1. Doctoral Research programme in Information Engineering

2.   **Academic year** 2013/2014
3.   **Cycle** 29°
4**.**   **Call deadline (date and time)** 20 September 2013 13:00
5.   **Director** Prof. Stefano Maci (stefano.maci@unisi.it)
6.   **Department** of Information Engineering and mathematics
7.   **Course start date** 1st November 2013
8.   **Duration** 3 years
9.   **Number of places** 20
10.   **Number of grants** 7
11.   **Grant details**:
   2 scholarships - Funding body: University of Siena
   1 scholarship – Funding body: Information Engineering and mathematics - Research aim: Accelerating Bioinformatics through High Performance Computing
   1 scholarship - Funding body: Fondazione Bruno Kessler - Research aim: Research in the field of Artificial Vision
   1 scholarship – Funding body: Italian Institute of Technology (Istituto Italiano di Tecnologia - IIT) – Research aim: *"Robotics, especially in the sectors of robot manipulation and haptic interfaces"*
   1 scholarship - Funding body: Thales Research & Technology (France) - Research aim: "*Reconfigurable metasurfaces"*
   1 scholarship - Funding body: "Nello Carrara" Institute of Applied Physics of the Italian National Research Council (CNR) - Research aim: "Research in the field of Electronics and Electronic Measurement*"*

Number of places reserved for foreign grant recipients, those participating in specific international mobility programmes 6
Number of places reserved for recipients of research grants 1

Number of places without grants 6

12.   **Research tracks** Bioinformatics - Computing Systems - Telecommunications and Telematics technologies - Automatic Control and Robotics - Electronics, Electrical Engineering and Electronic Measurements - Complex Systems - Mathematical Logic and Informatics - Electromagnetics Engineering - Decision support methods for management

13.   **Research topics**: Computation systems biology, natural computation, formalisms for biology, stochastic methods, biological modelling and simulation, algorithms for biology - Management, Production systems, Service systems, Performance evaluation, Marketing, Decision support systems - Linear, Intuitionistic and Fuzzy Logic; Recursion, Algorithms and Complexity Theory, Dataflow analysis, Formal methods in Computational Science, Web services. - Optimal control, Robust control, Dynamic vision, Process control, Robotics and biomechanics; Modelling and control of robotic teams - Electronics for cryptography, Integrated electronic circuits, Sensors, Stability of nonlinear circuits; Neural Networks - Computer architecture, Parallel programming and security; Language processing; Machine learning; Pattern recognition; Information Retrieval and Procural - Communications networks; Satcomm systems; Personal communication systems, Digital signals/images processing and compression; Information security; Wireless Systems - Antennas, Microwaves, Wave Propagation, Computational Electromagnetics, Metamaterials, RFID, Electromagnetic Compatibility - Modelling of biophysical phenomena, ecological system bifurcations and chaotic behaviors; complex nonlinear systems; - computational systems biology, natural computation, formalisms for biology, stochastic methods, biological modelling and simulation, algorithms in biology - Management, Production systems, Service systems, Performance evaluation, Marketing, Decision support systems
14.   **Website** for full details http://phd.dii.unisi.it/

15   **Admission requirements**
- Italian degree (*Laurea*) awarded according to the university rules prior to Ministerial Decree no. 509/99 (lasting at least 4 years)
- Italian second cycle degree (*Laurea Specialistica/Magistrale*) lasting 3+2 years or a single 5-year cycle)
- Academic qualification (degree) gained abroad, equivalent to an Italian qualification in length and content.

Applicants must be in possession of the admission requirements or gain their degree before 31 October 2013.

Academic qualifications obtained abroad

Academic qualifications obtained abroad, following courses lasting at least four years, must be recognized as second cycle degrees and permit admission to doctoral programmes in the country in which they were awarded.

Candidates with foreign academic qualifications must enclose with their printed or online application:

- a transcript in Italian or English (or translated into Italian or English). Those who have not yet been awarded their degree must provide a list of exams taken and grades awarded, translated into Italian or English;

- a copy of any documents of use to evaluate the recognisability of the qualification (e.g. diploma supplement, course contents, declaration of value).

Candidates with foreign academic qualifications will be admitted to the selection procedure conditionally and will be excluded from the Doctoral Research Programme if, following verification, their qualification is found not to comply with the requirements specified in the call. If successful, candidates must provide the documents specified in art. 5.

16.   **Application procedure**

Applications must be made using the online procedure described on the following page
http://www.unisi.it/ricerca/dottorati-di-ricerca clicking on the Doctoral Programme of interest **by the final deadline of 13:00 on 20 September 2013**

E-mail confirmation of successful registration of the application is sent automatically to the address indicated by the candidate in the application form.

Should it not be possible to use the online application procedure, applications can also be presented in one of the following ways:

   delivery by hand, by the final deadline of **13:00 on 20 September 2013**, to the: Divisione Corsi di III Livello – Dottorato, Collegio Santa Chiara, Via Valdimontone 1, 53100 Siena (opening hours: Mon/Wed/Fri. 9.00-13.00; Tues/Thurs 14.30 -16.30);

   by post, using recorded delivery with return receipt, to: Divisione Corsi di III Livello – Dottorato, Collegio Santa Chiara, Via Valdimontone 1, 53100 Siena. Candidates residing abroad can use any form of postage that provides legible proof of the date of dispatch.

In any case, applications and documents must be received by the University of Siena by the final deadline 13:00 on 20 September 2013. Only the date of receipt, not the date of postage, will be considered.

A printable version of the application form is available online at http://www.unisi.it/ricerca/dottorati-di-ricerca clicking on the Doctoral Programme of interest.

For applications made either online or in printed form, candidates must provide the "documents of use for evaluation", as specified in the table (art. 1 of the doctoral programme call), by the call deadline.

In the case of online applications the abovementioned documents must be sent with the application, in electronic form. If the candidate making an online application is unable to send the abovementioned documents in electronic form, the documents must be delivered or sent in printed form according to the instructions and deadline specified above for the delivery/postage of printed applications. The abovementioned documents must be enclosed in a sealed envelope and the **slip containing the application details** received in the e-mail confirming registration of the application must be attached to the envelope.
Documents other than those stated herein as useful for evaluation and documents that arrive after the abovementioned final deadline of **20/09/2013** will not be taken into consideration.
In the case of applications presented in printed form, the abovementioned "documents of use for evaluation" must be delivered or posted in printed form according to the instructions and deadline specified above for the delivery/postage of printed applications.

Candidates must choose only one of the Research tracks possible within the Doctoral Programme they are applying for.

The University can, by reasoned decision, exclude candidates from the selection procedure at any time if they lack the admission requirements specified in this call.

17.   **Documents for evaluation**
Documents required for evaluation are: 1) a) if the qualification was awarded (or will be awarded) in Italy: Curriculum vitae with self-certification in lieu of affidavit indicating exams taken and relative grades in the second cycle degree

(Laurea vecchio ordinamento/Laurea specialistica/Laurea magistrale); b) if the qualification, equivalent to an Italian second cycle degree (see a) above) was awarded (or will be awarded) in a country other than Italy: Curriculum vitae with certificate indicating exams taken and relative grades; 2) Research project of maximum 1000 words (describing the research the candidate intends to carry out and his/her expected learning outcomes); 3) any other qualifications and publications the candidate deems useful for the evaluation. These documents can be in Italian or English and must be attached to the online application in electronic form. If the candidate is unable to provide the documents in electronic form, they must be presented in printed form together with the online or printed application

18. **Exam details**
Candidates must indicate their chosen research track. The selection procedure consists of: 1) evaluation of the documents presented by candidates (candidates may, if they wish, supply two names or people, from academia or not, from Italy or another country, to whom the Commission can refer for an evaluation of the candidate's aptitude for research, background, research potential and academic maturity. For each person the candidate must provide the name, surname, affiliation, email address and (optional) telephone number); 2) interview (only if the Commission deems it necessary), to be held in Italian or English; the candidate must also demonstrate good knowledge of English. Candidates residing abroad who have demonstrated the impossibility of attending the interview can agree on an interview via videoconferencing. In this case the University of Siena cannot be held responsible for a missed interview due to technical problems of any nature or cause. The exams aim to ascertain candidates' aptitude for scientific research.

19. **Exam schedule**
Evaluation of qualfications. No written exam is required. Oral exam: the Commission will select candidates who are required to take an oral exam that will be on 4 October 2013, at 10.00, Dipartimento di Ingegneria dell'Informazione e Scienze Matematiche, Via Roma 56, Siena. The Commission will inform all candidates (including those who do not have to take an oral exam) of the result of the preselection.

20. **Enrolment of successful candidates and Documents required for enrolment**

There will be a single final ranking list, published on the following page: http://www.unisi.it/ricerca/dottorati-di-ricerca clicking on the Doctoral Programme of interest.
Successful candidates will not be notified in person.
Places may be reserved for graduates of foreign universities, foreign grant recipients, those participating in specific international mobility programmes, or recipients of research grants in the same scientific-disciplinary area as the research programme, depending on their place in the ranking list, and as long as the study or research grant has the same duration as the Doctoral Research programme (at least 3 years).
The simultaneous enrolment on a first or second cycle degree, postgraduate specialization course (except for medical specializations) or another Doctoral Programme is not permitted.
Doctoral students may attend medical specialization courses at the same time as the Doctoral Programme. In this case, the duration of the Doctoral Programme is reduced to a minimum of two years (art. 19, Law 240/2010).

Instructions for enrolment on the first year of the Doctoral Programme are published on the following page: http://www.unisi.it/ricerca/dottorati-di-ricerca clicking on the Doctoral Programme of interest.

Without receiving further notice from the University, successful candidates must send the forms listed at http://www.unisi.it/ricerca/dottorati-di-ricerca clicking on the Doctoral Programme of interest **by the final deadline of 29/10/2013** to: Divisione Corsi di III livello – Dottorato, Collegio S.Chiara, Via Valdimontone 1, 53100 Siena (opening hours: Mon/Wed/Fri. 9.00-13.00; Tues/Thurs 14.30 -16.30) (Failure to do so will result in exclusion):

- enrolment form bearing a revenue stamp for €16 Euros;
- study grant acceptance form (if applicable);
- request for canteen access card;
- request for a university e-mail address;
- signed photocopy of identity card/passport;
- copy of receipt for payment of regional tax (*Tassa Regionale per il Diritto allo Studio Universitario*);
- copy of receipt for payment of university fees;
- copy of visa in passport and residence permit (only for non-EU students).

Candidates who are admitted and hold a **foreign degree** (conferred at the end of a degree course lasting at least 4 years) which has not yet been recognized by an Italian University as equivalent to one of the Italian degrees required, must submit the following documents together with the enrolment form:

- photocopy of their original diploma and degree certificate with list of exams and grades, translated into Italian and legalized by the competent Italian authorities abroad (Italian Consulate or Embassy);

- **Declaration of Value "*in loco*"**, clearly stating that the academic qualification possessed gives access to Doctoral Research Programmes in the country in which it was awarded.

Candidates with foreign academic qualifications who cannot deliver the documents required at the time of enrolment will be enrolled conditionally and will be excluded from the Doctoral Programme if they fail to present said documents by the deadline set by the Administration. They will also be excluded if their qualifications are found not to comply with the requirements specified in the call.

Non-EU candidates who have passed the admission exam will be admitted to the courses as long as they have a permit to enter and reside in Italy and are legally residing in Italy (art. 39, par. 5, Legislative Decree. 25.07.1998 no. 286 as modified by art. 26 Law 30.07.2002 no. 189); they must present a copy of their passport and a valid residence permit issued by the competent authorities along with the enrolment form.
Non-EU citizens residing abroad must present a copy of their passport, entrance visa and residence permit for the purpose of study issued by the competent *Questura* (Police headquarters).

Successful candidates who do not complete the enrolment procedure by the deadline will be considered to have renounced their place.

Vacancies may be made available to the next candidates in the ranking list.

University fees
The annual enrolment fee is 300.00 (three hundred) Euros, to be paid at the time of enrolment. Payment can be made:
- through a branch of the bank Monte dei Paschi di Siena. The reason for payment (causale) must be specified as: "Dottorandi, Tasse Universitarie 2013/2014 + your name and surname";

- bank transfer to the following account:
account in the name of: Università degli Studi di Siena, Via Banchi di Sotto 55, Siena
Bank: Monte dei Paschi di Siena, Agenzia n. 13, Piazza Amendola 4, 53100 Siena –
IBAN: IT16U0103014217000063269552
BIC CODE (for payments made outside Italy):
PASCITM1J25

The reason for payment (causale) must be specified as: "Dottorandi, Tasse Universitarie 2013/2014 + your name and surname".

Regional tax

Annual payment of a Regional Tax for the Right to University Study is required by Regional Law no. 4 of 3 January 2005. For the academic year the tax is 140.00 (one hundred and forty) Euros and can be paid as follows:

1) bank transfer to post office account in the name of: Azienda Regionale per il Diritto allo Studio Universitario
IBAN: IT60B0760114200000095810461
SWIFT CODE: BPPIITRRXXX
The reason for payment (causale) must be specified as:
 "Dottorandi, Tassa Regionale DSU 2013/2014 + your name and surname";

2) Post Office payment ("bollettino postale" - within Italy): Italian Post Office Account no.: 95810461
in the name of: Azienda Regionale per il Diritto allo Studio Universitario – AOT Siena.
The reason for payment (causale) must be specified as:
 "Dottorandi, Tassa Regionale DSU 2013/2014".
Also provide (pagamento eseguito da) your name, surname and full address.

Exemption from payment of taxes and fees
Students with certified disability equivalent to 66% or higher, are exempt from the payment of any taxes or fees.

Recipients of a research grant for the Doctoral Programme financed with funds from the Ministry for Education, University and Research (MIUR) are exempt from payment of university enrolment fees.

Research grants

Research grants are awarded on the basis of the ranking list formed following the admission exam.

The gross annual amount of the research grant is 13,638.47 Euros.

As long as the student is authorized by the Academic Board to carry out research abroad, the amount of the grant is increased by up to 50% for a maximum of 18 months during the period abroad.

The grant will be paid for the whole duration of the course.

Payments are normally made in monthly instalments in arrears.

For any matters not covered by this summary, please consult the official competition call published at http://www.unisi.it/ricerca/dottorati-di-ricerca clicking on the Doctoral Programme of interest, the University's Degree Course Regulations (Regolamento Didattico) and Regulations on Doctoral Programmes (Regolamento in materia di dottorati di ricerca).

N.B. The official call is published in Italian alone. This English summary of the call details is not valid for legal purposes. For full information, please consult the official call at http://www.unisi.it/ricerca/dottorati-di-ricerca clicking on the clicking on the Doctoral Programme of interest

Any amendments to the call will be published at the abovementioned internet address.