed by INAF – Astronomic Observatory of Padova	Exploiting the Deepest Hubble Space Telescope Observations of Ga-lactic Globular Clusters
1	Funded by Regione Emilia-Romagna: Research Project for Technology Transfer and Business	Integrated management of satellite data and ground IoT sensors aimed at sustainability in precision farming practices for regional crops of excellence

Assessment Criteria	
Evaluation of qualification: maximum score 20 points. Minimum score required to be admitted to the interview 12/20 - **Interview**: maximum score 60 points (including the foreign language examination). **Minimum final score required: 60/80**	
During the interview, applicant's knowledge of the following languages will be tested.	English

List of documents for the evaluation		
Curriculum vitae et studiorum	**Mandatory documents:** Complete academic career information, a list of examinations and grades and final mark, for Bachelor and Masters degrees.	Up to 14 points

	Thesis abstract (max length 2 pages), with the following structure: motivation, research methodology, obtained or expected results and bibliography. Only for undergraduates students the abstract must be signed by the supervisor.	
Scientific publications	**Mandatory documents:** *In extenso* copy of the publications, including abstracts and/or papers presented in national or international congresses and meetings; **OR** File containing the full list of the publications with relevant link.	Up to 2 points
Reference letters	Maximum 3 letters, supporting the application, written and signed by teachers, experts, researchers or professionals, qualified on the course topics.	Up to 3 points
Other academic or professional qualifications	Certified working experiences in the field. Others academic qualifications	Up to 1 point
Interview		
Verification of the knowledge on the subject of the Doctoral Research topics and Candidate's linguistic skills.		
Examination timetable		
Evaluation of qualifications and interview will take place in September. Evaluations' results may be checked at the following link: http://www.unife.it/studenti/dottorato/concorsi/selection. The beginning date for consulting the evaluations' results and the interview schedule will be available within the present call deadline at the following page http://www.unife.it/studenti/dottorato/concorsi/commissioni		