NOVA SCHOOL OF SCIENCE & TECHNOLOGY

UNIVERSIDADE NOVA DE LISBOA

PhD Program in Electrical and Computer Engineering

Report Year 12

PREPARED BY

Luis M. Camarinha-Matos

Coordinator of the program

December 2020

TABLE OF CONTENTS

1. BRIEF HISTORY

Editions:

The PhD Program in Electrical and Computer Engineering in its current format, which is adapted to the Bologna model, started in the academic year of 2008/2009. It is now starting its 13th edition.

The inaugural sessions of previous editions took place on:

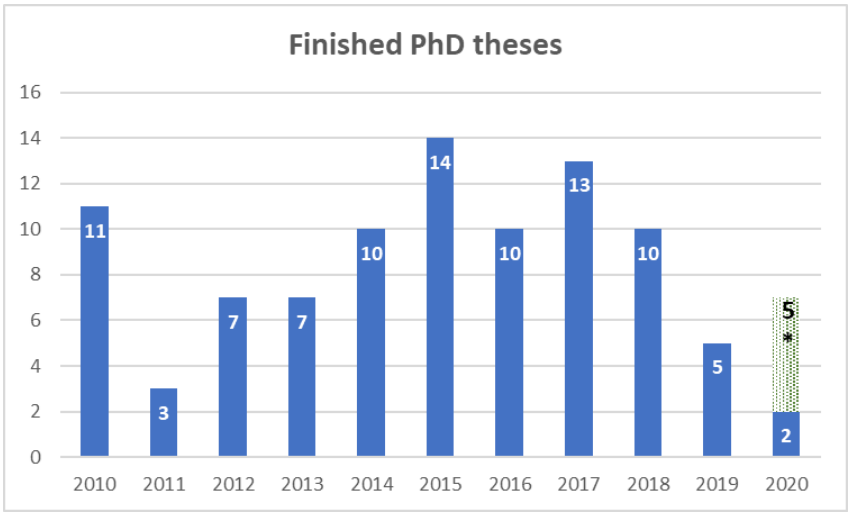
- 1st edition: 17 Nov 2008.
- 2nd edition: 25 Nov 2009.
- 3rd edition: 16 Dec 2010.
- 4th edition: 9 Jan 2012.
- 5th edition: 14 Jan 2013.
- 6th edition: 6 Jan 2014.
- 7th edition: 6 Jan 2015.
- 8th edition: 15 Jan 2016.
- 9th edition: 16 Jan 2017.
- 10th edition: 22 Jan 2018.
- 11th edition: 21 Jan 2019.
- 12th edition: 10 Feb 2020.

The edition of 2020/2021 (**13th edition**) is scheduled to start in 11 January 2021.

As some candidates usually took a long time to formalize their enrolment in the Academic Office (e.g., in some cases they had to wait for the defense of the MSc thesis, others had to wait for VISA to Portugal), it was not possible to start the formal activities earlier. Nevertheless, some preparatory activities (e.g., Advanced Topics courses), which have a tutorial nature started for some students in the last quarter of 2020.

Results:

During last years, the following number of theses have been concluded:



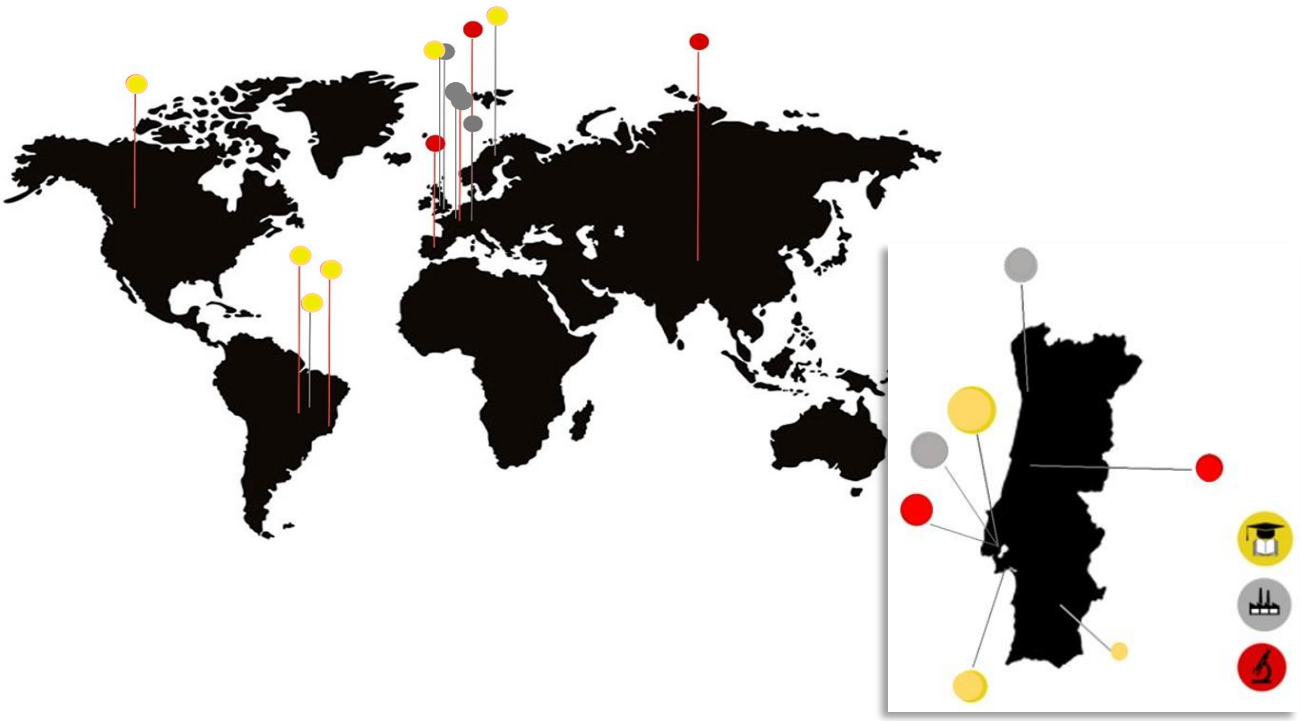
* Theses submitted and waiting public defense (viva) – delayed due to COVID-19 pandemic.

Placement:

The graduates of last decade (GOLD) are all employed, with the following distribution:

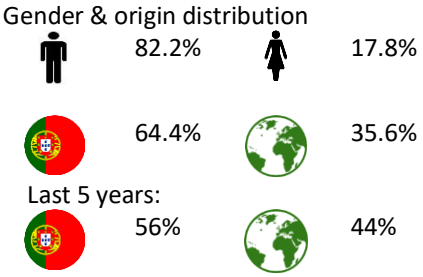
- Academia: 54.7%
- Research institutes: 20%
- Industry: 25.3%

In terms of geographical location, they are working in different parts of the world:



Current demographics:

In terms of **current students**, the following demographics apply:



In recent years there is a fast increase in the number of foreign students. This number could be even higher if the visa and procedures of SEF (Service of Foreigners and Borders) were less complex and less time demanding.

Current number of students:

Total number of registered students as of Dec 2020: **118**

- Active students: **66**
- Suspended for lack of payment of tuition fee: 35 (most of them active)
    - Active + Suspended for no payment: **101**

- Suspended for other reasons: 17

2. ORGANIZATIONAL STRUCTURE

Coordinator:

- Prof. Dr. Luis M. Camarinha-Matos

Scientific Committee of PDEEC:

- Chair: Prof. Dr. Luis M. Camarinha-Matos
- Members: Prof.s Dr.s Rui Neves da Silva, José Barata Oliveira, João Martins, João Goes, Ricardo Gonçalves, Rui Dinis

Secretarial support:

- Helena Inácio

Financial officer:

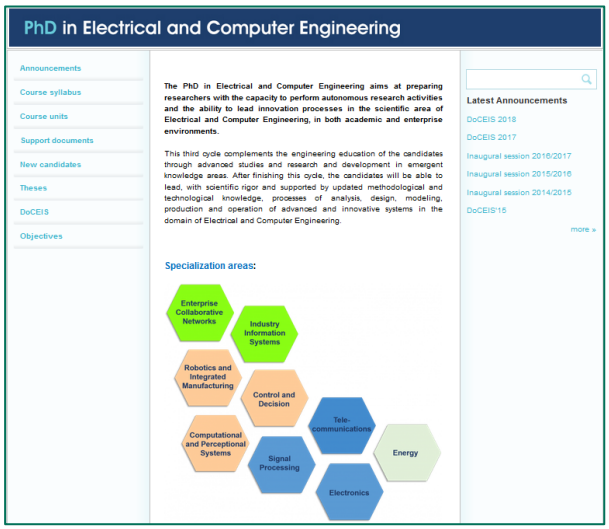
- Prof.s Drs. Paulo Gil / Ana Inês Oliveira

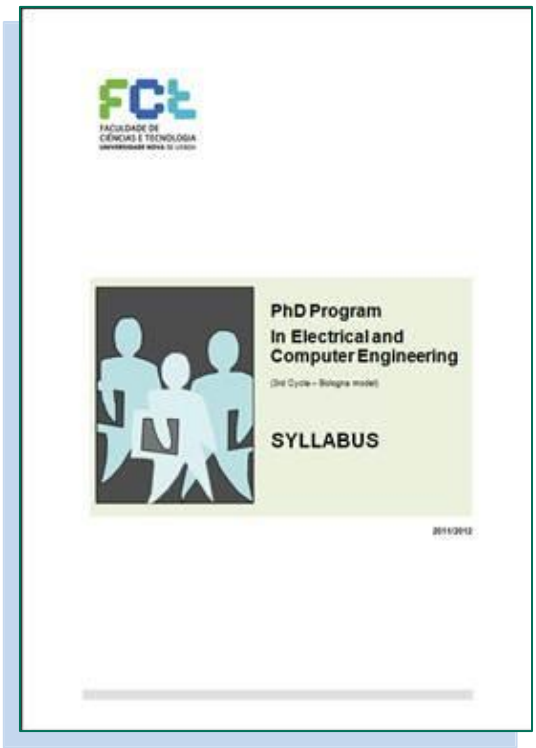
Site:

In order to both support dissemination of the program and provide a repository of information for the students, there is a specific site:

http://sites.fct.unl.pt/pdeec

Complementarily, two main reports provide base information on the program contents: Guide of the PhD Program (in Portuguese and English) and *Syllabus* (in English).





3. CANDIDATES ACCEPTED IN 2019/2020

Regarding the 12th edition of PDEEC, there were **18** candidates. After the selection process, **15** candidates were accepted by the Scientific Committee, out of which **12** formalized their enrolment.

Taking into account the analysis of the candidates' CV the following individual study plans were established:

Table 1 – PhD students enrolled in the 12th edition of the program

Nº	Name	SRMT	EM	DC	RP	FO	AT cd	AT el	AT en	AT sp	AT cn	AT rim	AT cps	AT iis	AT tel	Specialization
58917	Ali Gashtasbi															Telecommunications ?
58902	Ayman Tayseer Ali Abu Sabah															Telecommunications
59034	Carlos Nuno de Paiva Marques												?			?
58990	Daniel Viana Dias															Energy
58859	Diyar Salah Fadhil															Telecommunications
58829	Guilherme Simões Calado de Brito															Industry Information Systems
58816	João Eduardo Albuquerque Martins Pereira Pires															Computational and Perceptional Systems
57424	Kwabena Amoako Kyeremeh								?							?
58986	Luis Alberto Estrada Jimenez															Robotics and Integrated Manufacturing
58997	Omid Nasrollahi														?	?
59004	Pedro Correia Ferreira															Industry Information Systems
58814	Ricardo Alexandre Sacoto Martins															Telecommunications

Equivalence
To be done

In terms of geographical origin, the **candidates** had the following distribution:

- Angola: 1
- Brazil: 1
- Ecuador: 1
- Ghana: 1
- Iran: 5
- Iraq: 1
- Jordan: 1
- Portugal: 7

Among the **enrolled** students, we have:

- Brazil: 1
- Ecuador: 1
- Ghana: 1
- Iran: 2
- Iraq: 1
- Jordan: 1
- Portugal: 5

Some of the accepted candidates did not formalized their enrolment, either due to economic problems or difficulty in getting visa to Portugal. Our Embassies / SEF continue creating strong obstacles to the attraction of foreign students.

4. CURRICULUM STRUCTURE

4.1 Modus operandi

Like previous editions and considering the number of registered students for each course, some courses included formal lectures, while others were organized as self-study units (individual guided studies and interaction with professors assigned to each topic).

Courses with formal lectures

Lectures were organized in a concentrated mode (daily from14:00 to 18:00) during a period between the 1st and 2nd semesters.
Like previous editions, all lectures were offered in English.

Scientific Research Methodologies and Techniques

This course included 30 h (14 modules + projects' presentation) lectured during Feb 2020.
This course is a fundamental element to let students acquire a "scientific research culture" and to learn how to organize their research work. Received feedback from students continues to be very positive.

Supporting materials are available at:
https://sites.google.com/a/uninova.pt/cam/teaching/srmt

A total of **8** students concluded this course in 2020 (average grade 14.25 in 20).

The course was mostly lectured by Prof. Camarinha-Matos, with a partial contribution of Prof.s Ricardo Gonçalves, Rui Neves-Silva and João Goes in module 14 (Project Proposals Preparation) and corresponding evaluation.

Entrepreneurship Methods

A total of 11 students were registered for this course this year. This course included 30 h lectured during Mar 2020, by staff of FCT-NOVA (J. Barata, P. Sousa, L. M. Camarinha-Matos, J. Silva Lopes, A. Brandão Moniz) and external invited experts (J. Jassbi, A. Pascoal, S. Nikghadam, M. Cerejo, R. Caldeira, D. Horta e Costa).

A total of **9** students concluded this course in 2020 (average grade 14.44 in 20).

Doctoral Conference

Due to the specific nature of this course, it has a mixed structure: a few plenary lectures for the introduction of the main concepts and principles, followed by parallel working groups focused on the various specific aspects of the organization of an international conference.

With reference to the **11th edition**, the activities of this course started in June 2019 and ended in July 2020 (the conference was held on 1-3 Jul 2020).

Like previous editions, the conference had an international scope and was technically co-sponsored by 3 international societies:

- SOCOLNET – Society of Collaborative Networks
- IFIP – International Federation for Information Processing, WG 5.5
- IEEE, Industrial Electronics Society.

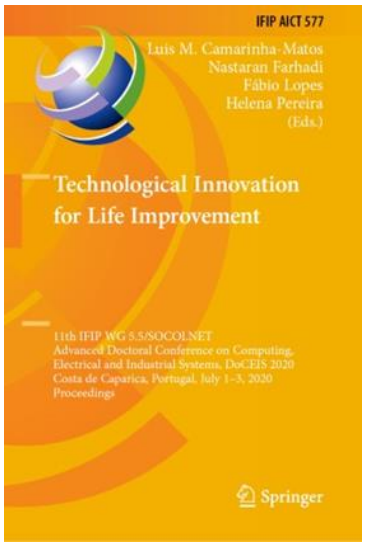
The conference proceedings continued to be published by Springer, under theIFIP AICT (Advances in ICT) series (indexed in **Web of Science, SCOPUS and DBLP**).

Due to COVID-19 pandemic the conference was organized **online** through the ZOOM platform.

The general theme of the 2020 edition was "**Technological Innovation for Life Improvement**".

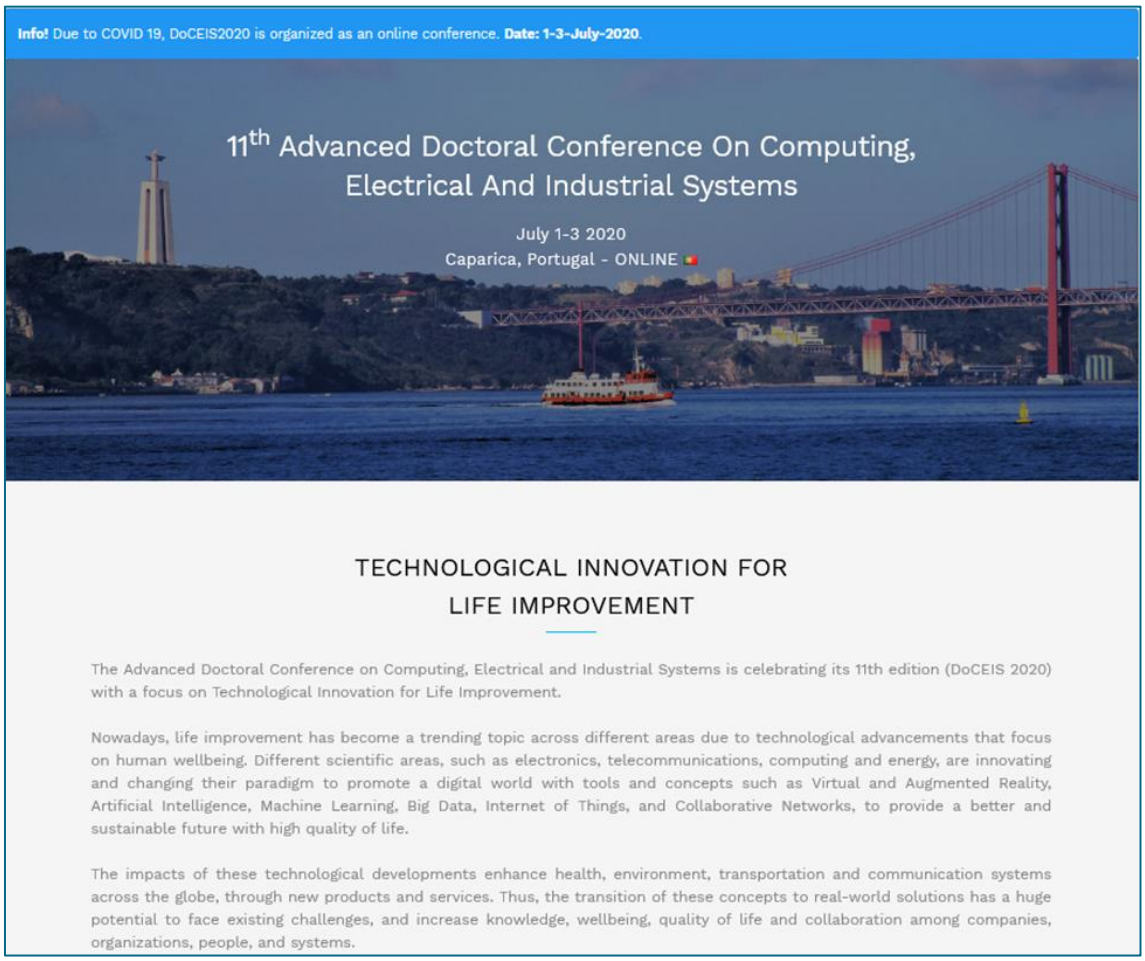
For the 11th edition a total of **67** submissions from **18** countries were received. This included the following authors per country:

Brazil – 17
China – 3
Czech Republic – 4
Egypt – 1
Finland – 1
Germany – 3
Ghana – 1
Hungary – 20
Iran – 5
Nigeria – 3
Portugal – 114
Russia – 3
Serbia – 2
Slovenia – 1
South Africa – 2
Spain – 6
Ukraine – 2
United States – 1



After double blinded peer reviewing, the International Program Committee accepted 44 papers (29 as full papers, 15 as shorter papers) for inclusion in the conference program. Among these, **15** papers were contributed by PDEEC.

A special collaboration was established with the PhD Program in Biomedical Engineering of FCT-NOVA, which organized a special session.



In addition to the presentations of technical papers, the conference also included:

- 3 invited keynotes:
  - Interpretability, Privacy, and Ethics in Intelligent Systems - Prof. Catarina Silva, Univ. Coimbra, Portugal.
  - Activities of Daily Life (ADL) Recognition via Locomotion & Location Determination - Prof. Stefan Poslad, Queen Mary University of London, England
  - Smarter infrastructure monitoring and opportunities for innovation in asset management – Prof. Theo Tryfonas, University of Bristol, England

- 1 Tutorial session:
  - Using Energy Flexibility to Improve the Grid Interaction of nearly Zero-Energy Buildings – Rui Amaral Lopes, FCT-NOVA

- 1 Panel: “My Research for Life Improvement”
  - Hugo Gamboa – FCT-NOVA
  - Inês Oliveira – FCT-NOVA
  - André Mora – FCT-NOVA
  - Maria Marques – UNINOVA
  - João Pires – PhD student
  - João Rodrigues – PhD student
  - Moderator: Pedro Pereira

Co-located with DoCEIS 2020, and similar to previous year, another event was organized:

YEF-ECE 2020
4th International Young Engineers Forum on Electrical and Computer Engineering

This event was dedicated to young engineers to present results of their MSc theses or early career projects.
A total of **13** papers (out of 20 submissions) were accepted by the International Program Committee.
The proceedings were published by IEEE Xplore and also indexed in Web of Science and SCOPUS.

- Like previous years, this edition was highly successful, according to received feedback from the participants,
- Despite being organized online due to COVID-19, all sessions had a very good number of attendants.
- The organization of YEF-ECE was quite successful, as a 4th edition, and contributed to increase the number of participants.
- **5** students completed this course in 2020 (average grade: 16 in 20). A few of the registered students still need to deliver some evaluation elements (to be completed in the next edition).
- Regarding the various editions of DoCEIS, in addition to the books sold worldwide by Springer, the electronic version of the papers is having a **large number of downloads**:

Data provided by Springer (as of Dec 2020, https://link.springer.com/conference/doceis):

Edition	Chapter downloads	Since	Proceedings book
DoCEIS'10	**140 K**	April 2010	Emerging Trends in Technological Innovation
DoCEIS'11	**140 K**	April 2011	Technological Innovation for Sustainability
DoCEIS'12	**102 K**	April 2012	Technological Innovation for Value Creation
DoCEIS'13	**242 K**	April 2013	Technological Innovation for the Internet of Thing
DoCEIS'14	**116 K**	April 2014	Technological Innovation for Collective Awareness Systems
DoCEIS'15	**86 K**	April 2015	Technological Innovation for Cloud-based Engineering Systems
DoCEIS'16	**67 K**	April 2016	Technological Innovation for Cyber-Physical Systems
DoCEIS'17	**46 K**	May 2017	Technological Innovation for Smart Systems
DoCEIS'18	**15 K**	May 2018	Technological Innovation for Resilient Systems
DoCEIS'19	**12 K**	May 2019	Technological Innovation for Industry and Service Systems
DoCEIS'20	**12 K**	July 2020	Technological Innovation for Life Improvement

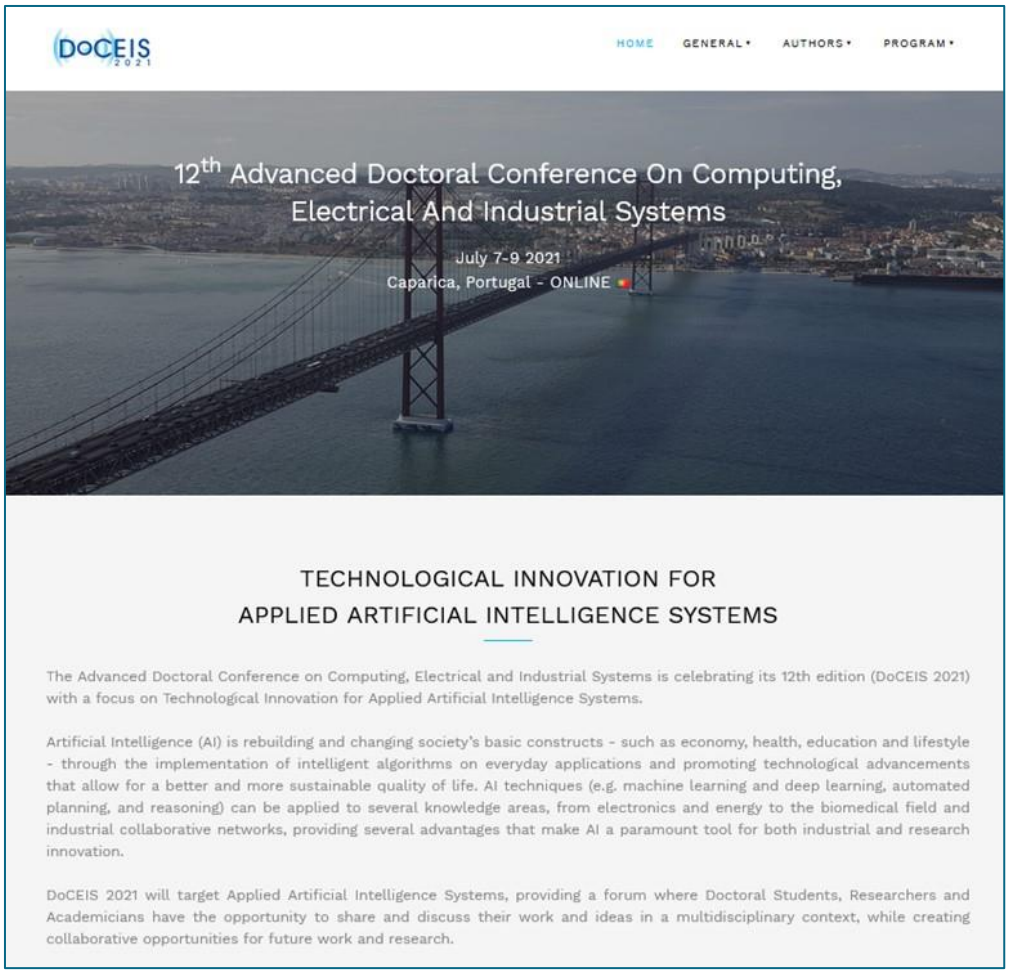
The **12th edition** of the conference - **DoCEIS'21** – started to be prepared in Sept 2020, and it shall take place in Caparica, on 7-9 July 2021 (online).

The theme chosen for this edition is:

"**Technological Innovation for Applied Artificial Intelligence Systems**".

This edition is coordinated by Prof.s L.M. Camarinha-Matos (*Conference chairman*), L. Gomes (*Organization chairman*), P. Pereira (*Associated activities chairman*), and J. Goes (*Financial chairman*).

For this edition, we are in the process of receiving submissions.



The proceedings are also expected to be published as a book by Springer, under the AICT series.

The conference site is available at: **http://doceis.dee.fct.unl.pt/**

Like in previous years, the 5th YEF-ECE forum is also being organized as an associated event:

http://sites.uninova.pt/yef-ece

The proceedings are also expected to be published by IEEE Xplore.

Free Option

Since this is a course that can be freely selected from any other courses offered by FCT at the PhD level or courses offered by NOVA Doctoral School, students are typically integrated in those courses and follow the normal program and evaluation rules of those courses.

Courses organized in a self-study / tutorial modality

This group includes the courses:

- Advanced Topics (9 options, to select one according to the specialization area)
- Research planning (leading to the Thesis Plan).

Advanced Topics

Regarding these courses, students are supposed to follow and individual study plan according to the list of selected topics for each specialization area (as described in the *Syllabus* of PDEEC) and interact with the professors in charge of those topics (also indicated in the *Syllabus*).

Some of these courses continue with some delays, as students do not have to follow a strict schedule. This situation also affects the progress on the Research Planning course.

In this area it is necessary to have a more active involvement of the professors associated to each topic in order to guarantee a more effective and timely progress.

Research Planning

This "course" is equivalent to a workload of one semester full time and involves the identification of the research question(s) and hypothesis(es), study and synthesis of the state of the art, and elaboration of the research plan. This work needs to be developed by the student in close interaction with the supervisor. The result should be a **Thesis Plan** to be discussed with the Thesis Accompanying Committee in a public seminar.

Only **3** students completed this course in 2020 (average grade: 18.33 in 20). This number is very limited, considering the number of registered students.

According to the PhD Program Regulations, the PhD students have up to 24 months to submit the report and apply for this public discussion (which, in principle, should happen between month 12 and month 24).

However, most students continue taking too long to finish their plans. The supervisors have a relevant role in this process. Only with a continuous monitoring and support from the supervisor it will be possible to reduce the traditionally excessive time spent with this activity.
The limit of 24 months should be an exception and not the norm. The desirable norm should be to finish all courses in 12 months (except for students in part-time).

Unfortunately, we have observed that some supervisors are not performing the expected supervision in this area, resulting in considerable delays.
Some supervisors also guide their students to include substantial research results in the Thesis Plan, which is not the intention for such Plan and has the negative consequence of leading to excessive delays.
TACs are now being asked to not focus on research results but rather on the key components expected in a thesis plan.

The Thesis Accompanying Committees (TACs) have been playing an important role in the improvement of the quality of the PhD research work. There are, however, a few cases in which the TAC assessment reports are too short and thus not providing useful guidance to the student. This situation needs to be improved.

In some areas there is an excessive repetition of the same names in the TACs of those areas. Although it might be difficult to find additional experts for some topics, it is **necessary to diversify the composition of the TACs** in order to guarantee the necessary independent assessment. As such, supervisors are asked to make an effort in this direction.

4.2 Edition of 2008/2009

Situation of the PhD students enrolled in 2008/2009 regarding the courses component:

Nº	Name	MTIC	ME	CD	PI	OL	TAcd	TAel	TAen	TAps	TArc	TArmi	TAscp	TAsii	TAtel	Graduated
30064	Ana Inês da Silva Oliveira															2016
30074	Carlos Manuel de Melo Agostinho															2012
30069	Daniel José M. Dias															2015
29760	David Duarte Pereira Inácio															2014
30068	Ezequiel Vale Carvalho															2015
30065	Filipa Alexandra Moreira Fernando															2017
29588	Filipe André de Sousa Figueira Bexiga															2015
30073	João Filipe S. Sarraipa															2013
29586	João Paulo Machado Mendes															2018
30070	José Carlos de Pinho Pinheiro															Suspended p
30063	José Inácio Pinto Rosado Rocha															
30066	José Pedro Lopes Ribeiro															2012
30004	Luís Miguel Bentes Moita Flores											N				Suspended p
29770	Nuno Alexandre Soares Domingues															2015
30067	Pedro Miguel Ribeiro Pereira															2013
30137	Raúl Eduardo Capela Tello Rato															2011
29768	Ruben Duarte Dias da Costa															2014
30072	Sérgio Miguel da Silva Oliveira															2017
30040	Tiago José Monteiro Baptista Cabral Ferreira															Suspended p

Finished course

Got equivalence

Waiting for public defense

N — Course not yet finished (delayed)

Note: PhD students that have quit were removed from this table.

15 students finished their theses till now.

Even considering that most of the remaining ones are part-time students, they should have finished already.
One student has not yet (officially) finished all courses!

Some students are **suspended**, probably because they have not yet paid the annual fee. It might even be the case that they quit but did not formalize their withdrawal from the program.

4.3 Edition of 2009/2010

Situation of the PhD students enrolled in 2009/2010 regarding the courses component:

Nº	Name	MTIC	ME	CD	PI	OL	TAcd	TAel	TAen	TAps	TArc	TArmi	TAscp	TAsii	TAtel	Graduated
33253	Ana Sofia Pacheco Fernandes (d)															2010
32555	Anabela Monteiro Gonçalves Pereira (d)															2010
33254	António Manuel Vieira Pombo															2015
32618	Carlos Manuel Esperiça Carvalho															2011
33240	Dora Helena Avelar Gonçalves (quit?)				N			N								Suspended
32608	Fábio Nobre															2014
33224	Eduardo Adelino Mateus Nunes Eusébio				N											Suspended p
33490	Eduardo Manuel Fonseca Morais Pinto (d)				N											Suspended
32678	Elena Nikolaevna Raikova															2018
33249	Fernando Joaquim Ganhão Pereira															2017
32574	Filipe de Carvalho Moutinho															2014
33270	Francisco José Dinis de Sousa Fernandes Ganhão															2014
32552	Hugo Rui Manuel Mendes da Silva Pinto	N	N	N	N											Suspended
32571	Gonçalo Moreira Cândido (e)															2013
32725	João Miguel Ferreira Costa da Cunha															Suspended p
32590	João Carlos Ferreira de Almeida Coqueiro															2015
32697	João Manuel Ferreira Martins				N											Suspended p
32734	João Pedro Alves de Oliveira (e)															2010
33572	José Alberto Oliveira Lima															2016
33271	José Miguel Ferreira Pinto Marques Lopes															2014
32606	José Rui Barbosa Coutinho (e)															2011
32585	José Xavier Ferreira Da Silva (d)												N			Suspended p

32564	Manuel Augusto Vieira															2012
33102	Marco António da Luz Delgado (quit?)	N	N		N											Suspended p
32612	Maria da Graça Vieira de Brito Almeida															2015
32632	Maria do Carmo Marques (a)															2012
32607	Michael Figueiredo (a)															2012
32643	Miguel Bacelar de Sousa Carneiro			N	N					N						Suspended
32617	Miguel Ramos Pereira (a)															2013
32626	Patricia Alexandra Pires Macedo (a)															2011
32733	Pedro Jorge Cristina Mendes		N	N	N	N						N				Suspended
33331	Pedro José Ambrósio Lobato (a)															2015
32577	Pedro Miguel Figueiredo Amaral (a)															2013
33101	Pedro Miguel Negrão Maló (a)															2013
32566	Raul Figueiredo Cordeiro Magalhães Correia															2018
33103	Regina Maria Frei Santos Barbosa (a)															2010
32719	Rui Manuel Carvalho dos Santos Azevedo Antunes (a)															2018
33332	Silviano Francisco Santos Rafael (a)															2010
32656	Svetlana Roudolfovna Chemetova															2018
32550	Tiago Oliveira Machado de Figueiredo Cardoso (a)															2012
32584	Vitor Manuel de Oliveira Fialho															2017

Equivalence

Finished course

N Course not yet finished (delayed)

(a) Student from pre-Bologna program (does not have to do the courses part)
(b) Entered in the 2nd phase
(c) Changed specialization area (new area: Electronics)
(d) Changed specialization area; as such he needs to do the Advance Topics in the new area

31 students finished their theses till now. Nevertheless, it should be noted that some of them were transferred from the pre-Bologna program, and thus have started before 2009. As most of the remaining ones are part-time students, it is desirable that most will finish soon (if they are still pursuing the PhD).

As shown in the above table, there are **unacceptable delays** regarding some courses, namely in what concerns the Research Planning. It is also the case that there was no progress in solving these cases since last 2 years. It is also likely that these students have quit but have not formalized their withdrawal from the program.

Several students are **suspended (10)**, mostly because they have not yet paid the annual fee (*suspended p*) or have quit, but they did not formalize their withdrawal from the program. Student 33102 seems to have quit.

4.4 Edition of 2010/2011

Situation of the PhD students enrolled in 2010/2011 regarding the courses component:

Nº	Name	MTIC	ME	CD	PI	OL	TAcd	TAel	TAen	TAps	TArc	TArmi	TAscp	TAsii	TAtel	Graduated
35499	Blazej Nowacki															2016
34339	Ehsan Shahamatnia															Suspended p
34752	Gonçalo Nuno Nascimento Ventura de Brito Nunes			N	N	N	N									Suspended p
35122	Hugo Tito Cordeiro															2016
35771	Ivan Iuri Alves Bastos (a)															2015
35831	João Luís Alvernaz de Melo (a)															2017
35719	João Tiago Vieira de Sousa Virote			N	N											Suspended p
35171	Magno Edgar da Silva Guedes	N		N	N	N						N				Suspended p
35276	Manuel Fernandes Carvalho			N	N	N								N		Suspended
35768	Mohammad Hadi Nategh (a)	N		N	N						N					Suspended p
35666	Nuno Miguel Abreu Luís															2015
35208	Pedro Mendes de Lacerda Peixoto de Magalhães															2017
38741	Raúl Manuel Mendes Dionisio (b)															2011
35661	Rogério Alexandre Botelho Campos Rebelo															2016
33761	Somayeh Abdollahvand															
35851	Vitor Manuel Guerra Vaz da Silva (a)															2015

Equivalence | Finished course | N – Course not yet finished (delayed)

(a) Entered in the 2nd phase
(b) Student from pre-Bologna program (does not have to do the courses part)

9 students finished their theses till now.

Also, in this edition there are unacceptable **major delays** regarding the conclusion of some courses.
Since these cases coincide with students that are suspended, it is likely that they have quit but did not formalize the withdrawal yet.

In the case a thesis plan is not available yet (5 suspended students), the TACs and supervisors should assess whether the student has the capacity to continue or not; or if the supervisors are able to guide these students. **It is not acceptable that after 10 years there is no thesis plan yet (even if some of them are part-time students).** One of them has finish the thesis plan but the grade is not registered yet because of lack of payment of tuition fee.

Student 33761 has submitted her thesis and is waiting for the viva.

4.5 Edition of 2011/2012

Situation of the PhD students enrolled in 2011/2012 regarding the courses component:

Nº	Name	MTIC	ME	CD	PI	OL	TAcd	TAel	TAen	TAps	TArc	TArmi	TAscp	TAsii	TAtel	Graduated
38744	Carlos Eduardo Dias Coutinho (a)															2013
38070	Carlos José Pinto da Silva															2015
38345	Fernanda Luís Lourenço Ferreira															2015
38346	José Alexandre Pires Ferreira															2017
38996	Luís Manuel Roque Duarte (a)				N											
38876	Maria Paula de Brito Graça (b)															
38050	Massimiliano Zanin															2014
38690	Miguel Alexandre Sousa Lopes de Brito															2016
38980	Miguel Duarte Carapito Coelho (b)				N											Suspended
38728	Nuno Manuel Ortega Amaro															2015
38972	Raúl Eduardo Capela Tello Rato (a) (c)															2012
38691	Rui Alexandre Neves Moreira				N	N			N							Suspended
38049	Sebastian Scholze															Suspended
38184	Sudeep Ghimire															2016
37772	Tahereh Nodehi															2014
38063	Tiago Miguel Delgado Gomes				N	N										

Equivalence | Finished course | N – Course not yet finished (delayed)

(a) Student from pre-Bologna program (does not have to do the courses part)
(b) Entered in the 2nd phase
(c) Self-supervised

10 students of this edition have finished their theses till now.

Also, in this edition there are **major delays** regarding the conclusion of some courses.
It is necessary that both the supervisors and the TACs more carefully check what is happening with the courses not finished yet.

In the case a thesis plan is not available yet (2 active and 2 suspended **students), the TACs and supervisors should assess whether the student has the capacity to continue or not; or if the supervisors are able to guide these students. It is not acceptable that after 9 years there is no thesis plan yet** (even if some of them are part-time students). One of them has

finish the thesis plan but the grade is not registered yet because of lack of payment of tuition fee.

4.6 Edition of 2012/2013

Situation of the PhD students enrolled in 2012/2013 regarding the courses component:

Nº	Name	MTIC	ME	CD	PI	OL	TAcd	TAel	TAen	TAps	TArc	TArmi	TAscp	TAsii	TAtel	Graduated
41203	Ali Abdollahy Gharbali															2018
41185	António Eduardo Carreiro Furtado															2017
40964	Catarina Inês Marques de Lucena															2016
41116	Eduardo José Resende Ortigueira															2017
41189	Fábio Emanuel Pais Januário															
41159	Hamidreza Tolue Joe Forush Tusi	N	N	N	N	N	N									Suspended p
41192	Hugo Alexandre de Andrade Serra															2017
41071	João Francisco Martinho Lêdo Guerreiro															2016
40662	Luis Filipe Romba Jorge				N	N			N							Suspended
41199	Nuno Manuel Gonçalves Vilhena															
41200	Pedro Miguel Lucas Arsénio															2017
41430	Ricardo André Martins Mendonça				N											Suspended p
41198	Rui Miguel Amaral Lopes															2017
41507	Slavisa Tomic															2017

Equivalence

Finished course

N Course not yet finished (delayed)

A positive aspect is that **9** students of this edition finished their theses.

Also, in this edition there are **major delays** regarding the conclusion of some courses. **It is necessary that both the supervisors and the TACs more carefully check what is happening with the courses not finished yet.**

In the case a thesis plan is not available yet (3 students), the TACs and supervisors should assess whether the student has the capacity to continue or not; or if the supervisors are able to guide these students. It is not acceptable that after 8 years there is no thesis plan yet (even if some of them are part-time students).

4.7 Edition of 2013/2014

Situation of the PhD students enrolled in 2013/2014 regarding the courses component:

Nº	Name	MTIC	ME	CD	PI	OL	TAcd	TAel	TAen	TAps	TArc	TArmi	TAscp	TAsii	TAtel	Graduated
43945	André Dionísio Bettencourt da Silva Rocha															2018
44429	Edgar Miguel Felício Oliveira da Silva (a)															2020
43962	Elsa Maria Marcelino de Jesus				N											
43621	Francisco Antero Cardoso Marques				N	N						N				Suspended
43984	Frederico João Gonçalves dos Santos Branco Martins	N	N	N	N	N			N							Suspended p
43619	Giovanni Di Orio				N	N						N				Suspended
44089	Kevin Pierre Nagorny															
43582	Leonardo Pedro Donas-Boto Vilhena Martins															2020
44126	Mário Rui Monteiro Marques															2018
44154	Nuno Rúben Ferreira Pereira															2019
44173	Thais Andrea Baldissera (a)															2019

Equivalence

Ongoing

Finished course

N Course not yet finished (delayed)

(a) Entered in the 2nd phase

6 students of this edition finished their theses.

Also, in this edition there are major delays regarding the conclusion of some courses. It is necessary that both the supervisors and the TACs more carefully check what is happening with the courses not finished yet.

Even if some students are part-time students, by now all courses should have been completed and the Thesis Plan should be available.
It is necessary that the supervisors check the situation.
It looks like that in several cases the supervisors are guiding the students to invest on the research activities before having a research plan approved, a situation that needs to be fixed!

One student (43984) has quit but did not formalize the withdrawal yet.

4.8 Edition of 2014/2015

Situation of the PhD students enrolled in 2014/2015 regarding the courses component:

Nº	Name	MTIC	ME	CD	PI	OL	TAcd	TAel	TAen	TAps	TArc	TArmi	TAscp	TAsii	TAtel	Graduated
46574	Ana Paula Pinto Correia															
46657	André Filipe Lopes Lourenço				N	N						N				Suspended
46416	António Jorge Teixeira Falcão			N	N	N								N		Suspended
46560	Artem Artemovych Nazarenko															
46316	Bruno Augusti Mozzaquatro															
46533	Esmaeil Kondori			N	N	N	N									Suspended p
46471	Miguel Duarte Madeira Fernandes															Suspended p
46575	Milica Marikj			N	N	N									N	Suspended
46581	Nazanin Vafaei															
46678	Paulo Alves Figueiras				N											
46651	Shirin Najdi															2018
46324	Vagner Savegnago Schaefer															Suspended p

1 student of this edition finished her thesis.

5 students have not finished all courses! All courses should have been finished long ago. In fact, some of them progressed very little during this year.
It is necessary that the supervisors check the situation.
It looks like that also in this edition, some supervisors continue guiding the students to invest on the research activities before having a research plan approved, a situation that needs to be fixed!

The situation with some suspended students is unclear.

4.9 Edition of 2015/2016

Situation of the PhD students enrolled in 2015/2016 regarding the courses component:

Nº	Name	MTIC	ME	CD	PI	OL	TAcd	TAel	TAen	TAps	TArc	TArmi	TAscp	TAsii	TAtel	Graduated
48978	Adriano Manuel Alves Ferreira (a)															

49139	[redacted]															2016
48689	[redacted]			N	N	N			N							
48872	[redacted]															
48895	[redacted]					N										
48801	[redacted]				N											
48305	[redacted]															2019
49014	[redacted]				N											Suspended P
48938	[redacted]					N										
48855	[redacted]				N	N										
48833	[redacted]															2017
48995	[redacted]				N	N										
48884	[redacted]			N	N	N								N		Suspended P
49015	[redacted]															Suspended
49030	[redacted]															2019
48889	[redacted]															

(c) In cooperation with Universidade Federal do Rio Grande do Sul, Brazil (joint PhD)

A positive aspect is that **4** students of this edition finished their theses.

Only 8 students (2 by equivalence) finished all courses!
In fact, some of them progressed very little during this year.

It is necessary that the supervisors check the situation.
It looks like that also in this edition, some supervisors are guiding the students to invest on the research activities before having a research plan approved, a situation that needs to be fixed!

Various students are suspended because they have not yet paid the annual fee.

4.10 Edition of 2016/2017

Situation of the PhD students enrolled in 2016/2017 regarding the courses component:

Nº	Name	MTIC	ME	CD	PI	OL	TAcd	TAel	TAen	TAps	TArc	TArmi	TAscp	TAsii	TAtel	Graduated
51334	[redacted]				N				N							
51324	[redacted]				N	(eq.)										
51567	[redacted] (a)															2018
51477	[redacted]		N	N	N	N						N				Suspended P
51443	[redacted]			N	N	N							N			Suspended p
51615	[redacted]				N	N										
49331	[redacted]															

(a) Dual PhD with Federal University of Para, Brazil

A positive aspect is that **1** student of this edition finished his thesis.

This edition is also late in terms of various courses !
The supervisors need to carefully check the situation.

4.11 Edition of 2017/2018

Situation of the PhD students enrolled in 2017/2018 regarding the courses component:

Nº	Name	MTIC	ME	CD	PI	OL	TAcd	TAel	TAen	TAps	TArc	TArmi	TAscp	TAsii	TAtel	Graduated
53892	Ameer Teimoorzadeh	N	N	N	N	N										Suspended P
53858	David Oliveira Borges				N	N									N	
54003	Duarte José Marques Alemão															
54352	Fayez Saleem Hassan Al-Jehany (a)	N	N	N	N	N					N					Suspended
53820	João Carlos de Fraga Gião da Silva				N	N										
53873	João Pedro Leal Abalada de Matos Carvalho															
53967	José Augusto Inácio	N	N	N	N	N			N							Suspended P
53856	José Manuel Lima D'Oliveira			N	N	N			N							
53556	Mohammad Reza Shahrokhi Yeganeh	Eq.		N	N	Eq.					Eq.					Suspended P
52272	Mohammadhassan Abdollahi Sotta		N	N	N	N			N							Suspended P
54130	Nuno Miguel Mendes Correia	N	N	N	N	N		N								Suspended P
53836	Ricardo Daniel Lopes Almeida				N	N										

This edition is quite late in several courses !
The supervisors need to carefully check the situation.

Some students might have quit but they did not formalize their withdrawal yet.

4.12 Edition of 2018/2019

Situation of the PhD students enrolled in 2018/2019 regarding the courses component:

Nº	Name	MTIC	ME	CD	PI	OL	TAcd	TAel	TAen	TAps	TArc	TArmi	TAscp	TAsii	TAtel	Graduated
54815	Akashkumar Rajaram			N	N	N									N	
56656	Alcides Teixeira Gonçalves	N	N	N	N	N			N							Suspended p
55073	Ameneh Mazandarani			N	N	N									N	
56413	Carolina Isabel Lagartinho de Oliveira				N	N										
54753	Dário Filipe Romana Pedro															
56395	Fábio Adriano Seixas Lopes				N	N								N		
56370	Guilherme André Marques Guerreiro			N	N	N								N		Suspended p
56422	Helena Rico Pereira				N	N							NN			
56365	Hugo André dos Santos Antunes			N	N	N								N		
56412	Humberto Almeida de Queiroz			N	N	N			N							
56492	Luis Miguel Lopes Mateus			N	N	N										
54822	Nastaran Farhadi Ghalati				N	N						N				
56437	Peiman Behbahani Nejad	N		N	N	N						N				Suspended p
56275	Sonia Hosseinpour			N	N	N			N							

This edition is quite late in terms of courses !
The supervisors need to carefully check the situation.

4.13 Edition of 2019/2020

Situation of the PhD students enrolled in 2019/2020 regarding the courses component:

Nº	Name	SRMT	EM	DC	RP	FO	AT cd	AT el	AT en	AT sp	AT cn	AT rim	AT cps	AT iis	AT tel	Graduated
58917	Ali Gashtasbi				N	N									N	
58902	Ayman Tayseer Ali Abu Sabah				N	N									N	
59034	Carlos Nuno de Paiva Marques	N	N		N	N							?			Suspended p
58990	Daniel Viana Dias				N	N			N							
58859	Divar Salah Fadhil				N	N									N	
58829	Guilherme Simões Calado de Brito		N		N	N								N		
58816	João Eduardo Albuquerque Martins Pereira Pires				N	N							N			
57424	Kwabena Amoako Kyeremeh	N	N		N	N			?							Suspended p
58986	Luis Alberto Estrada Jimenez				N	N						N				Suspended p
58997	Omid Nasrollahi	N			N	N									?	
59004	Pedro Correia Ferreira	N			N	N							?			
58814	Ricardo Alexandre Sacoto Martins				N	N									N	

This edition is also very in terms of courses !
Nevertheless, the pandemic situation of COVID-19 might have caused some disturbance.

Some students have not yet indicated their specialization area.

5. FINISHED THESES IN 2020 AND AWARDS

THESES

The following theses were concluded in 2020: 2

Nº	Name	Supervisor	Co-supervisor(s)	Theses in 2020
44429	**Edgar** Miguel Felício Oliveira da **Silva**	Ricardo Gonçalves		9 Sep 2020
43582	**Leonardo** Pedro Donas-Boto Vilhena **Martins**	José Manuel Fonseca	André Sanchez Ribeiro	22 Sep 2020

This year we had a reduced **number of finished theses;** nevertheless, 5 additional theses were submitted and are waiting for public defense (viva). The delay was caused by the COVID-19 pandemic.

Additional theses submitted 2020 and waiting defense: 5

Nº	Name	Supervisor	Co-supervisor(s)
33761	**Somayeh Abdollahvand**	João Goes	Luis Gomes
53873	**João** Pedro Leal Abalada de Matos **Carvalho**	José Manuel Fonseca	André Mora
41189	**Fábio** Emanuel Pais **Januário**	Paulo Gil	Alberto Cardoso
46316	**Bruno** Augusti **Mozzaquatro**	Ricardo Jardim Gonçalves	João Martins
41199	**Nuno** Manuel Gonçalves **Vilhena**	João Murta Pina	Anabela Pronto, Alfredo Álvarez

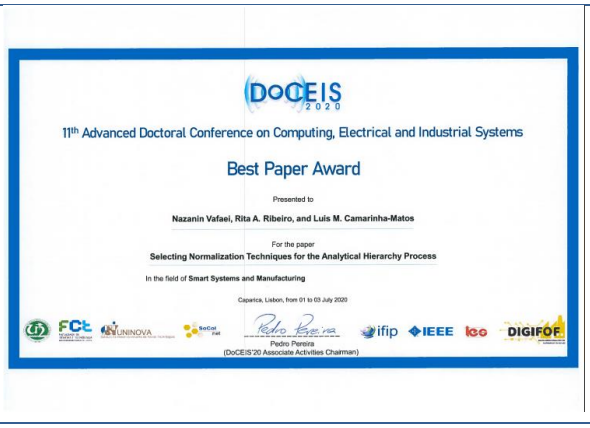
AWARDS

Five of our students got best paper awards in 2020:

Sudent: Nazanin Vafaei
Supervisor: Rita A. Ribeiro and Luis M. Camarinha-Matos

Award:
Best Paper Award
In the area "*Smart Systems and Manufacturing",* DoCEIS 2020, Caparica, Portugal (online), 1-3 Jul 2020.

Paper: "Selecting Normalization Techniques for the Analytical Hierarchy Process"



Sudent: Helena Rico Pereira
Supervisor: José Manuel Fonseca and Hugo Alexandre Ferreira

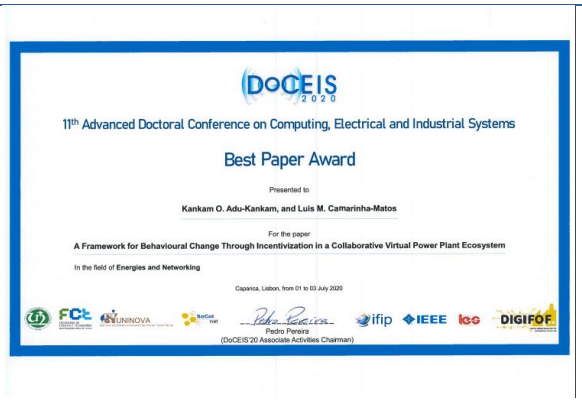
Award:
Best Paper Award
In the area "*Smart Health and Complex Algorithms",* DoCEIS 2020, Caparica, Portugal (online), 1-3 Jul 2020.

Paper: "Combination of Medical Imaging and Demographic Data for Parkinson's Disease Diagnosis"

Sudent: Kankam O. Adu-Kankam
Supervisor: Luis M. Camarinha-Matos

Award:
Best Paper Award
In the area "*Energies and Networking",* DoCEIS 2020, Caparica, Portugal (online), 1-3 Jul 2020.

Paper: "A Framework for Behavioural Change Through Incentivization in a Collaborative Virtual Power Plant Ecosystem"

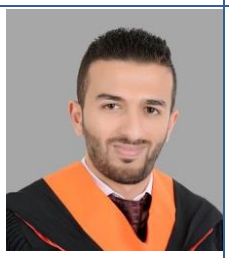


Sudent: Paula Graça
Supervisor: Luis M. Camarinha-Matos

Award:
Best Paper Award
In PRO-VE 2020 – 21st Working Conference on Virtual Enterprises, Valencia, Spain (online), 23-25 Nov 2020.

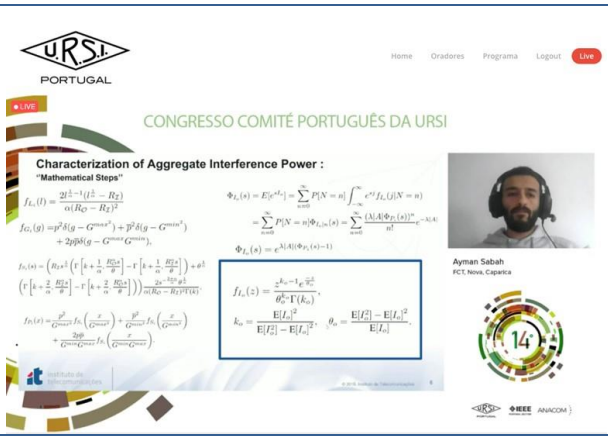
Paper: "Evaluating and Influencing the Performance of a Collaborative Business Ecosystem – A Simulation Study"

Sudent: Ayman Sabah
Supervisor: Rodolfo Oliveira



Award:
Best Paper Award
In 14º Congresso do Comité Português da URSI, 10 Dec 2020.

Paper: "Aggregate Interference Power Characterization for Directional Beamforming Wireless Networks"



6. SUPERVISION AND MONITORING

6.1 Supervisors, TACs, and research topics

The following tables show the situation of each student:

Edition of 2008/2009:

				TAC			
Nº	Name	Specialization	Thesis title (tentative)	Chair	Supervisor	Co-supervisor	External member
30064	Ana Inês da Silva Oliveira	Collaborative Enterprise Networks	An environment to support negotiation and contracting in collaborative networks	José Barata Oliveira	Luis Camarinha Matos		Henrique O'Neill
29737	Carla Solange Pires Correia Viveiros	Control and Decision	Fault tolerant control approaches – application to structural faults	Luís Gomes	Luís Palma	José Igreja	Alberto Jorge Lebre Cardoso
29714	Carlos Jorge de Cunha Matos	Signal Processing	Fractional-order linear systems implementation	Fernando Coito	Manuel Ortigueira	Octávio Páscoa Dias	José A. Tenreiro Machado
30074	Carlos Manuel de Melo Agostinho	Industrial Information Systems	Sustainability of systems interoperability in dynamic business networks	A. Steiger Garção	Ricardo Gonçalves		Ricardo Chalmeta
30069	Daniel José Medronho Foito	Energy	Máquina de Indução no Aproveitamento de Energias Renováveis	M.Ventim Neves	João Martins	José Querido Maia	Vitor Fernão Pires
29760	David Duarte Pereira Inácio	Energy	Estudo do Motor em Disco com o Rotor em Alumínio e em Supercondutor Multi-semente	Anabela Pronto	M.Ventim Neves	Alfredo Álvarez Garcia (ext) João Murta Pina	António Dente
30068	Ezequiel Francisco do Vale Carvalho	Energy	A Integração do Veículo Eléctrico no Sistema Eléctrico Nacional	João Martins	M.Ventim Neves	José Alberto Sousa	João Paulo da Silva Catalão
30065	Filipa Alexandra Moreira Ferrada	Collaborative Enterprise Networks	Emotions-oriented monitoring system of collaborative networks	José Barata Oliveira	Luis Camarinha Matos		Henrique O'Neill
29588	Filipe André de Sousa Figueira Barata	Control and Decision	Control of distribution networks with demand side management	João Martins	Rui Neves-Silva		José Manuel Igreja
30073	João Filipe dos Santos Sarraipa	Industrial Information Systems	Semantics adaptability for systems interoperability	A. Steiger Garção	Ricardo Gonçalves		Hervé Panetto
29586	João Paulo Machado Mendes	Energy	Modulador Híbrido de potência pulsada para aplicações médicas - O uso de semicondutores com linhas de transmissão	Luís Camarinha Matos	Luís Manuel Redondo	Manuela Vieira	Elmano da Fonseca Margato
30070	José Carlos de Ponte Ribeiro	Computational and Perceptional Systems	Exploração de diferentes semânticas na construção estruturada de modelos em redes de Petri e sua aplicação no desenvolvimento de sistemas embutidos	Luís Camarinha Matos	Luís Gomes	Fernando Manuel Melício	João Paulo Mestre Barros
30063	José Inácio Pinto Rosado Rocha	Computational and Perceptional Systems	System design optimization using real time genetic algorithm hardware implementations	João Goes	Luís Gomes	Octávio Páscoa Dias	Manuel Barata
30066	Luís Domingos Ferreira Ribeiro	Robotics and Integrated Manufacturing	Diagnosis in Evolvable Assembly Systems	Luís Camarinha Matos	José Barata Oliveira		Carlos Baptista Cardeira
30004	Luís Miguel Bentes Moita Flores	Robotics and Integrated Manufacturing	Evolvable/reconfigurable control architecture for complex and heavy manufacturing shopflor	Pedro Sousa	José Barata Oliveira		Mauro Onori
30067	Pedro Miguel Ribeiro Pereira	Electronics	Projecto de osciladores LC controlados por tensão por utilização de técnicas de optimização	Fernando José Almeida Vieira do Coito	Maria Helena Silva Fino	Mário Fernando Ventim Neves	João Vaz
29768	Ruben Duarte Dias da Costa	Industrial Information Systems	A framework to support semantic enhancement of knowledge in collaborative engineering projects	José Barata Oliveira	Celson Lima	A. Steiger Garção	Paulo Rupino
30072	Sérgio Miguel da Silva Onofre	Computational and Perceptional Systems	Arquitectura de Referência para Sistemas Físicos Monitorados por Sensores	José Barata Oliveira	Pedro Sousa	João Paulo Pimentão	Ernestina Menasalvas

30040	Tiago José Monteiro Baptista Cabral Ferreira	Computational and Perceptional Systems	Reference architecture for maintainability and reliability systems	João Paulo Pimentão	Pedro Sousa	José Barata Oliveira	Ernestina Menasalvas

Edition of 2009/2010:

				TAC			
Nº	**Name**	**Specialization**	**Thesis title (tentative)**	**Chair**	**Supervisor**	**Co-supervisor**	**External member**
33254	António Manuel Vieira Pombo	Energy	Planeamento multiobjectivo de sistemas em redes de distribuição	João Martins	Vitor Manuel de Carvalho Fernão Pires	João Murta Pina	Humberto Manuel Matos Jorge
32618	Carlos Manuel Ferreira Carvalho	Electronics	CMOS indoor light energy harvesting system for wireless sensing applications	João Goes	Nuno Paulino		Jorge Fernandes
33240	Dora Helena Avelar Gonçalves	Control and Decision	Análise Transiente de fotodíodos de a-Si:H para aplicações da optoelectrónica		Alessandro Fantoni	Manuela Vieira	
32608	Edinei Santin	Electronics	A built-in Self-Test Technique for High Speed Analog-to-Digital Converters	Nuno Paulino	João Goes	Luís Oliveira	Jorge M. dos Santos Ribeiro Fernandes
33224	Eduardo Adelino Mateus Nunes Eusébio	Energy	Agentes comerciais no mercado de energia eléctrica		Jorge Alberto Mendes Sousa	Mário Fernando Ventim Neves	
32678	Elena Nikolaevna Baikova	Energy	Energy distribution by high-power high-frequency wireless methods	Fernando Coito	Stanimir Valtchev	Vitor Pires	Duarte de Mesquita e Sousa
33249	Fernando Joaquim Ganhão Pereira	Computational and Perceptional Systems	Petri nets and reconfigurable computing platforms	Aniko Katalin Horvath da Costa	Luís Gomes		Ricardo J. Machado
32574	Filipe de Carvalho Moutinho	Computational and Perceptional Systems	Petri Nets and heterogeneous distributed embedded systems design	Aniko Katalin Horvath da Costa	Luís Gomes		João Miguel Fernandes
33270	Francisco José Dinis de Sousa Fernandes Ganhão	Telecommunications	Cross-Layer design and optimization for power-efficient low earth orbit satellit	Paulo da Costa Luís da Fonseca Pinto	Rui Dinis	Luís Bernardo	Nuno M. Branco Souto
32552	Francisco Manuel Mendes da Silva Pina	Energy					
32590	João Carlos Ferreira de Almeida Casaleiro	Electronics	MOSFET - only radio receiver	João Carlos Palma Goes	Luís Oliveira		Manuel Medeiros Silva
32697	João Manuel Ferreira Martins	Electronics	Using reconfigurable computing to improve the performance of massively parallel processing architectures		Mário Pereira Véstias	Manuela Vieira	
32725	João Miguel Ferreira Caldas da Costa	Control and Decision	Classification and Analysis of Sleep Spindles	Adelino Rocha Ferreira da Silva	Manuel Ortigueira	Maria Teresa Aguiar dos Santos Paiva	António Serralheiro
33271	José Miguel Ferreira Preto Marques Luzio	Telecommunications	High efficiency transmission techniques for broadband wireless systems	Luís Filipe Lourenço Bernardo	Rui Dinis	Paulo Montezuma	João Marques Silva
33268	José Pedro Magalhães Lucas	Computational and Perceptional Systems	Behavioral model for distributed automation systems	José António Barata de Oliveira	Luís Gomes	João Martins	Paulo Leitão
32585	José Xavier Ferreira da Silva	Telecommunications	Computacional intelligence in space weather prediction for aviation	José Manuel Matos Ribeiro da Fonseca	(Lost the supervisor)	Ivan Dorotovic	Luis Correia
33572	José Alberto Oliveira Lima	Energy	Real-time intelligent optimization and learning for intelligent buildings	José António Barata de Oliveira	João Martins	Celson Lima	Paulo Rupino
32564	Manuel Augusto Vieira	Electronics	Three transducers for one photo detector: essays for optical communication	Ricardo Luís Rosa Jardim Gonçalves	Paula Louro Antunes (ext)	A. Steiger Garção	Manuel Martins Barata
32612	Maria da Graça Vieira de Brito Almeida	Computational and Perceptional Systems	Image Processing for Displacement Measurements	André Teixeira Bento Damas Mora	José Manuel Fonseca	Fernando Manuel Melício	Arnaldo Joaquim Abrantes
32643	Miguel Bacelar de Sousa Carneiro	Processamento de Sinais	Automatic sleep stage classification using electroencephalography (EEG) signal analysis		Arnaldo Batista	Manuel Ortigueira	

32613	Nuno Paulo Real Veiga Cardoso	Signal Processing	High-frequency electrocardiogram wavelet analysis	Rui Manuel Leitão Santos Tavares	Arnaldo Batista	Manuel Ortigueira	Maria Cristina E. B. Prista Caetano
32733	Pedro Jorge Cristina Mendes	Robotics and Integrated Manufacturing			(Lost the supervisor)		
33331	Pedro José Ambrósio Lobato	Energy	A Máquina eléctrica de relutância comutada - análise de funcionamento como gerador em aproveitamentos eólicos	Mário Fernando Ventim Neves	Armando Pires (ext)	João Martins	Joaquim António F. Gonçalves Dente
32566	Raúl Figueiredo Cordeiro de Magalhães Correia	Computational and Perceptional Systems	Euronet Lab a cloud V-Lab Environment	Luis Gomes	José Manuel Fonseca	Andrew Donnellan (ext)	Amine Bergia
32719	Rui Manuel Carvalho dos Santos Azevedo Antunes	Control and Decision	Controlo em Sistemas de Interacção Humano-Máquina	(pre-Bologna)	Luis Palma	Herminio Duarte Ramos	
33332	Silviano Francisco dos Santos Rafael	Energy	Controlo de posição angular de uma máquina eléctrica de relutância comutada 8/6	Fernando Coito	Armando Pires (ext)	Steiger Garção / Paulo José Costa Branco (ext)	Joaquim A. Fraga Gonçalves Dente
32656	Sveltana Roudolfovna Chemetova	Energy	Estimação de padrões de consumo de energia eléctrica	João Miguel Murta Pina	Paulo Jorge da Costa Santos (ext)	M. Ventim Neves	Jorge Alberto Mendes de Sousa
32584	Vitor Manuel de Oliveira Fialho	Electronics	Estudo e optimização do ruído de fase em osciladores locais para comunicação sem fios	Luís Augusto Bica Gomes de Oliveira	Fernando M-Ascenso Fortes (ext)	Manuela Vieira	Mário Vestas
33490	Eduardo Manuel Ferreira Morais Pinto	Robotics and Integrated Manufacturing	Cooperation in multi-ambient swarm robots	Luís Manuel Camarinha de Matos	José Barata Oliveira		Jorge Manuel Miranda Dias

Note: José Xavier Ferreira da Silva no longer has supervisor, as he is not contactable for a long time.

As shown in the above table, some students from 2009/2010 still **do not have a TAC**, which is not acceptable!
It is absolutely urgent that their supervisors submit the proposals for TACs.
Some lost their supervisor due to being inactive.

Francisco Pina and José Silva have lost their supervisor due to their underperformance during the last years. It is unclear if they intend to continue.

Edition of 2010/2011:

				TAC			
Nº	**Name**	**Specialization**	**Thesis title (tentative)**	**Chair**	**Supervisor**	**Co-supervisor**	**External member**
35499	Blazej Nowacki	Electronics	Design of sigma-delta modulators for analog-to-digital conversion intensively using passive switched-capacitor circuits	João Pedro Abreu de Oliveira	Nuno Filipe Silva Veríssimo Paulino	João Carlos Palma Goes	Jorge Manuel Correia Guilherme
34339	Ehsan Shahamatnia	Industrial Information Systems	Automatic solar feature characterization and tracking	José Manuel Fonseca	Rita Ribeiro	Ivan Dorotovic (ext)	João Fernandes
34752	Gonçalo Nuno Nascimento Ventura de Brito Nunes	Control and Decision	Topologias multi-agente em redes de sensores e actuadores sem fios: aplicação ao controlo tolerante a falhas	Rui Alexandre Nunes Neves-Silva	Paulo José Carrilho de Sousa Gil	Alberto Jorge Lebre Cardoso (ext)	Mário José Gonçalves Cavaco Mendes
35122	Hugo Tito Cordeiro	Signal Processing	Reconhecimento de patologias da voz usando técnicas de procesamento da fala	André Mora	Carlos Eduardo de Meneses Ribeiro (ext)	José Manuel Fonseca	Isabel Cristina Ramos Peixoto Guimarães
35771	Ivan Iuri Alves Bastos (a)	Electronics	MOSFET-only low noise amplifiers	João Carlos Palma Goes	Luís Augusto Bica Gomes de Oliveira	Manuel de Medeiros Silva (ext)	Jorge Manuel Ribeiro dos Santos
35831	João Luís Alvernaz de Melo (a)	Electronics	Design of a low cost CMOS modulator for class D audio power amplifiers with very high efficiency	João Pedro Abreu de Oliveira	Nuno Filipe Silva Veríssimo Paulino	João Carlos Palma Goes	Marcelino Bicho dos Santos
35719	João Tiago Vieira de Sousa Virote *	Control and Decision	Methodologies for optimal control of networked distributed systems				
35171	Magno Edgar da Silva Guedes *	Robotics and Integrated Manufacturing	Analysis of operator's behaviors in working places				
35276	Manuel Fernandes Carvalho *	Industrial Information Systems	Algoritmo de aprendizagem automática para construção de variáveis linguísticas para sistemas de monitorização				

35666	Nuno Miguel Abreu Luis	Telecommunications	Medium Access Control Design for Distributed Opportunistic Radio Networks	Luis Bernardo	Rodolfo Alexandre Duarte Oliveira	Rui Miguel H. Dias Morgado Dinis	Paulo Marques
35208	Pedro Mendes de Lacerda Peixoto de Magalhães	Energy	Control and demand-oriented optimization of photovoltaic-thermal (PV-T) solar collectors	Fernando J. Almeida Vieira Coito	João Francisco Alves Martins	António Joyce (ext)	António Gomes Martins
35661	Rogério Alexandre Botelho Campos Rebelo	Computational and Perceptional Systems	Petri nets and human-system interactions design	Luis Palma	Luís Filipe Santos Gomes	Aniko K. Horvath da Costa	João Paulo Barros
33761	Somayeh Abdollahvand	Electronics	Design of high-performance low-noise and low-power mixed-signal CMOS circuits employing self-biasing and low-voltage techniques	Luis Oliveira	João Carlos Palma Goes	Luís F. S. Gomes	José Soares Augusto
35851	Vitor Manuel Guerra Vaz da Silva (a)	Electronics	Demultiplexing optical communications with visible light selector	Rui Tavares	Manuela Vieira	Manuel Martins Barata (ext)	João M.Serra

J. Virote, M. Guedes and M. Fernandes apparently quit but have not formalized their withdrawal yet. They no longer have a supervisor, as they are not contactable for a long time.

Edition of 2011/2012:

				TAC			
Nº	**Name**	**Specialization**	**Thesis title (tentative)**	**Chair**	**Supervisor**	**Co-supervisor**	**External member**
38744	Carlos Eduardo Dias Coutinho (a)	Industrial Information Systems	(Transição pré-Bolonha) NEGOSEIO: Framework for the Sustainability of Model-oriented Enterprise Interoperability		Ricardo Gonçalves	Adina-Georgeta Bratu Cretan (ext)	
38070	Fábio José Pinto da Silva	Telecommunications	Users and Channel Estimation for Network Diversity Multiple Access	Rodolfo Alexandre Duarte Oliveira	Rui Dinis	Paulo Montezuma Carvalho	Francisco Cercas
38345	Fernando Luís Lourenço Ferreira	Computational and Perceptional Systems	Framework for knowledge Management based on Neuroscience Models	João Martins	Ricardo Gonçalves		Pedro Santos Pinto Gamito
38960	Joaquim Moreira Lima (b)	Energy	Distributed power generation in smart grids	João Carlos Palma Goes	José Barata	João Martins	Rui Gameiro Castro
38346	José Alexandre Pires Ferreira	Industrial Information Systems	Monitoring morphisms to support sustainable interoperability of networked enterprise systems	José Barata Oliveira	Ricardo Gonçalves	Carlos Manuel Melo Agostinho (ext)	João Pedro Mendonça de Assunção da Silva
38996	Luis Miguel Rego Pires (b)	Electronics	Ultra-low power RF CMOS digital transceiver using parametric signal conversion in nano-scale CMOS technology	João Carlos da Palma Goes	João Pedro Oliveira		Jorge Manuel Correia Guilherme
38876	Maria Paula de Brito Graça (b)	Collaborative Enterprise Networks	Performance Indicators for Collaborative Business Ecosystems	João Martins	Luis Camarinha Matos		António Abreu
38050	Massimiliano Zanin	Computational and Perceptional Systems	Complex networks and data mining: toward a new perspective for the understanding of complex systems	Luis Camarinha Matos	Pedro Sousa	Stefano Boccaletti (ext)	Ernestina Menasalvas
38690	Miguel Alexandre Sousa Ferra de Bega	Industrial Information Systems	Framework to facilitate the discovery of data sources using semantic web principles	José Barata Oliveira	Ricardo Gonçalves	Adina-Georgeta Bratu Cretan (ext)	João Pedro Mendonça de Assunção da Silva
38980	Miguel Pinto Campilho Gomes (b)	Electronics	Automated flat circuit-level topology generation	Nuno Paulino	Rui Santos Tavares	João Goes	Nuno Cavaco Gomes Horta
38728	Nuno Manuel Ortega Amaro	Energy	Superconducting Magnetic Energy Storage (SMES) for power quality applications	Mário Ventim Neves	João Murta Pina	José Ceballos Martínez (ext) + João Martins	Victor Fernão Pires
38972	Raúl Eduardo Capela Tello Rato (a)(c)	Signal Processing	Formalização da tolerância à ausência de dados do processamento de sinais discretos		(self-supervised)		
38691	Rui Alexandre Neves Medeiros	Energy	Wireless energy transfer for robotic purposes	Fernando Coito	Stanimir Valtchev	Mário Rui Melício da Conceição (ext)	Victor Manuel Fernandes Mendes
38049	Sebastian Scholze	Industrial Information Systems	Efficient embedded services applying context awarenes for agile manufacturing	Luís Manuel Camarinha Matos	José Barata		Edmundo Monteiro

38184	Sudeep Ghimire	Industrial Information Systems	Self-* Framework for service system	João Goes	Ricardo Gonçalves	António C. Bárbara Grilo	Ricardo Jorge Silvério de Magalhães Machado
37772	Tahereh Nodehi	Computational and Perceptional Systems	A new MDA-SOA framework for intercloud interoperability	José Barata Oliveira	Ricardo Gonçalves		João Pedro Mendonça de Assunção da Silva
38063	Vasco Miguel Delgado Gomes	Industrial Information Systems	A framework to support standard-based communication between the heterogeneous building-related systems	Ricardo Luís Rosa Jardim Gonçalves	Celson Pantoja Lima (ext)	João Martins + Paul Nicolae Borza (ext)	Silvio Mariano

(a) From pre-Bolonha
(b) Entered in the 2nd phase
(c) Self-supervised

Edition of 2012/2013:

				TAC			
Nº	**Name**	**Specialization**	**Thesis title (tentative)**	**Chair**	**Supervisor**	**Co-supervisor**	**External member**
41203	Ali Abdollahy Gharbali	Signal Processing	Biomedical Signal Processing	Rui Neves Silva	José Manuel Fonseca		André Lourenço
41185	António Eduardo Carreiro Furtado	Telecomunicações	Advanced PHY/MAC design for infrastructure-less wireless networks	Luís Filipe Lourenço Bernardo	Rodolfo Oliveira	Rui Dinis	Pedro Joaquim Amaro Sebastião
40964	Catarina Inês Marques de Lucena	Industrial Information Systems	Semantic adaptation of knowledge representation systems	João Francisco Alves Martins	Ricardo Gonçalves	João Filipe dos Santos Sarraipa (ext)	Teresa Cristina de Freitas Gonçalves
41116	Eduardo José Resende Ortigueira	Electronics	Wideband Oscillators Synchronized by a magnetic nano-oscillator	João Carlos Palma Goes	Luís Oliveira	Jorge Manuel dos Santos Ribeiro Fernandes (ext)	Igor Filanovski
41189	Fábio Emanuel Pais Januário	Control and Decision	Resilient control systems over wireless sensor and actuator networks: a multi-agent based approach	Luís Filipe Santos Gomes	Paulo Gil	Alberto Jorge Lebre Cardoso (ext)	Mário José Gonçalves Cavaco Mendes
41159	Hamidreza Tolue Joe Forush Tusi	Control and Decision					
41192	Hugo Alexandre de Andrade Serra	Electronics	Design of switched-capacitor filters using low gain amplifiers in advanced CMOS technologies	João Pedro Abreu de Oliveira	Nuno Paulino		Nuno Cavaco Gomes Horta
41071	João Francisco Martinho Lêdo Guerreiro	Telecommunications	Optimum performance and sub-optimal receivers for OFDM signals	Rodolfo Alexandre Duarte Oliveira	Rui Dinis	Paulo Montezuma	Marco Cravo Gomes
40662	Luis Filipe Romba Jorge	Energy	Wireless power transfer in polyphase systems with optimized control	Fernando Coito	Stanimir Valtchev	Mário Rui Melício da Conceição (ext)	Victor Manuel Fernandes Mendes
41199	Nuno Manuel Gonçalves Vilhena	Energy	Contribution for the study of integration of the saturated cores fault current limiters in electrical distribution grids	João Francisco Alves Martins	João Murta Pina	Anabela Pronto + Alfredo Álvarez García (ext)	Antonio Morandi
41200	Pedro Miguel Lucas Arsénio	Energy	Contribution for the study of inductive fault current limiters in distribution electric grids	João Martins	João Murta Pina	Anabela Pronto + Alfredo Álvarez García (ext)	Istvan Vajda
41430	Ricardo André Martins Mendonça	Robotics and Integrated Manufacturing	Framework for swarm cognition	José Manuel Fonseca	José Barata Oliveira	Pedro Figueiredo Santana (ext)	João Ascenso
41198	Rui Miguel Amaral Lopes	Energy	Gestão de energia em edifícios no contexto da internet of things	Luís Filipe Santos Gomes	Celson Lima (ext)	João Martins + Daniel Aelenei (ext)	João Peças Lopes
41507	Slavisa Tomic	Telecommunications	Cognitive radio	Paulo Montezuma Carvalho	Marko Beko	Rui Dinis	Fernando Duarte Nunes

Apparently H. Tusi has quit, but he didn't formalize his withdrawal.

Edition of 2013/2014:

				TAC			
Nº	**Name**	**Specialization**	**Thesis title (tentative)**	**Chair**	**Supervisor**	**Co-supervisor**	**External member**
43945	André Dionísio Bettencourt da Silva Rocha	Robotics and Integrated Manufacturing	An architecture for self-organizing conveyor-based material handling systems	Ricardo Gonçalves	José Barata Oliveira	Luis Domingos Ribeiro (ext)	Paulo Leitão
44429	Edgar Miguel Felício Oliveira da Silva (a)	Computational and Perceptional Systems	A multi criteria co-design for cyber-physical systems	João Francisco Alves Martins	Ricardo Luis Rosa Jardim Gonçalves		João Pedro Mendonça da Silva
43962	Elsa Maria Marcelino de Jesus	Industrial Information Systems	Knowledge-based framework for an effective technology transfer from research to industry	Anabela Monteiro Gonçalves Pronto	Ricardo Gonçalves		João Pedro Mendonça da Silva
43621	Francisco Antero Cardoso Marques	Robotics and Integrated Manufacturing	Context-aware navigation for long lasting operation of multi-robot systems	Luis Gomes	José Barata Oliveira	Pedro Figueiredo Santana	Victor José de Almeida e Sousa Lobo
43984	Frederico João Gonçalves dos Santos Branco Martins	Energy					
43619	Giovanni Di Orio	Robotics and Integrated Manufacturing	Self-adaptable production systems	Pedro Sousa	José Barata Oliveira		Luis Domingos Ribeiro
44089	Kevin Pierre Nagorny	Robotics and Integrated Manufacturing	Service Oriented architecture based manufacturing to support product life-cycle	Pedro Sousa	José Barata Oliveira	Armando Walter Colombo	Luis Domingos Ferreira Ribeiro
43582	Leonardo Pedro Donas-Boto Vilhena Martins	Computational and Perceptional Systems	Study of the kinetics of asymmetric disposal of aggregates in cell division and its correlation to functional aging in vivo measurements, one event at a time	André Teixeira Bento Damas Mora	José Manuel Fonseca	André Sanchez Ribeiro	Adriano José Alves de Oliveira Henriques
44126	Mário Rui Monteiro Marques	Control and Decision	Model Reference for USV	José António Barata de Oliveira	Fernando Coito	Victor José de Almeida e Sousa Lobo	António Joaquim dos Santos Serralheiro
44154	Nuno Rúben Ferreira Pereira	Electronics	Design of analog-to-digital converters with embedded mixing for ultra-low-power	Rui Dinis	João Goes		Jorge Manuel Ribeiro Fernandes
44173	Thais Andrea Baldissera (a)	Collaborative Enterprise Networks	Personalization and evolution of collaborative business services	Rita A. Ribeiro	Luis M. Camarinha-Matos		Patrícia Alexandra de Pires Macedo

(a) Started in the 2nd semester

1 student has not proposed a **supervisor** yet. And it is not clear if he intends to continue.

Edition of 2014/2015:

				TAC			
Nº	**Name**	**Specialization**	**Thesis title (tentative)**	**Chair**	**Supervisor**	**Co-supervisor**	**External member**
46574	Ana Paula Pinto Correia	Electronics	A paradigm shift in the design of analog circuits targeting nano-scale CMOS and large-scale TFT technologies	João Pedro Abreu de Oliveira	João Carlos Palma Goes	Pedro Miguel C. Barquinha (ext)	Vitor Manuel Grade Tavares
46657	André Filipe Lopes Lourenço	Robotics and Integrated Manufacturing					
46416	António Jorge Teixeira Falcão	Industrial Information Systems	Innovative Methods for Visualisation & Correlation of Large Scale Connected Object Data		Maria Rita Sarmento de Almeida Ribeiro		

46560	Artem Artemovych Nazarenko	Collaborative Enterprise Networks	Collaborative cyber-physical systems	Luís Filipe Santos Gomes	Luís Manuel Camarinha de Matos		Patrícia Alexandra de Pires Macedo
46316	Bruno Augusti Mozzaquatro	Industrial Information Systems	A framework to improve security and privacy on the Internet of Things	Anabela Monteiro Gonçalves Pronto	Ricardo Luís Rosa Jardim Gonçalves	João Francisco Alves Martins	Bruno Andò
46533	Esmaeil Kondori	Control and Decision	Dynamic Multiple Criteria Decision Making for Risk Management				
46471	Miguel Duarte Madeira Fernandes	Electronics	High Efficiency Transceivers Blocks designed in modern CMOS technologies	João Pedro Abreu de Oliveira	Luís Augusto Bica Gomes de Oliveira	João Carlos da Palma Goes	Michael Figueiredo
46575	Milica Mariki	Telecommunications	(Quit?)				
46581	Nazanin Vafaei	Collaborative Enterprise Networks	Data Normalization in Decision Making Processes	José M. Fonseca	Rita A. Ribeiro	Luís Manuel Camarinha de Matos	Leonilde Varela
46678	Paulo Alves Figueiras	Industrial Information Systems	Multi-source Big Data Fusion Driven Proactivity for Intelligent Mobility	Anabela Gonçalves Pronto	Ricardo Luís Rosa Jardim Gonçalves	João Moura Pires	Celson Pantoja Lima
46348	Raquel Alexandra Abrantes Melo	Industrial Information Systems	Orchestration of Things	José António Barata de Oliveira	Ricardo Luís Rosa Jardim Gonçalves	Carlos M. Melo Agostinho	Raul Poler
46651	Shirin Najdi	Signal Processing	Feature Selection in Sleep Stage Classification	Rita Ribeiro	José Manuel Matos Ribeiro da Fonseca		Rui Ferreira Silva
46324	Vagner Savegnago Schaefer	Energy	Comfort and energy efficiency in service buildings	Ricardo Gonçalves	João Francisco Alves Martins		Celson Pantoja Lima

Some students do not have CAT yet. It is **urgent to solve this issue**.

3 students have not proposed a **supervisor** yet. This situation cannot continue and needs to be solved **urgently**.

M. Mariki seems to have quit but did not formalize her withdrawal.

Edition of 2015/2016:

				TAC			
Nº	**Name**	**Specialization**	**Thesis title (tentative)**	**Chair**	**Supervisor**	**Co-supervisor**	**External member**
48978	Adriano Manuel Alves Ferreira (a)	Robotics and Integrated Manufacturing	Self-sustainable Holonic Multi-Agent System Management in Smart Electrical Microgrids	Ricardo Gonçalves	José Barata	Paulo Leitão	Thomas Strasser
49139	Anselmo Rafael Cukla (b)	Robotics and Integrated Manufacturing	Robôs Manipuladores Baseados em Módulos Mecatrônicos		Eduardo André Perondi	José Barata	
48689	Fernando Jorge Chapita de Castro Monteiro	Energy	A Framework for the Integration of Renewable Energy	José Barata	João Miguel Murta Pina	João Francisco Alves Martins	Miguel Centeno Brito
48872	José Teixeira Gonçalves	Energy	Desenvolvimento de um Retificador Trifásico Híbrido Unidirecional com Conversor Boost	Luis Camarinha-Matos	Stanimir Stoyanov Valtchev	Frede Blaabjerg + Rui Melício	Vitor Mendes
48895	Kankam Okatakyie Adu-Kankam	Collaborative Enterprise Networks	Optimization of virtual power plants response using a Collaborative Network approach	João Martins	Luis Camarinha-Matos		Patrícia Macedo
48801	Luis Miguel Gomes Tavares	Electronics	Optimal sparsity bases for Compressed Sensing application to Cognitive Radio Spectrum Sensing	Paulo Montezuma Carvalho	José António Beltran Gerald	João Carlos Palma Goes	Vitor Mendes Silva
48305	Luís Miguel do Rosário Irio	Telecommunications	Interference Characterization in Advanced Wireless Communication Systems	Rui Miguel Henriques Dias Morgado Dinis	Rodolfo Alexandre Duarte Oliveira		Francisco António Bucho Cercas
49014	Mafalda Palma da Silva Viola Parreira Rocha	Robotics and Integrated Manufacturing	Collaborative Resilience for Smart Products Manufacturing	(Quit)			

48938	Majid Zamiri	Collaborative Enterprise Networks	Mass Collaboration and Learning: Structure and Methods	Ricardo Gonçalves	Luis Camarinha-Matos		António Abreu
48855	Masoomeh Ramezani	Collaborative Enterprise Networks	Collaborative Networks and Disruptive Environments				
48833	Márcio José Moutinho da Ponte (b)	Industry Information Systems	Referencial Semântico da Identificação Botânica de Espécies Amazônicas		Celson Lima	Ricardo Gonçalves	
48995	Miguel de Lima Teixeira	Electronics	Neuro-Inspired Ultra-low-power CMOS Electronic System (mW range) for ECG and BMI Applications	João Pedro Abreu de Oliveira	João Carlos Palma Goes	José Carlos Príncipe	Vitor Manuel Grade Tavares
48884	Nuno Ricardo Zacarias Ramos	Industry Information Systems					
49015	Pedro Miguel Lima Monteiro	Robotics and Integrated Manufacturing	Energy monitoring and optimization framework - Complex networks approach	José António Barata de Oliveira	Pedro Sousa		Ernestina Menasalvas
49030	Ricardo Alexandre Fernandes da Silva Peres	Robotics and Integrated Manufacturing	An Intelligent Predictive Maintenance Approach for Evolvable Smart Systems	Ricardo Luís Rosa Jardim Gonçalves	José Barata	Paulo Leitão	Carlos Baptista Cardeira
48889	Shahnam Pasandideh	Computational and Perceptional Systems	A framework for designing resilient cyber physical social system	João Martins	Luis Gomes		João Paulo Barros

2 students do not have TAC yet. This situation cannot continue and needs to be solved **urgently**.

Edition of 2016/2017:

				TAC			
Nº	**Name**	**Specialization**	**Thesis title (tentative)**	**Chair**	**Supervisor**	**Co-supervisor**	**External member**
51334	Adriana Mar Brazuna de Jesus	Energy	The use of cooperative NZEB communities to improve the grid resilience	Luis Camarinha-Matos	João Martins	Pedro Pereira	Sílvio José Mariano
51324	Andreia Filipa Valada Pereira Artifice	Industry Information Systems	Smart systems to enhance student's cognitive skills	João Martins	Ricardo Gonçalves	João Sarraipa	Yacine Ouzrout
51567	José Roberto Branco Ramos Filho (a)	Industry Information Systems	Um modelo conceitual de ecossistema de inovação baseado em fluxo de conhecimento		(Supervisor in Brazil)	Ricardo Gonçalves	
51477	Koorosh Aslansefat						
51443	Mohammad Julashokri	Computational and Perceptional Systems	Intelligent framework for interoperability in cyber-physical systems network	José Barata	Ricardo Gonçalves		João Pedro Mendonça da Silva
51615	Paulo Jorge Passos Sério Lourenço	Electronics	Amorphous Silicon Photonics Waveguides	João Goes	Manuela Vieira	Alessandro Fantoni	José Figueredo
49331	Ricardo Fale de Carvalho Madeira	Electronics	Study of fully integrated energy harvesting power management units (PMUs) for internet of things (IoT) applications	Luis Oliveira	Nuno Paulino		Jorge M. dos Santos Ribeiro Fernandes

(a) Dual PhD with Federal University of Para, Brazil

1 student has not proposed a **supervisor** yet (although it appears that he has quit the program). 2 of them do not have TAC yet! This situation cannot continue and needs to be solved **urgently**.

Edition of 2017/2018:

				TAC			
Nº	Name	Specialization	Thesis title (tentative)	Chair	Supervisor	Co-supervisor	External member
53892	Ainoor Teimoorzadeh						
53858	David Oliveira Borges	Telecommunications	Design of low complexity receivers for massive MIMO systems	Luis Bernardo	Paulo Montezuma de Carvalho	Marko Beko, Rui Dinis	Pedro Joaquim Amaro Sebastião
54003	Duarte José Marques Alemão	Robotics and Integrated Manufacuring					
54352	Fawaz Saleem Hassan Al-Jobory (a)	Enterprise Collaborative Networks					
53820	João Carlos de Fraga Gião da Silva	Industry Information Systems	A distributed Ledger Based Framework for Ensuring IoT Data Integrity	Anabela Pronto	João Sarraipa	Ricardo Gonçalves	Nejib Moalla
53873	João Pedro Leal Abalada de Matos Carvalho	Computational and Perceptional Systems	Land-cover classification using image texture dynamic features	Rui Neves Silva	José Manuel Fonseca	André Mora	Arnaldo Joaquim Castro Abrantes
53967	José Augusto Inácio	Energy					
53856	José Manuel Lima D'Oliveira	Energy					
53556	Mohammad Reza Shahrokhi Yeganeh	Enterprise Collaborative Networks					
52272	Mohammadhassan Abdollahi Sofla	Energy					
54130	Nuno Miguel Mendes Correia	Electronics					
53836	Ricardo Daniel Lopes Almeida	Enterprise Collaborative Networks			Luis Camarinha-Matos	Laura Ricci	

Most students have not proposed a **supervisor** yet.
Most of them do not have TAC yet!
This situation needs to be solved **urgently**.

Edition of 2018/2019:

				TAC			
Nº	Name	Specialization	Thesis title (tentative)	Chair	Supervisor	Co-supervisor	External member
54815	Akashkumar Rajaram	Telecommunications		Rodolfo Oliveira	Rui Dinis	Dushantha Nalin K. Jayakody	Francisco António Cercas (ISCTE)
56656	Alcides Teixeira Gonçalves	Energy					
55073	Amineh Mazandarani	Telecommunications					
56413	Carolina Isabel Lagartinho de Oliveira	Computational and Perceptional Systems	Model-driven development of dependable systems		Luis Gomes	Filipe Moutinho	
54753	Dário Filipe Romana Pedro	Computational and Perceptional Systems	Collision Avoidance on Autonomous Vehicles utilizing Deep Neural Networks	Luis Oliveira	José Manuel Fonseca	André Mora	Luis Correia
56395	Fábio Adriano Seixas Lopes	Industry Information Systems					
56370	Guilherme André Marques Guerreiro	Industry Information Systems					

56422	Helena Rico Pereira	Computational and Perceptional Systems	Image Processing	André Mora	Hugo Alexandre Teixeira Duarte Ferreira	José Manuel Fonseca	Ana Fred
56365	Hugo André dos Santos Arcanjo	Industry Information Systems					
56412	Humberto Almeida de Queiroz	Energy		Luis Camarinha-Matos	João Martins	Rui Lopes	Silvio Mariano
56492	Luis Miguel Lopes Mateus	Computational and Perceptional Systems	Applying Knowledge Discovery to manage renewables distributed production		Pedro Sousa		
54822	Nastaran Farhadi Ghalati	Robotics and Integrated Manufacturing					
56437	Peiman Behbahani Nejad	Robotics and Integrated Manufacturing					
56275	Sonia Hosseinpour	Energy					

Most students have not proposed a **supervisor** yet.
Most of them do not have TAC yet!
This situation needs to be solved.

Edition of 2019/2020:

				TAC			
Nº	**Name**	**Specialization**	**Thesis title (tentative)**	**Chair**	**Supervisor**	**Co-supervisor**	**External member**
58917	Ali Gashtasbi						
58902	Ayman Tayseer Ali Abu Sabah	Telecommunications	PHY/MAC Design of Future Small Cells Adopting Multi-Packet Reception and Full-Duplex Communications		Rodolfo Oliveira		
59034	Carlos Nuno de Paiva Marques						
58990	Daniel Viana Dias	Energy	Study of the impact of electric vehicles integration on energy flexibility	Ricardo Gonçalves	João Martins	Rui Amaral Lopes	Carlos Silva
58859	Diyar Salah Fadhil	Telecommunications	Traffic Analytics for Packet Networks		Rodolfo Oliveira		
58829	Guilherme Simões Calado de Brito	Industry Information Systems					
58816	João Eduardo Albuquerque Martins Pereira Pires	Computational and Perceptional Systems					
57424	Kwabena Amoako Kyeremeh						
58986	Luis Alberto Estrada Jimenez	Robotics and Integrated Manufacturing					
58997	Omid Nasrollahi						
59004	Pedro Correia Ferreira						
58814	Ricardo Alexandre Sacoto Martins	Telecommunications	Cross-Layer Design for Secure Communications in Unmanned Vehicle Networks		Luis Bernardo		

Most students have not proposed a **supervisor** yet.
Several of them have not chosen a specialization area yet!
COVID-19 can justify the situation, but it needs to be solved urgently.

6.2 Annual Progress Reports

According to the Deliberation of the Scientific Council 1/CC/2010:

"All PhD students of FCT-UNL must elaborate an **annual progress report**, which needs to be accompanied by an assessment of the supervisor or supervisors.
*This report, together with the **assessment report from the supervisor(s)** and **assessment report from the thesis accompanying committee** (when it exists), shall be sent to the Coordinator of the PhD Program up to 2 months after the end of the academic year.*
In case any of the assessment reports considers there is insufficient progress, such assessment shall be communicated to the student.
*The PhD Program **Coordinator** will **check the report** and send it, together with the assessment reports, to the Academic Office.*
The check of the annual report by the Scientific Council as foreseen in the internal regulation 3/CC/FCT/2006 and in art. 23.º of Law 216/92 of 13 October, is delegated in the Coordinator of the PhD Program."

According to a more recent deliberation, the progress reports shall be scanned and uploaded in the CLIP system. **PhD students cannot submit their theses if the progress reports are not available and properly registered in CLIP.**

The situation regarding the progress reports is the following:

Edition of 2008 / 2009:

Nº	Name	Annual Progress Report												
		2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	
30064	Ana Inês da Silva Oliveira	✓	✓	✓	✓	✓	✓	✓						Finished
30074	Carlos Manuel de Melo Agostinho	✓	✓	✓										Finished
30069	Daniel José Medronho Foito	✓	✓	✓	✓	✓	✓	✓						Finished
29760	David Duarte Pereira Inácio	✓	✓	✓	✓	✓	✓							Finished
30068	Ezequiel Francisco do Vale Carvalho	✓	✓	✓	✓	✓	✓	✓						Finished
30065	Filipa Alexandra Moreira Ferrada	✓	✓	✓	✓	✓	✓	✓	✓	✓				Finished
29588	Filipe André de Sousa Figueira Barata	✓	✓	✓	✓	✓	✓	✓						Finished
30073	João Filipe dos Santos Sarraipa	✓	✓	✓	✓									Finished
29586	João Paulo Machado Mendes	✓	✓	✓	✓	✓	✓	✓	✓	✓				Finished
30070	José Carlos de Ponte Ribeiro	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
30063	José Inácio Pinto Rosado Rocha	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
30066	Luís Domingos Ferreira Ribeiro	✓	✓											Finished
30004	Luís Miguel Bentes Moita Flores	✓	✓	✓	✓	✓	✓	✓	✓					
29770	Nuno Alexandre Soares Domingues	✓	✓	✓	✓	✓	✓	✓						Finished
30067	Pedro Miguel Ribeiro Pereira	✓	✓	✓	✓									Finished
30137	Raúl Eduardo Capela Tello Rato	✓	✓	✓	✓									Finished
29768	Ruben Duarte Dias da Costa	✓	✓	✓	✓	✓	✓							Finished
30072	Sérgio Miguel da Silva Onofre	✓	✓	✓	✓	✓	✓	✓	✓	✓				Finished
30040	Tiago José Monteiro Baptista Cabral Ferreira	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			

A few students (as well as their supervisors and TACs) have not submitted the annual reports, despite being warned for being late.

Edition of 2009/2010:

Nº	Name	Annual Progress Report										
		2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
33253	Ana Sofia Pedrosa Fernandes (a)											Finished
32555	Anabela Monteiro Gonçalves Pronto (a)											Finished
33254	António Manuel Vieira Pombo	✓	✓	✓	✓	✓	✓					Finished
32618	Carlos Manuel Ferreira Carvalho	✓	✓	✓	✓							Finished
33240	Dora Helena Avelar Gonçalves	✓	✓	✓	✓	✓						
32608	Edinei Santin	✓	✓	✓	✓	✓						Finished
33224	Eduardo Adelino Mateus Nunes Eusébio	✓	✓									
33490	Eduardo Manuel Ferreira Morais Pinto	✓	✓	✓	✓	✓	✓	✓				
32678	Elena Nikolaevna Balkova	✓	✓	✓	✓	✓	✓	✓	✓			Finished
33249	Fernando Joaquim Ganhão Pereira	✓	✓	✓	✓	✓	✓	✓	✓			Finished
32574	Filipe de Carvalho Moutinho	✓	✓	✓	✓	✓						Finished
33270	Francisco José Dinis de Sousa Fernandes Ganhão	✓	✓	✓	✓							Finished
32552	Francisco Manuel Mendes da Silva Pina											
32571	Gonçalo Moreira Cândido (a)											Finished
32590	João Carlos Ferreira de Almeida Casaleiro	✓	✓	✓	✓	✓	✓					Finished
32697	João Manuel Ferreira Martins	✓		✓	✓	✓						
32725	João Miguel Ferreira Caldas da Costa	✓	✓									
32734	João Pedro Abreu de Oliveira (a)											Finished
33572	José Alberto Oliveira Lima	✓	✓	✓	✓	✓	✓					Finished
33271	José Miguel Ferreira Preto Marques Luzio	✓	✓	✓	✓	✓						Finished
32606	José Rui Barbosa Cisódio (a)											Finished
32585	José Xavier Ferreira da Silva	✓										
32564	Manuel Augusto Vieira	✓	✓	✓								Finished
33102	Marco António da Luz Delgado											
32612	Maria da Graça Vieira de Brito Almeida	✓	✓	✓	✓	✓						Finished
32632	Maria do Carmo Marques (a)											Finished
32607	Michael Figueiredo (a)											Finished
32643	Miguel Bacelar de Sousa Carneiro	✓										
32617	Miguel Ramos Pereira (a)											Finished
32626	Patrícia Alexandra Pires Macedo (a)											Finished
32733	Pedro Jorge Cristina Mendes											
33331	Pedro José Ambrósio Lobato	✓	✓	✓	✓	✓	✓					Finished
32577	Pedro Miguel Figueiredo Amaral (a)											Finished
33101	Pedro Miguel Negrão Maló (a)											Finished
32566	Raúl Figueiredo Cordeiro de Magalhães Correia	✓	✓	✓	✓	✓	✓	✓	✓			Finished
33103	Regina Maria Frei Santos Barbosa (a)											Finished
33332	Silviano Francisco dos Santos Rafael (a)	✓										Finished
32656	Svetlana Roudolfovna Chemetova	✓	✓	✓	✓	✓	✓	✓	✓			Finished
32550	Tiago Oliveira Machado de Figueiredo Cardoso (a)											Finished
32584	Vitor Manuel de Oliveira Fialho	✓	✓	✓	✓	✓	✓	✓				Finished

(a) Student from pre-Bologna program

Several students (as well as their supervisors and TACs) have not submitted the annual reports, despite being warned for being late.

Edition of 2010/2011:

Nº	Name	Annual Progress Report									
		2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
35499	Blazej Nowacki	✓	✓	✓	✓	✓					Finished
34339	Ehsan Shahamiri	✓	✓	✓	✓	✓					
34752	Gonçalo Nuno Nascimento Ventura de Brito Nunes	✓									
35122	Hugo Tiago Cordeiro	✓	✓	✓	✓	✓	✓				Finished
35771	Ivan Jurí Alves Bastos (a)	✓	✓	✓	✓	✓					Finished
35831	João Luís Alvernaz de Melo (a)	✓	✓	✓	✓	✓	✓				Finished

35719	João Tiago Vieira de Sousa Virote *	✓										
35171	Magno Edgar da Silva Guedes *											
35276	Manuel Fernandes Carvalho *											
35852	Mário Jorge Saldanha Couto Alves (a)	✓	✓	✓	✓	✓						
35768	Mohammad Hadi Nategh (a) *											
35666	Nuno Miguel Abreu Luís	✓	✓	✓	✓	✓						Finished
35208	Pedro Mendes de Lacerda Peixoto de Magalhães	✓	✓	✓	✓	✓	✓					Finished
38741	Raúl Manuel Mendes Dionísio (b)											Finished
35661	Rogério Alexandre Botelho Campos Rebelo	✓	✓	✓	✓	✓						Finished
33761	Somayeh Abdollahvand	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
35851	Vitor Manuel Guerra Vaz da Silva (a)	✓	✓	✓	✓	✓						Finished

* Apparently M. Guedes, M. Carvalho, J. Virote, and M. Nategh have quit, but they didn't formalize their withdrawal.
(b) Student from pre-Bologna program

Several students (as well as their supervisors and TACs) have not submitted the annual reports, despite being warned for being late.

Edition of 2011/2012:

Nº	Name	Annual Progress Report									
		2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	
38744	Carlos Eduardo Dias Coutinho (a)										Finished
38070	Fábio José Pinto da Silva	✓	✓	✓	✓						Finished
38345	Fernando Luís Lourenço Ferreira	✓	✓	✓	✓						Finished
38960	Joaquim Moreira Lima (b)	✓	✓	✓	✓	✓					
38346	José Alexandre Pires Ferreira	✓	✓	✓	✓	✓					Finished
38996	Luís Miguel Rego Pires (b)	✓	✓	✓	✓	✓	✓				
38876	Maria Paula de Brito Graça (b)	✓	✓	✓	✓	✓	✓	✓	✓	✓	
38050	Massimiliano Zanin	✓	✓	✓	✓						Finished
38690	Miguel Alexandre Sousa Ferro de Beça	✓	✓	✓	✓						Finished
38980	Miguel Pinto Campilho Gomes (b)	✓	✓	✓	✓	✓	✓	✓	✓		
38728	Nuno Manuel Ortega Amaro	✓	✓	✓	✓						Finished
38972	Raúl Eduardo Capela Tello Rato (a) (c)										Finished
38691	Rui Alexandre Neves Medeiros	✓	✓	✓	✓						
38049	Sebastian Scholze	✓	✓	✓	✓	✓					
38184	Sudeep Ghimire	✓	✓	✓	✓	✓					Finished
37772	Tahereh Nodehi	✓	✓	✓	✓						Finished
38063	Vasco Miguel Delgado Gomes	✓	✓	✓	✓	✓	✓	✓			

Several students (as well as their supervisors and TACs) have not submitted the annual reports, despite being warned for being late.

Edition of 2012/2013:

Nº	Name	Annual Progress Report								
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	
41203	Ali Abdollahy Gharbali	✓	✓	✓	✓	✓				Finished
41185	António Eduardo Carreiro Furtado	✓	✓	✓	✓	✓				Finished
40964	Catarina Inês Marques de Lucena	✓	✓	✓	✓					Finished
41116	Eduardo José Resende Ortigueira	✓	✓	✓	✓	✓				Finished
41189	Fábio Emanuel Pais Januário	✓	✓	✓	✓	✓	✓	✓	✓	
41159	Hamidreza Tolue Joe Forush Tusi									
41192	Hugo Alexandre de Andrade Serra	✓	✓	✓	✓	✓				Finished
41071	João Francisco Martinho Lêdo Guerreiro	✓	✓	✓	✓					Finished
39264	Konstantin Firsanov	Erasmus								
40662	Luís Filipe Romba Jorge	✓	✓	✓	✓					
41199	Nuno Manuel Gonçalves Vilhena	✓	✓	✓	✓	✓	✓	✓	✓	

41200	Pedro Miguel Lucas Arsénio	✓	✓	✓	✓					Finished
41430	Ricardo André Martins Mendonça	✓	✓	✓	✓					
41198	Rui Miguel Amaral Lopes	✓	✓	✓	✓	✓				Finished
41507	Slavisa Tomic	✓	✓	✓	✓					Finished

* Apparently H. Tusi has quit, but he didn't formalize his withdrawal.

Some students (as well as their supervisors and TACs) have not submitted the annual reports, despite being warned for being late.

Edition of 2013/2014:

Nº	Name	Annual Progress Report							
		2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	
43945	André Dionísio Bettencourt da Silva Rocha	✓	✓	✓	✓				Finished
44429	Edgar Miguel Felício Oliveira da Silva	✓	✓	✓	✓	✓	✓		Finished
43962	Elsa Maria Marcelino de Jesus	✓	✓	✓	✓	✓	✓		
43621	Francisco Antero Cardoso Marques	✓	✓	✓					
43984	Frederico João Gonçalves dos Santos Branco Martins								
43619	Giovanni Di Orio	✓	✓	✓					
44089	Kevin Pierre Nagorny	✓	✓	✓					
43582	Leonardo Pedro Donas-Boto Vilhena Martins	✓	✓	✓	✓	✓	✓		Finished
44126	Mário Rui Monteiro Marques	✓	✓	✓	✓				Finished
44154	Nuno Rúben Ferreira Pereira	✓	✓	✓	✓	✓	✓		Finished
44173	Thais Andrea Baldissera	✓	✓	✓	✓	✓	✓		Finished

Several students (as well as their supervisors and TACs) have not submitted the annual reports, despite being warned for being late.

Edition of 2014/2015:

Nº	Name	Annual Progress Report						
		2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	
46574	Ana Paula Pinto Correia	✓	✓	✓	✓	✓		
46657	André Filipe Lopes Lourenço							
46416	António Jorge Teixeira Falcão	✓	✓	✓	✓			
46560	Artem Artemovych Nazarenko	✓	✓	✓	✓	✓	✓	
46316	Bruno Augusti Mozzaquatro	✓	✓	✓	✓	✓	✓	
46490	Bruno Miguel Pereira de Almeida							
46533	Esmaeil Kondori							
46471	Miguel Duarte Madeira Fernandes	✓	✓	✓				
46575	Milica Marikj							
46581	Nazanin Vafaei	✓	✓	✓	✓	✓	✓	
46678	Paulo Alves Figueiras	✓	✓	✓	✓	✓		
46348	Raquel Alexandra Abrantes Melo	✓	✓				QUIT	
46651	Shirin Najdi	✓	✓	✓				Finished
46324	Vagner Savegnago Schaefer	✓	✓	✓	✓	✓		

Several students (as well as their supervisors and TACs) have not submitted the annual reports, despite being warned for being late.

Edition of 2015/2016:

Nº	Name	Annual Progress Report					
		2015/16	2016/17	2017/18	2018/19	2019/20	
48978	Adriano Manuel Alves Ferreira (a)	✓	✓	✓			
49139	Anselmo Rafael Cukla (b)						Finished
48689	Fernando Jorge Chapita de Castro Monteiro	✓	✓	✓	✓		
48872	José Teixeira Gonçalves	✓	✓	✓	✓	✓	
48895	Kankam Okatakyie Adu-Kankam	✓	✓	✓	✓	✓	
48801	Luis Miguel Gomes Tavares	✓	✓	✓	✓	✓	
48305	Luís Miguel do Rosário Irio	✓	✓	✓	✓		Finished
49014	Mafalda Palma da Silva Viola Parreira Rocha	✓	✓	Quit			
48938	Majid Zamiri	✓	✓	✓	✓	✓	
48855	Masoomeh Ramezani	✓	✓	✓	✓		
48833	Márcio José Moutinho da Ponte (b)						Finished
48995	Miguel de Lima Teixeira	✓	✓	✓			
48884	Nuno Ricardo Zacarias Ramos						
49015	Pedro Miguel Lima Monteiro	✓	✓	✓			
49030	Ricardo Alexandre Fernandes da Silva Peres	✓	✓	✓	✓		Finished
48889	Shabnam Pasandideh	✓	✓	✓	✓	✓	

Several students (as well as their supervisors and TACs) have not submitted the annual reports, despite being warned for being late.

Edition of 2016/2017:

Nº	Name	Annual Progress Report				
		2016/17	2017/18	2018/19	2019/20	
51334	Adriana Mar Brazuna de Jesus	✓	✓	✓	✓	
51324	Andreia Filipa Valada Pereira Artífice	✓	✓	✓	✓	
51567	José Roberto Branco Ramos Filho (a)					Finished
51477	Koorosh Aslansefat					
51443	Mohammad Julashokri	✓				
49255	Mojtaba Pouyan					
51615	Paulo Jorge Passos Sério Lourenço	✓	✓			
49331	Ricardo Falé de Carvalho Madeira	✓	✓	✓		

Most students (as well as their supervisors and TACs) have not submitted the annual reports, despite being warned for being late.

Edition of 2017/2018:

Nº	Name	Annual Progress Report		
		2017/18	2018/19	2019/20
53892	Ainoor Teimoorzadeh			
53858	David Oliveira Borges	✓		
54003	Duarte José Marques Alemão	✓		
54352	Fawaz Saleem Hassan Al-Jobory (a)			
53820	João Carlos de Fraga Gião da Silva	✓	✓	
53873	João Pedro Leal Abalada de Matos Carvalho	✓	✓	✓
53967	José Augusto Inácio			
53856	José Manuel Lima D'Oliveira			
53556	Mohammad Reza Shahrokhi Yeganeh			
52272	Mohammadhassan Abdollahi Sofla			
54130	Nuno Miguel Mendes Correia			
53836	Ricardo Daniel Lopes Almeida	✓	✓	✓

Most students (as well as their supervisors) have not submitted the annual reports, despite being warned for being late.

Edition of 2018/2019:

Nº	Name	Annual Progress Report	
		2018/19	2019/20
54815	Akashkumar Rajaram	✓	✓
56656	Alcides Teixeira Gonçalves		
55073	Anirudh Muralidharan		
56413	Carolina Isabel Lagartinho de Oliveira	✓	✓
54753	Dário Filipe Romana Pedro	✓	✓
54463	Ezgi Ozer (*)		
56395	Fábio Adriano Soares Lopes	✓	
56370	Guilherme André Marques Guerreiro		
56422	Helena Rico Pereira		
56365	Hugo André dos Santos Antunes	✓	
56412	Humberto Miranda de Queiroz	✓	
56492	Luis Miguel Lopes Mateus	✓	
56419	Mohammed Shihab Ahmed Al-Saadi (*)		
54822	Nastaran Farhadi Ghalati		
56437	Roozbeh Dehghani Nejad		
56275	Sonia Hosseinpour	✓	

Most students (as well as their supervisors) have not submitted the annual reports, despite being warned for being late.

Edition of 2019/2020:

Nº	Name	Annual Progress Report
		2019/20
58917	Ali Gashtashi	✓
58902	Ayman Tayseer Ali Abu Sabah	✓
59034	Carlos Nuno de Paiva Marques	
58990	Daniel Viana Dias	
58859	Diyar Salah Fadhil	✓
58829	Guilherme Simões Calado de Brito	
58816	João Eduardo Albuquerque Martins Pereira Pires	
57424	Kwabena Amoako Kyeremeh	
58986	Luis Alberto Estrada Jimenez	
58997	Omid Nasrollahi	
59004	Pedro Correia Ferreira	
58814	Ricardo Alexandre Sacoto Martins	

Most students (as well as their supervisors) have not submitted the annual reports, despite being warned for being late.

7. CONDITIONS FOR PhD SUPERVISION

Based on the experience of the previous years, and in order to improve the quality of the supervision process, the Scientific Committee of PDEEC decided (in 2014) to define more strict conditions under which it will approve future proposals for PhD supervision:

1) Limits

A supervisor should not have more than 6 PhD students full-time under his/her supervision.
In the case of co-supervision, each student counts 50%.
Likewise for the case of part-time students.

2) Required experience and activity level

Like what is practiced in many other universities, the Scientific Committee considers that junior doctors without supervision experience should not start as main supervisors. Furthermore, a PhD supervisor needs to be an active researcher with adequate productivity. Therefore, **in order to qualify as main supervisor** a doctor should:

- Have successfully supervised / co-supervised at least one student.
- Have at least 2 journal papers indexed in the Science Citation Index during the last 3 years.

Unexperienced doctors, candidates to a first supervision, should:

- Be co-supervisors (naturally in collaboration with an experienced supervisor).
- Have at least 2 journal papers indexed in the Science Citation Index during the last 3 years.

3) Performance regarding the annual progress reports

Despite the many requests from the Program Coordinator and Secretarial support, we continue noticing that a large number of students are not submitting their annual progress reports (and supervisor's/TAC assessment) on time. In order to improve this situation, any future proposal coming from a supervisor with missing reports **will be kept suspended** until the situation is resolved.

Conditions 1) and 2) started to be applied in 2014/2015.

Condition 3) started to be applied in 2016/2017. Consequently, several cases were solved, but for the current year we notice several delays again.

8. CANDIDATES 2020 / 2021

8.1 Applicants

For the new academic year (13th edition), PDEEC received the following applications:

- Phase 1: 8 (accepted 8)
- Phase 2: 10 (accepted 10)
- Phase 3: *still ongoing*

The received applications in the first two phases had the following geographic origin:

- Angola: 2
- China: 1
- Iran: 4
- Portugal: 11

It is still unclear how many of the accepted candidates will actually enroll in the program, as some of them are waiting for visa to come to Portugal, others waiting for defense of MSc theses, and others are waiting for confirmation of a scholarship (until 31 Dec, 13 students are enrolled).
The process of getting a **visa,** which is not at all agile from the side of our Embassies and Ministry of Foreign Affairs (through "SEF"), continues to be a **major obstacle** for the smooth starting of each academic year.

8.2 Assistance to foreign students

Foreign students face a number of difficulties when dealing with the Portuguese bureaucracy. As such it would be important to have an Office / Service, **preferably at the Faculty level**, to support these students. The support services could include, for instance:

a) Support during application phase
   – Provision of elements to get the visa at Portuguese embassies.
   Establishment of contacts with SEF ("Serviço de Estrangeiros e Fronteiras") to expedite the visa granting processes.
   Assistance with (initial) accommodation search and booking.
   Provision of information about possible scholarships and other resources.
   Assistance regarding the official documents the candidates need to bring.

b) Support on arrival
   - Guided tour through the campus and assistance with enrollment process.
   - Help with accommodation.
   - Assistance with the processes to get fiscal number, bank account, etc.
   - Assistance with transportation tickets and options.
   - Help interfacing the social security and health care services.
   - Etc.

c) During the stay
   - Assistance with family issues (kinder garden, etc.).
   - Help interfacing the various services of FCT.
   - Guidance for those that want to stay in Portugal after finishing the PhD.
   - Etc.

Currently, foreign students ask help from the program coordinator and/or supervisor, but this is not enough.

A suggestion to create such office was made to the former Management Board of FCT-NOVA in previous years, but no answer was received.
The same proposal was made to the current Board, but no answer yet.

The accreditation office (A3ES) also emphasized the importance of having such office.

9. ACCREDITATION BY A3ES

During this year, the PhD Program was re-evaluated by the governmental agency A3ES and was **accredited** again for a new period of 6 years.

Global appraisal by A3ES:

The Study Cycle of the Doctoral Program in Electrical and Computer Engineering (PDEEC) at Universidade Nova de Lisboa is very well structured and corresponds to an area of scientific and technological knowledge of great interest and actuality. This cycle reveals a significant transversality in terms of areas of knowledge, involving several departments of the FCT and also cooperation with foreign schools, allowing a good scientific and technological preparation of the PhD students of the PDEEC. The teaching staff is very well qualified and has a very good performance in terms of participation in national and international research projects, as well as publications in congresses and international journals. The number of Study Cycle vacancies is not usually filled, hence the relatively small number of students, which favors a close teacher / student relationship, with the possibility of significantly improving student performance. The preparation of the CE graduates is very good, making it possible both to leave for integration in the labor market (most of the students are already in the labor market), or to pursue activities in the field of teaching and scientific research. Several students from PDEEC were involved in European projects. Some of the PDEEC teachers, involved in more technological areas, underlined some difficulties in the acquisition of materials and consumables to be able to fully carry out the proposed objectives. This point was also underlined by several students and graduates of the EC who referred to the availability of adequate means for the research work of doctoral students as desirable. The partnerships with several companies in the region that are relevant in the energy area represent a very significant asset for the attractiveness of the EC, and for the development of R&D activities. Foreign students from PDEEC mentioned the difficulties they had with obtaining visas, as well as questions related to accommodation

On the level of internationalization:

The internationalization of the Study Cycle is very good, both in terms of the number of foreign students looking for it and who, in recent years, has constituted a large majority of the enrolled elements (70%), as well as the participation of students in international research projects and, consequently, a significant number of publications in international Congresses and Scientific Journals.
On the other hand, the professors involved in the PDEEC have a strong presence in several international networks, greatly contributing to the internationalization of the respective doctoral students. However, in global terms, the mobility of students and teachers is relatively small, both in terms of reception and in terms of sending them abroad.

On results:

The academic results of the Study Cycle are quite satisfactory, with an average of just over 5 years for the completion of the respective doctorates, which can be considered good given that most students are on a part-time basis, with professional work simultaneously. This situation is responsible, occasionally, for some cases of 8 and 9 years for the conclusion of the respective doctorates. The Study Cycle had a total of 224 enrollments in the last 10 years, which represents an average of 22.4 students / year. The percentage of foreign students has been increasing, reaching around 70% in the last 3 years. However, some difficulties in obtaining Visas are an element that can stop or weaken some students from completing their enrollments.

On publications:

The overall assessment is very positive, taking into account the quality and quantity of the works developed, most of which are used in business and industrial activity. The volume and quality of the works published in international Conferences and Journals by students in the Study Cycle is perfectly adequate. All PDEEC doctoral students are required to have at least one article in a journal indexed in the Science Citation Index as the 1st author and several articles in indexed Conferences. This fact is of great relevance and impact on the total publications of the Department and CTS (more than 1100 publications in the last 5 years).
The annual holding of the DoCEIS Conference (Advanced Doctoral Conference on Computing, Electrical and Industrial Engineering), organized within the scope of the UC Doctoral Conference, which is in its 10th edition and which brings together representatives from 20 to 25 countries, is seen by students and teachers as an excellent mechanism for acquiring and exercising transversal skills, being very positive and stimulating for the establishment and expansion of partnerships and international contacts.
Most PDEEC doctoral students carry out their research in the context of national and international projects at the CTS (Center for Technology and Systems). In the last 5 years, more than 100 projects have been achieved, of which 42% are international, 38% national and 20% services. The financing obtained corresponds to approximately 13.5 M €, of which more than 10 M € correspond to international funds.

Appraisal and validation of the proposals for future improvement

The improvement proposals presented by the Institution can be substantiated in the following four points:
1) INFRASTRUCTURE RENEWAL: it is necessary to renew the basic infrastructures. This operation can hardly be made compatible with research projects, namely due to the restrictions imposed by the rules of the programs that finance these projects, as well as by the accounting rules for amortization. The solution must undergo a concerted effort in multiple directions:
a) Sensitize university management bodies to the need to keep the objective of infrastructure renewal on their agenda.
b) Look for specific infrastructure financing programs.
c) Try to establish partnerships with companies that can support the creation / renovation of laboratories.
2) STRENGTHENING LABORATORY SUPPORT TECHNICIANS: in this case, it is also important to continue efforts in complementary directions:
a) Sensitize the university's management bodies to the need to hire non-teaching technical personnel.
b) Try to obtain some specific funding from the Foundation for Science and Technology, namely in the scope of support to CTS.
3) SUPPORT FOR FOREIGN STUDENTS: it is recommended that FCT NOVA create a Support Office for Foreign Students. Such a Office should include support services:
a) During the students' application phase: providing documents for obtaining a visa, facilitating interactions with the SEF, assistance with initial accommodation, providing information on possibilities for obtaining scholarships, assistance in preparing the official documents necessary to start the program, etc.
b) Upon arrival in Portugal: support for familiarization with the various sectors of the faculty, assistance with bureaucratic processes (obtaining a TIN, opening a bank account, etc.), assistance with local transport, help with the interface with Social Security and other services , etc.
c) During the PhD: support for family needs, interface with the various services of FCT-NOVA, facilitation of the interface with SEF (renewal of resident card, etc.), etc.
4) PHD'S IN INDUSTRIAL CONTEXT: launch of a working group to analyze and propose solutions to find a way to reconcile the quality requirements of a doctorate with the restrictions and specific characteristics of research work carried out in an industrial context.
CAE during the visit and the various meetings held, was able to verify that these points are absolutely essential and of great importance for the improvement of the conditions of the PDEEC. Its implementation should be carried out within acceptable timeframes, and it is advisable that the following periods of time are not exceeded:
1) As for the renovation of infrastructure, a substantial renovation of laboratories in the various areas is expected over the next 5 years. To this end, the greatest expectations regarding funds will be FCT, companies and projects.
2) Laboratory support technicians (VERY URGENT): an improvement in 2 years is expected, through FCT NOVA and eventually FCT (financing for CTS).
3) Support for foreign students (VERY URGENT): it is expected that FCT NOVA can implement this measure within 1 year.
4) PhDs in an industrial context (MEDIUMLY URGENT): an improvement in this area is expected within 1-2 years.

10. CONCLUDING REMARKS

Considering the status described above and the acquired experience with previous editions, it is possible to draw some conclusions:

- **Attraction of candidates**. So far, PDEEC was successful in attracting candidates, namely in comparison with other sectors of the Faculty and in comparison with similar programs in other national universities. In recent years, the number of foreign candidates has been higher than Portuguese candidates, which is a good sign of our attraction capability.

- **Recruitment space.** In order to guarantee sustainability, especially in periods of economic crisis and lack of scholarships, it is necessary to reconsider the traditional recruitment space, as well as the profile of potential candidates. A stronger emphasis needs to be put in two directions:
  - recruitment of foreign candidates, and
  - increasing the number of PhDs in cooperation with industry.

  The recruitment of foreign students contributes to a cultural enrichment and the introduction of new experiences and working methods. A higher percentage of foreign students will also contribute to increase the external visibility and prestige of our program. A higher percentage of PhDs developed in an industrial context will contribute to re-enforce links with companies, facilitate research that addresses relevant societal challenges, and might mitigate the economic constraints. There are however a number of obstacles:

  - Our embassies make it very difficult for candidates to get a visa to study in Portugal. PDEEC has attracted a good number of foreign candidates every year, probably as a result of the good references given by other students already in Portugal, but only in a few cases it was possible to overcome the obstacles raised by our Embassies. FCT-NOVA should implement more pro-active mechanisms to help overcoming these difficulties. In fact, like other universities, **FCT-NOVA should have an Office to** really **support foreign students** during all phases of their career with us. **Until now, such Office was not established and remains an urgent issue, as recommended by A3ES**.
  - Some foreign candidates are not able to find a scholarship or fund themselves. As such, we often loose some candidates with very good potential.
  - Current regulations of FCT-NOVA limiting the number of years that a student can be in the part-time regime (or at least making it more bureaucratically complicated), do not facilitate the process of having PhD research in industrial contexts. Such limits can be overcome, but it requires additional bureaucracy and does not give a clear signal that such type of PhDs is welcome.

- **Annual tuition fee**. The possibility of having the tuition fee waived used to be a key element in the attraction of candidates from the academic staff of the Polytechnic Institutes of Lisbon and Setubal. However, this market is exhausted now. Considering the importance of PhD students for the Faculty (contributors to publications, researchers in projects, re-enforcement of research teams, help in attracting new projects, etc., thus contributing significantly to the ranking of the university), **it would**

make sense to reconsider the current policy regarding tuition fees, namely when we consider the competition at the European level.

- In various European countries, with universities that are better positioned in most of the international rankings, PhD students do not pay tuition fee. That is the case, for instance, of Netherlands in which not only they do not pay but even receive a good salary. The current policy of our university to keep the tuition fee for foreign students (not members of the European Union) equal to the fee for national students is a good progress, but other "creative" options should be considered.
- **Recently, the Management Board of FCT-NOVA drastically reduced the possibilities for students to apply for reduced tuition fee, which is a major limitation and goes against the practice in competing countries.**
- Current efforts of the Center of Technology and Systems, namely through colleagues with H2020 projects, to provide some scholarships are regarded as a very valuable contribution.
- The policy of FCT-NOVA of returning part of the tuition fee to be used by the PDEEC coordination to support the PhD activities of students (e.g., support attending conferences, etc.) during 2014-1016 was very beneficial. This was in fact one of the recommendations of the PhD accreditation agency A3ES. **Unfortunately, this practice is only implemented with long delays.**
- **Recently (18 Dec 2020), the Management Board of FCT-NOVA substantially reduced the percentage of the tuition fee that is made available to PDEEC, which is another obstacle for the success of the program. Unfortunately, the coordinators of the PhD programs at FCT-NOVA are never heard about the impact of such decisions.**
- On the other hand, the waving of tuition fee (namely in the case of special protocols with Polytechnic Institutes) should be cancelled in case the student does not achieve a reasonable and timely progress.

- **Quality of supervision**. It is necessary to continue the efforts towards improving the role of the supervisors and TACs in the monitoring of the progress of students, namely in the first year. Most students do not finish the courses part in the first year, as planned in the program, and this needs to be changed. It seems that **most supervisors only care for the research part** of the work and pay little attention to the delays in the courses part.
  - Delays in finishing the courses part will definitely affect the quality of the research, as those initial studies are designed to provide a sound basis for the research work.
  - A particularly critical situation refers to the *Research Planning* activity and the preparation of its main outcome, the **Thesis Plan**, to be defended in a public seminar. Many students, often influenced by their supervisors, postpone the defense of their Thesis Plan to a very late stage. In these cases, although the corresponding reports might impress by the amount of research done, they **completely fail** the purpose of a Thesis Plan. Sometimes these plans are submitted so late that there is not much chance for the TAC to make any feasible suggestions anymore. **It is therefore necessary that all supervisors pay more attention to this issue and properly perform their supervision role.**
  - In a few cases, there are supervisors with an excess of students under their supervision. Our experience shows that this situation often leads to a less effective supervision. It is necessary to clearly distinguish between the capability of performing an effective scientific supervision, and the economic capacity to attract collaborators when supervisors have funded projects! The fact that a supervisor is successful in attracting substantial amounts of money **is not** an automatic guarantee that he/she is able to supervise a large number of students with the required scientific quality. During the first editions of the program, some *soft approaches* were attempted to improve this situation, although not always successful. The current criteria adopted by the Scientific Committee of PDEEC regarding approval of supervision proposals, which are in line with common practices in various other universities, are expected to have a positive effect. **Nevertheless, this issue is rather delicate and requires continuous attention**.

- **Despite the effort put in the monitoring process and drawing attention to the various participants in the program, the Coordinator of PDEEC does not have any other instruments to ensure the quality principles. As a result, it is very frustrating to see the continuation of "red marks" in various zones of this report.**

- **Joint PhDs**. Current regulations at NOVA regarding joint PhDs do not facilitate the establishment of agreements with other universities. Although some of the academic staff of the Electrical Engineering Department have good international links and are involved in some co-supervision activities with other universities, this is done at individual level, without direct benefit to FCT-NOVA. In the last few years, we managed to get a few of these agreements, but the process was rather slow. Considering the importance of re-enforcing international cooperation links, this area should deserve more attention from FCT-NOVA governance bodies in order to establish agile procedures.

- **PhDs in industrial context**. Following the recommendations of A3ES, a working group shall be launched by the Scientific Committee of PDEEC "*to analyze and propose solutions to find a way to reconcile the quality requirements of a doctorate with the restrictions and specific characteristics of research work carried out in an industrial context*".

- **A word of appreciation**. A special "thank you" to the secretarial support provided by **Mrs. Helena Inacio**. Along the years, she has always been tremendously efficient and a great support, despite being overloaded with other duties. A "thank you" also to the colleagues, members of the **Scientific Committee**, which have been very effective in responding to all requests and thus greatly contributed to the smooth running of the program.

The importance of PDEEC

High quality Doctoral Programs are fundamental for the strategy of any "research-oriented university". PhD research works are important instruments in the creation of new knowledge and preparation of scientific publications. The past editions of PDEEC clearly show such evidence, with a substantial increase of the scientific productivity of our Department.

On the other hand, the external feedback from colleagues of other universities regarding the structure and ambition of our program, has been very positive and encouraging.

As such, our Department should continue dedicating significant efforts to this initiative. The investments in PDEEC are likely to have a high return.

On the other hand, the noticed growing obstacles, namely at the institutional level, are difficult to understand. Lack of proper support for the PhD programs inhibits the affirmation of any university as a "research-oriented" institution.