Having regard to the following:

- Ministerial Decree n. 45, 08/02/2013, “Regolamento recante modalità di accreditamento delle sedi e dei corsi di dottorato e criteri per la istituzione dei corsi di dottorato da parte degli enti accreditati”;
- The current Regulation of the University of Catania on Ph.D. courses;
- The Call for applications – Ph.D. Courses XXXII cycle – Academic Year 2017-2018, published on https://ateneo.cineca.it/bandi and on the University’s website http://www.unict.it/bandi/post-laurea/dottorati-di-ricerca;
- Annex 7 of the aforementioned call concerning the Ph.D. course in “Computer science”;
- Article 14, pt. 1, of the aforementioned call, which stipulates that the administration considers the possibility of modifications, updates or integrations to the present call - to be exclusively advertised through www.unict.it (section “Bandi, gare e concorsi” > “Studenti e Post laurea” > “Dottorati di ricerca”) in case the number of places with scholarships, and consequently the number of places without scholarships, increases due to further funds made available after the issuing of this call, provided the respect of the terms of assignation of places to candidates on the pass list;
- The agreement signed by the legal representative of the National Institute for Geophysics and Volcanology and delivered on 9 August 2017, concerning the grant of an additional scholarship for the Ph.D. course in “Computer Science” - XXXII cycle which will be ratified by the University’s governing bodies in their first meeting;
- The necessity of redefining the number of places related to the Ph.D. course in “Computer Science”;

THE RECTOR

The call for applications – Ph.D courses, XXXII cycles – Academic Year 2017-2018 of the University of Catania, published on https://ateneo.cineca.it/bandi and on the University’s website http://www.unict.it/bandi/post-laurea/dottorati-di-ricerca is integrated as follows:

Art. 1 The number of places concerning the Ph.D. course in “Computer science” is redefined as in the enclosed Annex 7, integral and substantial part of the aforementioned call.

CATANIA, 1° AGO, 2017

THE RECTOR
(F. Basile)

UNIVERSITÀ DEGLI STUDI DI CATANIA
Protocollo Generale

1° AGO, 2017

Prot. 85/17 Tit. 11 Cl. 6
Rep. Dettore n. 2 85

F. Basile
### Title of the Ph.D. course

**COMPUTER SCIENCE (INTERNATIONAL)**

<table>
<thead>
<tr>
<th>Scientific area</th>
<th>Mathematics, physics and natural science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration</td>
<td>3 years</td>
</tr>
<tr>
<td>Department</td>
<td>Department of Mathematics and Computer Science</td>
</tr>
<tr>
<td>Department website</td>
<td><a href="http://web.dmi.unict.it">http://web.dmi.unict.it</a></td>
</tr>
<tr>
<td>Ph.D. course Coordinator</td>
<td>Prof. Sebastiano Battiato</td>
</tr>
<tr>
<td>Partner Institution(s)</td>
<td>University of Hertfordshire (U.K)</td>
</tr>
<tr>
<td></td>
<td>University of Malta (Malta)</td>
</tr>
</tbody>
</table>

#### Research themes

The 3-year Ph.D. course in Computer Science is primarily aimed at training young researchers in the domains of Computer Science, both basic and applied, and developing professionals with career opportunities in the academic world as well as in the industry.

The principal research themes concern:

- Algorithms and Combinatorics
- Artificial Intelligence
- Assistive Technologies;
- Autonomous Systems;
- Big Data;
- Computer Vision and applications;
- Cryptography and Security
- Multimedia Forensics;
- Smart Cities & Communities;
- Video Analytics (e.g. Retail, Security, etc.)

#### Available places

1) Places with scholarship financed through European Social Fund - Sicily 2014/2020 – Call 12/2017: **2**
2) Places with scholarship financed by the Department of Mathematics and Computer Science: **1**
   - Research theme: “Computer Vision”
3) Places with scholarship financed by DWORD: **1**
   - Research theme: “Computer vision systems for localization”
4) Places with scholarship financed by ENEL GREEN POWER: **2**
   - Research theme 1:
     - Application of machine learning techniques and artificial intelligence to team control of remotely or autonomously piloted vehicles/robots for industrial applications such as automation of processes of building/maintenance/inspection of renewable energy production plants”
   - Research theme 2:
     - Use of techniques of Big Data analysis and IoT infrastructures for applications such as maximization of operational efficiency/production and predictive maintenance of production plants of energy from renewable sources”
5) Places with scholarships financed by ST Microelectronics S.r.L.: **1**
   - Research theme:
     - “Correlation between process parameters, machine parameters and electrical results from devices for the identification of algorithms capable of predicting potential failures of produced devices on the base of real-time data available on line”
6) Places with scholarship financed by the National Institute for Geophysics and Volcanology: **1**
   - Research theme:
     - “Development of machine learning algorithms to assess volcanic hazards”
7) Places without scholarship: **2**

**TOTAL: 10**

#### Selection procedures

Evaluation of qualifications