

The External Evaluation Report of a Doctoral Study Domain

Contents

- I. Introduction
- II. Methods used
- III. Analysis of performance indicators
- IV. SWOT Analysis
- V. Overview of judgments awarded and of the recommendations
- VI. Conclusions and general recommendations
- VII. Annexes

I. Introduction¹



The city of Iași is located in the east of Romania, and is the second largest city in the country, after Bucharest, with a population of 300,000. The city has eight universities with approximately 60,000 students, the second largest number of any Romanian city. Iași is an important economic centre in Romania. The local and regional economy relies on institutions and establishments in the service sector. The most important sectors are related to education, health care, banking, research, culture, government

¹ Each time when applicable the information shall be presented gender-wise.



and tourism. Iași is active in the manufacturing sector too, particularly in automotive, pharmaceutical industry, metallurgical production, textiles and clothing, construction, wine and preserved meat.

In 1562, Moldavia has become famous for the first attempts to lay the foundation of what later on had become higher education, all thanks to the setting up of the Latin School at Cotnari, near Iași. Still, it was not until 1813 that the scholar Gheorghe Asachi founded the first school of land surveyors and civil engineers with instruction in the Romanian language. This school can be considered the core of the technical higher education in Moldova. Later on, the school is developed within the Michaelian Academy (1835), and afterward's within the University of Iași, established in 1860.

On the 7th of November 1912, after passing the regulations for the Faculty of Science, they set up the proper Polytechnic Institute, which aligned more technical specialties: the department of the electro-technical, applied chemical and agricultural sciences. This event represents what may be called the birth certificate for the The Polytechnic Institute of Iași.

In March 1937, when the Parliament of Romania voted the Law of Education, the technical higher education is transferred to the new established Polytechnic School which was, at that time, one of the few higher education institution in Romania qualified to issue engineer's degrees. The new institution took from the very beginning the name of Gheorghe Asachi, the founder of the Romanian technical education, while professor Cristea Otin was elected its first rector.


Since 1957 the specialization of Electromechanical Engineering has been created, transformed in 1974 in the specialty of Electrical Engineering. Another important moment is the establishment in 1960 of the Electric Power specialization. In its current structure, besides the fields of Electrical Engineering and Energy Engineering, since 1995, the faculty has formed specialists in Economic Engineering (management) and in Industrial Informatics, specialization established in 2003.

As a result of some internal changes within the University, at present, "Gheorghe Asachi" Technical University integrates eleven universities:

- Faculty of Automatic Control and Computer Engineering
- Faculty of Civil Engineering and Building Services
- "G.M. Cantacuzino" Faculty of Architecture
- Faculty of Chemical Engineering and Environmental Protection
- Faculty of Machine Manufacturing and Industrial Management
- Faculty of Electronics, Telecommunications and Information Technology
- Faculty of Electrical Engineering
- Faculty of Hydrotechnical Engineering, Geodesy and Environmental Engineering
- Faculty of Material Science and Engineering
- Faculty of Mechanical Engineering
- Faculty of Textiles, Leather and Industrial Management.

Faculty of Electrical Engineering, Energy and Applied Informatics

About - Structure - News - studied - student - Research - Admittance - elections Q



Faculty of Electrical Engineering, Energy and Applied Informatics

The rise of our faculty was supported by the scale of some Titans, whose scientific performances brought them close to the Nobel Prizes, such as academics Dragomir Hurmuzescu and Ștefan Procopiș.

[Find out more](#)



"Gheorghe Asachi" Technical University of IAȘI
 PhD Graduate School of
Faculty of Electrical Engineering, IAȘI, Romania

Electricity, most innovative and inexhaustible gift offered to mankind!

HOME ABOUT PHD in ELECTRIC PHD in POWER ADMISSION ACCOMODATION RESEARCH EVENTS CONTACT



PHD in Electrical - Staff of Electric f

Electrical Engineering plays a role in everything involving electricity and magnetism. For instance, in the development of electrical motors for cars or the design of the very latest wireless chips for cell phones. Electrical Engineering is crucial in almost every modern technology, from reading information on a DVD to signal processing in medical equipment.

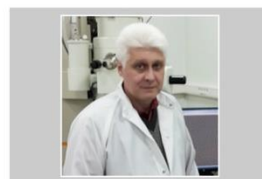
OUR TEAM STAFF OF ELECTRICAL ENGINEERING



Prof. dr. eng. Adam Maricel



Prof. dr. eng. Burlică Radu



Prof. dr. eng. Ciobanu Romeo

Presently, there are 16 professors having the Habilitation for supervising PhDs programs in Electrical and Power Engineering, while the number of PhD students in the internship is more than 70.

The research activity is carried out mainly in the three accredited research canter, being funded by both governmental and national or European programs, but also by contracts supported by the economic environment. Essentially, we invite you in a friendly environment of the highest scientific probity,

supporting the successful completion of doctoral programs in the domain of electrical and power engineering.

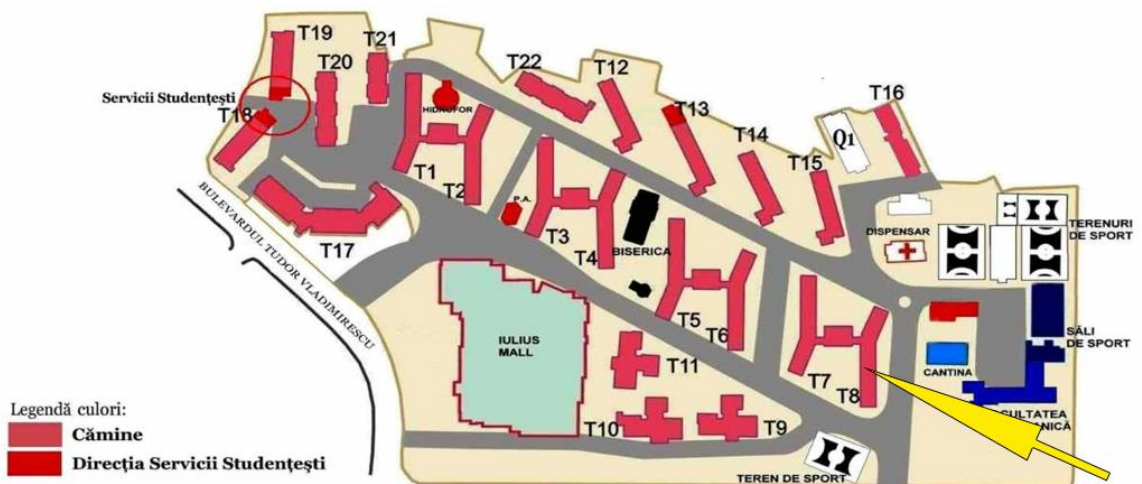


The Metros Center

The 26 research services, including over 70 state-of-the-art testing and control equipment, have allowed only the successful completion of 45 grants / research contracts won in national competitions over the last 5 years, 6 research contracts won in international competitions, amounting to more than three and a half million euros. This Center has been recognized by the CNCSIS (National Council of Scientific Research in Higher Education) as Center of Excellence, having the Accreditation Certificate no. 6 EC / 12.10.20.

This national recognition was confirmed by the ulterior achievements, synthetically here presented:

- 43 grants / research contracts won in national competitions in the last 5 years;
- 6 research contracts won in international competition (FP6 , bilateral cooperation) also in the last 5 years;



The campus "Tudor Vladimirescu" has an area of 137,148 square meters, being in the immediate vicinity of the academic area of the university. The campus consists of 21 student hostels accomodating around 7,526 students and has a student canteen at the most affordable prices in the city, a medical dispensary and a sports base consisting of six open-air sports fields, a fitness room, a gymnasium aerobics, a power room and a team games hall.



For Erasmus+ and PhD students is booked the hostel T8, located in the central area of the campus; it could be easily found on Google Maps at [link](#), It has 143 double rooms but it is possible, on request, to book and rent the room for single use. Students have free access to the cable television networks, which includes a vast grid of 82 TV channels, some of which are international programs. At the same time, students benefit from free internet access in their rooms, by simple registering at [follow link](#), Each room has its own bathroom. On each floor there is an open access kitchen between 06.30 - 23.00, where students can cook various culinary products. The university canteen is 50 meters from the T8 hostel. It is open from Monday to Friday, between 12.00 and 20.00. A lunch menu costs 3.5 € lei and a dinner less than 2.7 €. The menu of the canteen can be viewed daily at [follow link](#),





To ensure student security, the hostel is monitored by an advanced video surveillance system, consisting of 45 video cameras installed both inside and outside the building. At the same time, access to the T8 hostel is allowed based on a personalized card, provided free of charge by the campus administration. The price for a month's accommodation is between 32 and 43 €, according to the season (warm/cold period).

We start our mission of evaluation 8.9.2021 from 10:00 – 11:00 Romanian time with a Meeting of panel members for discussing main methodological aspects related to the evaluation of studies. We are talking about evaluation and meet with other members of the same domain of interest.

13.09.2021 continue from 10:00 to 10:45 with an online preliminary meeting for the preparation and harmonization of evaluation steps, in hybrid mode, of doctoral study domains and IOSUD. Together with *all evaluation panel members, representatives of the University's management, representatives of the CSUD and of the Doctoral School /Schools, the contact person for IOSUD / doctoral domains*

13.09.2021 continue from 11:00 to 12:30 with an Online meeting with the director of CSUD / directors of doctoral schools and the team who drafted the internal evaluation report. Online meeting with the contact person for the doctoral study domain under review and the team who drafted the internal evaluation report. members of IOSUD evaluation panel, representatives of CSUD and of doctoral school/IOSUD, members of the domain evaluation panel, The doctoral studies domain contact person and the team who drafted the internal evaluation report, Engineering sciences 2 - a fundamental domain of science, Electrical engineering, Electronic engineering, telecommunications and information technology, Computers and information technology

14.09.2021 starting from 09:00 to 10:00 start with an Online meeting with PhD students, Online meeting with graduates for the respective doctoral study domain, members of IO, PhD students, members of the domain evaluation panel, representatives of doctoral graduates.

14.09.2021 continue from Online meeting with employers of doctoral graduates, Online meeting with Doctoral Schools Council (CSD members), members of domain evaluation panel, employers' representatives, members of domain evaluation panel, CSUD's members

15.09.2021 starting from 09:00 to 10:00 start with an Online meeting with the members of the Ethics Commission and the Commission for Quality Evaluation and Assurance (CEAC) members / Quality Assurance Department, all evaluation panel members, Ethics Commission members, representatives of Commission for Quality Evaluation and Assurance (CEAC) / Quality Assurance Department

14.09.2021 continue from 11:15 to 12:15 with Online meeting with Doctoral University Studies Council (CSUD) members, Online meeting with employers of Doctoral graduates in the domain, members of the domain evaluation panel, CSD's members, members of IOSUD evaluation panel, employers' representatives, Electrical engineering, Electronic engineering, telecommunications and information technology, Computers and information technology

16.9.2021 was a site visit to the university was Face-to-face working meetings, visiting the educational and research infrastructure, a Site visit to the university, the Evaluation Director and the coordinator of the IOSUD evaluation panel, one student, university's representatives

17.09.2021 starting from 11:00 to 10:45 with Online meeting for conclusions and all evaluation panel members.

17.09.2021 continue from 12:00 to 13:00 with Meeting with representatives of the institution under review to discuss on the conclusions of the evaluation process and the main recommendations, all evaluation panel members, university's representatives.



II. Methods used

The logical framework, or log frame, is the most common and best-known planning tool used in international development. It is also the most hotly debated. Originally designed for use in simple time-bound projects, it is now the tool of choice for donors in interventions ranging from small projects to organizational core funding. The logical framework is often used as a basis for monitoring and evaluation.

A logical framework can have many different purposes depending on the context, and it is probably this that has made it so popular. It was originally conceived as a planning tool, aimed at supporting the management of planned processes. However, depending on the circumstances, a log frame can be:

- a planning tools.
- a tool for program management.
- the basis for M&E in a project or program.
- an accountability mechanism.
- a succinct summary of a piece of work.
- a ‘window’ into the work of an organization or complex program.
- a linear theory of change; or
- a mechanism for seeking fundin

This chapter will contain the methods and tools used in the external evaluation process, before and during the evaluation visit, including at least:

Narrative summary	Objectively Verifiable Indicators	Means of Verification	Assumptions
<i>Goal:</i>			
<i>Objectives:</i>			
<i>Outputs:</i>			
<i>Activities:</i>			
<i>Inputs:</i>			

Starting with the narrative summary column, the goal defines the longer-term impact that a project or program aims to contribute to. The goal may be designed to be achieved after completion of the project or program and may depend on the actions of many different agencies, as well as changes in the external environment. The next row down deals with the objectives or purpose of the project or program – the changes it hopes to directly influence over its lifetime. The outputs row includes the tangible products or services the project or program aims to produce. The last two rows deal with the activities of the project or program and the resources required (inputs).

The second column – objectively verifiable indicators – defines what information will be collected to indicate whether or how far the goal, objectives and outputs have been achieved. The third column – means of verification – indicates the sources that will be used to collect the indicators, such as interviews,



observation, or secondary sources. The final column identifies the key risks and assumptions that might influence the success or otherwise of the project or program.

III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

**general description of domain analysis.*

Criterion A.1. The administrative, managerial institutional structures and the financial resources

**general description of the criterion analysis.*

Standard A.1.1. The institution organizing doctoral studies (IOSUD) has implemented the effective functioning mechanisms provided for in the specific legislation on the organization of doctoral studies.

**general description of the standard analysis.*

Performance Indicator A.1.1.1. *The existence of specific regulations and their application at the level of the Doctoral School of the respective university doctoral study domain:*

(a) the internal regulations of the Doctoral School;

(b) the Methodology for conducting elections for the position of director of the Council of doctoral school (CSD), as well as elections by the students of their representative in CSD and the evidence of their conduct;

(c) the Methodologies for organizing and conducting doctoral studies (for the admission of doctoral students, for the completion of doctoral studies);

(d) the existence of mechanisms for recognizing the status of a Doctoral advisor and the equivalence of the doctoral degree obtained abroad;

(e) functional management structures (Council of the doctoral school), giving as well proof of the regularity of meetings;

(f) the contract for doctoral studies;

(g) internal procedures for the analysis and approval of proposals regarding the training for doctoral study programs based on advanced academic studies.

Technical University "Gheorghe Asachi" IASI is extraordinary quality University that takes a mission to generate and transfer knowledge towards society through initial and permanent training at the university and postgraduate level with the purpose of personal development, professional insertion of the individual, and through scientific research, development, innovation, and technological transfer, through individual and collective creation, as well as capitalizing on and disseminating their results.

"Gheorghe Asachi" Technical University of Iasi organizes doctoral university studies in 13 research fields under the guidance of doctoral leading teachers from the faculties of the Technical University. The doctorate is carried out within the Doctoral School through the Coordination Councils of the doctoral programs from 10 faculties of the university under the scientific guidance of a doctoral supervisor. Candidates, graduates of master's studies, can enroll for admission to the doctoral studies cycle, which involves choosing a field and a doctoral supervisor from one of the Faculties of Automation and Computers, Construction and Installations, Machine Building and Industrial Management, Electrical Engineering, Energy and Applied Informatics, Electronics, Telecommunications and Information



Technology, Hydrotechnics, Geodesy and Environmental Engineering, Chemical Engineering and Environmental Protection "Cristofor Simionescu", Mechanics, Materials Science and Engineering, Industrial Design and Business Management.

Among the reasons that can determine you to enroll in doctoral studies would be:

- *Professional development in the chosen field;*
- *-Participation in the development of integrated study programs in partnership with Romanian and European universities that should lead to obtaining common diplomas;*
- *Adapting doctoral studies to concrete topics, contracted with the economic and social environment;*
- *Accessing customized entrepreneurial programs by fields as well as carrying out practical internships (internships) in laboratories / research centers and companies (potential employers), participation in counseling and career guidance sessions, etc.*
- *The possibility to benefit from periods of study abroad in order to obtain a double diploma;*
- *Facilitating the granting of scholarships by companies to selected doctoral students in order to be employed after or even before graduation in the respective companies.*
- *THE FORMS OF TRAINING by doctorate are:*
- *with frequency with scholarship -BUDGET- for a period of 3 years;*
- *with frequency without scholarship - BUDGET- for a period of 3 years;*
- *with reduced frequency and without scholarship- BUDGET- for a period of 3 years;*
- *with reduced frequency and with TAX- for a period of 3 years;*
- *with frequency with TAX- for a period of 3 years;*
- *The doctorate has two components;*
 - *Training program based on advanced university studies (year I)*
 - *Scientific research program (year II and III)*
- *"Gheorghe Asachi" Technical University of Iasi has:*
- *Instructions for carrying out the activities of doctoral students in the academic year 2020-2021, in epidemiological safety conditions for the prevention of SARS-Cov -2 virus diseases*
- *Procedure for electing the members of the Council for doctoral studies (CSUD) in the organizing institution for Doctoral Studies (IOSUD)"Gheorghe Asachi" Technical University of Iasi has:*
 - *Methodology for choosing the director of the Doctoral School and its council at the institution organizing the doctoral university studies (IOSUD) - "Gheorghe Asachi" Technical University of Iasi*
 - *The procedure for electing the Directors of the Coordinating Councils of the Doctoral Programs of the faculties and for setting up these councils*
- *Methodology for setting up the Doctoral School*
- *Doctoral School Conference*
- *PROCEDURE for organizing and conducting admission in the cycle of doctoral studies-FORM*
- *PROCEDURE regarding the recognition of the quality of doctoral supervisor obtained abroad-TYPE APPLICATION*
- *PROCEDURE regarding the recognition of the title of doctor obtained abroad-TYPE APPLICATION*
- *Banking information for the payment in foreign currency (EURO) of the tuition fees by the citizens from outside the community space*



- Procedure for affiliation and termination of affiliation of doctoral supervisors at the Doctoral School - Forms
- The procedure regarding the prevention and ensuring the observance of the norms of ethics and academic integrity, within the doctoral studies from IOSUD-TUIASI
- Procedure for evaluating doctoral supervisors by management structures-Form F1,Form F2, Annex 1
- Procedure for initiating, approving, monitoring and periodically evaluating doctoral university programs - Form F1 , Form F2 , Annex A1 , Annex A2 , Annex A3
- Procedure for ensuring the fulfillment of qualification level 8 according to the national qualifications framework (cnc) and the european qualifications framework (eqf)
- GUIDE for the elaboration and writing of doctoral theses
- The procedure regarding the organization and development of postdoctoral studies of advanced research

Recommendations:

The indicator is fulfilled.

Performance Indicator A.1.1.2. The doctoral school' Regulation includes mandatory criteria, procedures and standards binding on the aspects specified in Article 17, paragraph (5) of the Government Decision No. 681/2011 on the approval of the Code of Doctoral Studies with subsequent amendments and additions.

The Regulation of the Doctoral School includes:

- Specific references to the way new members who are doctoral advisors are accepted;
- References to the mechanisms by means of which the decisions regarding the content of the training programme are made;
- Regulation of DSC with references to the procedures for the doctoral advisor's replacement;
- Regulation of DSC with references to the conditions under which the PhD programme can be interrupted;
- Regulation of DSC with references to the modalities to prevent fraud;
- Regulation of DSC and art. 15 in the regulation of DSC with references to the way access to research resources is ensured;
- Methodology regarding attendance obligations in accordance with a methodology elaborated by the Ministry of Education was not issue
-

Recommendations:

The indicator is fulfilled.

Standard A.1.2. The IOSUD has the logistical resources necessary to carry out the doctoral studies' mission.

*general description of the standard analysis.

Performance Indicator A.1.2.1. The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic backgrounds.

- *Technical University “Gheorghe Asachi” IASI has an information system that manages students' activities, study programs, facilitates the collection, processing and analysis of data and information relevant for institutional quality assessment and assurance.*
- *University website (<https://www.tuiasi.ro/>) together with the pages of the faculties and departments provides information on study programs, teaching staff, student facilities, regulations, procedures and other useful documents, announcements of current events and any information relevant to students or prospective students.*
- *The University website is of good quality with all information for doctoral and postdoctoral students.*
- *Weblink <http://www.doctorat.tuiasi.ro/Htm/Doctorat%20european.htm> gives us information about the procedure for granting the European doctoral certificate in TUIASI.*
- *Criteria for awarding the European Doctoral Certificate:*
 1. *The doctoral student is enrolled in a doctoral study program at the Technical University “Gheorghe Asachi” in Iasi (TUIASI);*
 2. *The student has completed a doctoral program accredited in TUIASI and has promoted the scientific research project with at least the grade “very good”;*
 3. *The doctoral student has completed a research internship in the field of the thesis of at least 3 months in one or two universities in the European Union (EU) / EU associated countries (outside Romania);*
 4. *At least one member of the doctoral thesis defense committee is a teacher / researcher in a prestigious university or research institute in the European Union and associated EU countries;*
 5. *At least two specialized referents, teachers and / or researchers, from prestigious universities or research units in the European Union and associated countries (outside Romania), analyze the doctoral thesis and recommend its public support.*
 6. *The doctoral thesis is written in a language of international circulation (preferably English);*
 7. *The public defense of the doctoral thesis was done in a language of international circulation (preferably English).*

Recommendations:

- *Translate all pdf documents on the website to English and put a picture of English and Romanian flags on top of the website.*

The indicator is fulfilled.

Performance Indicator A.1.2.2. *The existence and use of an appropriate software program and evidence of its use to verify the percentage of similarity in all doctoral theses.*

- *Technical University “Gheorghe Asachi” in Iasi uses a dedicated software to verify the similarity index of all doctoral theses, namely (<http://www.plagiarism-detector.com/c/en/index.php>). Technical University “Gheorghe Asachi” in Iasi ensures the verification of the authenticity and originality of doctoral theses and other scientific papers with the help of the program (<http://www.plagiarism-detector.com/c/en/index.php>) recognized by the National Council for Attestation of University Degrees, Diplomas etc..*



- **Sistemantiplagiat.ro** is a computer program for comparing documents in text format. It was created in 2002 by the Polish company Plagiat.pl, and in 2012 it was launched in Romania. The connection to the System is made by accessing the address www.sistemantiplagiat.ro, and the data processing takes place on our servers. System users upload texts to the system and their content is compared to the databases that the system has available.
- Sistemantiplagiat.ro detects similarities in documents written in any language that uses the Latin, Cyrillic, Greek, etc. alphabets.

Recommendations:

- Using an international expert in commission for PhD study and always translate doctoral thesis into English. In this way similarity on English and translation part of the thesis will be reduced to the minimum.

The indicator is fulfilled.

Standard A.1.3. The IOSUD makes sure that financial resources are used optimally, and the revenues obtained from doctoral studies are supplemented through additional funding besides governmental funding.

**general description of the standard analysis.*

Performance Indicator A.1.3.1. *Existence of at least one research or institutional/human resources development grant under implementation at the time of submission of the internal evaluation file, per doctoral study domain under evaluation or existence of at least 2 research or institutional development / human resources grant for the doctoral study domain, obtained by doctoral thesis advisors operating in the evaluated domain within the past 5 years. The grants address relevant themes for the respective domain and, as a rule, are engaging doctoral students.*

- *The number of research grants under implementation at the moment of submission of the application: 2 as director and 5 as a response from the partner;*
- *The number of institutional/human resources development grants under implementation at the moment of submission of the application: 1 as director and 2 as response from the partner;*
- *The number of research or institutional/human resources development grants obtained by the doctoral advisors in the evaluated area within the last 5 years: 10 as director and 1 as response from the partner*
- *All documents are in Annex 2.5 file*

Recommendations:

- *University must use more EU grants for foreign PhD and postdoctoral students to have the possibility to be excellent in education and to increase the internationality of the study of Electrical Engineering.*

The indicator is fulfilled.

Performance Indicator *A.1.3.2. *The percentage of doctoral students active at the time of the evaluation, who for at least six months receive additional funding sources besides government funding, through*

scholarships awarded by individual persons or by legal entities, or who are financially supported through research or institutional/human resources development grants is not less than 20%.

- The number of doctoral students on 30.09.2020 is 68 (62 financed by the budget + 6 paying fees). Doctoral students members in research grants: 17 (25%)

Recommendations:

- In the future is recommended more private sources for doctoral and postdoctoral study.

The indicator is fulfilled.

Performance Indicator *A.1.3.3.2 At least 10% of the total amount of doctoral grants obtained by the university through institutional contracts and of tuition fees collected from the doctoral students enrolled in the paid tuition system is used to reimburse professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad, publication of specialty papers or other specific forms of dissemination, etc.).

- Many doctoral students have big support from doctoral grants for the conference, summer schools, training, publication in ISI papers, etc. This money is more than 10%.
- Sum of revenues Oct. 2015 – Sept 2020: 64067785,62
- Sum of expenses Oct. 2015 – Sept 2020: 1766528,34
- The Sum of expenses represents 2.75% of the sum of revenues

Facultatea	Anul universitar 2015-2016			Anul universitar 2016-2017			Anul universitar 2017-2018			Anul universitar 2018-2019			Anul universitar 2019-2020			Total facultate
	Granturi doctorale	Venituri proprii	Total	Granturi doctorale	Venituri proprii	Total	Granturi doctorale	Venituri proprii	Total	Granturi doctorale	Venituri proprii	Total	Granturi doctorale	Venituri proprii	Total	
Automatică și Calculatoare	4,614	30,437	35,051	0	0	0	25,417	12,214	37,631	0	53,616	53,616	0	0	0	126,298
Inginerie Chimică și Protecția Mediului „Cristofor Simionescu”	47,667	41,920	89,587	73,017	75,665	148,677	50,315	52,066	102,381	24,003	17,989	41,992	14,023	25,024	39,047	421,684
Construcții de Mașini și Management Industrial	10,012	8,721	18,733	24,075	13,280	37,355	46,957	29,905	76,862	17,405	9,119	26,524	38,546	29,122	67,668	227,142
Construcții și Instalații	0	0	0	91,911	109,904	201,815	68,719	50,121	118,840	116,421	66,323	182,744	15,240	7,147	22,387	525,786
Inginerie Electrică, Energetică și Informatică Aplicată	14,535	13,139	27,674	31,068	16,997	48,065	12,468	6,234	18,702	132,887	69,158	202,045	43,055	27,589	70,644	367,130
Electronică, Telecomunicații și Tehnologia Informației	11,349	13,708	25,057	8,509	4,452	12,961	0	19,360	19,360	18,352	7,616	25,968	16,770	9,145	25,915	109,261
Hidrotehnică, Geodezie și Ingineria Mediului	10,907	6,866	17,773	32,538	45,475	78,013	11,982	26,956	38,938	0	0	0	52,522	27,538	80,060	214,784
Mecanică	18,538	15,964	34,502	0	25,444	25,444	22,779	17,956	40,735	8,488	3,961	12,449	52,699	29,089	81,788	194,918
Știința și Ingineria Materialelor	17,577	28,063	45,640	36,649	36,286	72,935	0	0	0	24,953	11,891	36,844	25,196	12,734	37,930	193,349
Design Industrial și Managementul Afacerilor	0	44,957	44,957	23,967	19,790	43,757	20,945	27,879	48,824	73,664	53,124	126,788	18,393	23,173	41,566	305,892
TOTAL universitate	135,199	203,775	338,974	321,729	347,293	669,022	259,582	242,891	502,273	416,179	292,797	708,970	276,444	190,561	467,005	2,686,244

Recommendations:

The indicator is fulfilled.

Criterion A.2. Research infrastructure

² The indicators marked with an asterisk (*) hold a special status, referring exclusively to the evaluation of doctoral studies domains, as per Article 12 from the annex No.1 of the Order of the minister of education No. 3651/12.04.2021 approving the Methodology for evaluating university doctoral studies and the system of criteria, standards and performance indicators used in the evaluation. In case they are not met, the Agency extends a period of maximum 3 years to IOSUD to correct the respective deficiencies.



**general description of the criterion analysis.*

Standard A.2.1. The IOSUD has a modern research infrastructure to support the conduct of doctoral studies' specific activities.

**general description of the standard analysis.*

Performance Indicator A.2.1.1. *The venues and the material equipment available to the doctoral school enable the research activities in the evaluated domain to be carried out, in line with the assumed mission and objectives (computers, specific software, equipment, laboratory equipment, library, access to international databases etc.). The research infrastructure and the provision of research services are presented to the public through a specific platform. The research infrastructure described above, which was purchased and developed within the past 5 years will be presented distinctly.*

- *The doctoral school has a research infrastructure that very well supports the development of activities specific to doctoral studies. It is available on the <https://ieeia.tuiasi.ro/cercetare/>.*
- *PhD students have institutional research centers.*
- *Metra is The Metrology, Measurement Systems and Innovative Materials Research Center-METROS is recognized by CNCSIS as a Center of Excellence. Metra has 43 research grants/contracts won through national competition in the last 5 years (CNCSIS, PNCDI, CEEX, PN2); 6 research contracts won through international competition (FP6, bilateral collaborations) also in the last 5 years; about three and a half million euro equivalents received in the last five years for these grants and contracts, 48 articles published in ISI listed journals, numerous others published in indexed databases (ISI, Scopus, Inspec, Compendex, etc.); 73 patents for application in the profile industry; 94 books and chapters of scientific books published in the country and abroad.*
- *SCECM The research center ENERGY CONVERSION SYSTEMS AND MOTION CONTROL, since 2010, continues the activity of CNCSIS accredited research centers: Electrical Engineering in Industrial Systems (IELSI), certificate no. 139 CC-C / 14.05.2002 and Electric Machines in Intelligent Systems and Automation (MESIA), certificate no. 6 CC- B / 11.05.2004. Electromechanical energy conversion systems with improved performance (servo drives, vector control of electric drives). The activity for the last 5 years is materialized in 24 research grants obtained based on competition, attracting funds with a value of about 1 million EURO.*

Recommendations:

The indicator is fulfilled.

Criterion A.3. Quality of Human Resources

**general description of the criterion analysis.*

Standard A.3.1. At the level of each domain, there is sufficient qualified staff to ensure the conduct of a doctoral study program.

Performance Indicator A.3.1.1. *Minimum three doctoral thesis advisors within that doctoral domain, and at least 50% of them (but no less than three) meet the minimum standards of the National Council for*



Attestation of University Degrees, Diplomas and Certificates (CNATDCU) in force at the time when the evaluation is carried out, which standards are required and mandatory for obtaining the enabling certification.

- *Within the doctoral area of study, there are 14 doctoral advisors and all 14 meet the NCAUTDC minimal standards that are required and compulsory in order to obtain the habilitation qualification. The corresponding percentage is 100%.*

Recommendations:

The indicator is fulfilled.

Performance Indicator *A.3.1.2. *At least 50% of all doctoral advisors have a full-time employment contract for an indefinite period with the IOSUD.*

- *The total number of doctoral advisors in the doctoral area of study: 14. Tenured doctoral advisors in the area of study 10. The corresponding percentage: 71,42 %*

Recommendations:

The indicator is fulfilled.

Performance Indicator A.3.1.3. *The study subjects in the education program based on advanced higher education studies pertaining to the doctoral domain are taught by teaching staff or researchers who are doctoral thesis advisors / certified doctoral thesis advisors, professors / CS I or lecturer / CS II, with proved expertise in the field of the study subjects they teach, or other specialists in the field who meet the standards established by the institution in relation with the aforementioned teaching and research functions, as provided by the law.*

- *The subjects in the training program based on advanced university studies related to the field of Electrical Engineering within SD IEE are supported by teachers who have the quality of doctoral supervisor / habilitated, all teaching staff being Professors -members of SD IEE, with proven expertise in the field of taught subjects.*
- *In Technical University "Gheorghe Asachi" in Iasi, the occupation of teaching positions is done based on a methodology, approved by the University Senate, in which the conditions for putting up for competition teaching and research positions are provided, for an indefinite or determined period.*
- *The subjects in the education programme based on advanced higher education studies corresponding to the area Electrical Engineering are delivered by 43 lecturers holding the title of professor or associate professor, with expertise in the area of the subjects they teach within the evaluated area.*

Recommendations:

The indicator is fulfilled.



Performance Indicator *A.3.1.4. *The percentage of doctoral thesis advisors who concomitantly coordinate more than 8 doctoral students, but no more than 12, who are themselves studying in doctoral programs³ does not exceed 20%.*

- *There were no situations in which a doctoral supervisor coordinated at the same time more than 8 students or 12 in the period of doctoral studies (3 years to which are added the extension periods).*
- *Electrical Engineering supervising a number of no more than 8 doctoral students is 14 (all of them). The number of doctoral advisors in the area of Electrical Engineering supervising a number of 8-12 doctoral students is: 0 (zero)*

Recommendations:

The indicator is fulfilled.

Standard A.3.2. The Doctoral advisors within the domain are carrying out a scientific activity visible at the international level.

**general description of the standard analysis.*

Performance Indicator A.3.2.1. *At least 50% of the doctoral thesis advisors in the evaluated domain have at least 5 Web of Science- or ERIH-indexed publications in magazines of impact, or other achievements of relevant significance for that domain, including international-level contributions that indicate progress in scientific research - development - innovation for the evaluated domain. The aforementioned doctoral thesis advisors enjoy international awareness within the past five years, consisting of membership on scientific boards of international publications and conferences; membership on boards of international professional associations; guests in conferences or expert groups working abroad, or membership on doctoral defence commissions at universities abroad or co-leading with universities abroad. For Arts and Sports and Physical Education Sciences, doctoral thesis advisors shall prove their international visibility within the past five years by their membership on the boards of professional associations, membership in organizing committees of arts events and international competitions, membership on juries or umpire teams in artistic events or international competitions.*

- *Each of the PhD supervisors in the field of Electrical Engineering has at least 5 Web of Science indexed publications, which include international contributions that reveal progress in scientific research.*
- *The number of doctoral advisors in the area who have no less than 5 Web of Science-indexed journals with impact factor is: 11. The corresponding percentage: $(11/14) \times 100 = 78,57\% > 50\%$*
- *The international visibility of doctoral supervisors in the last five years is highlighted in the Minimum Standards Sheets by membership in the scientific committees of international publications and conferences, membership in the boards of international professional associations, guest quality at conferences or groups of experts conducted abroad.*

³ 3 years for the doctoral university studies with the duration stipulated at Article 159, paragraph (3), respectively 4 years for the doctoral university studies with the duration stipulated at Article 174, paragraph (3) of the Law of national education No.1/2011 with subsequent amendments and additions, with additional extension periods approved as per Article 39, paragraph (3) of the Code of doctoral studies approved by the GD No. 681/2011 with subsequent amendments and additions.



- *The number of doctoral advisors in the area who are members in the scientific or organising Committees of international conferences within the past 5 years is:8. The corresponding percentage: $(8 / 14) \times 100 = 57,14\% > 50\%$.*

Recommendations:

The indicator is fulfilled.

Performance Indicator *A.3.2.2. *At least 50% of the doctoral thesis advisors in a specific doctoral study domain continue to be active in their scientific field, and acquire at least 25% of the score requested by the minimal CNATDCU standards in force at the time of the evaluation, which are required and mandatory for acquiring their enabling certificate, based on their scientific results within the past five years.*

- *In the case of PhD supervisors in the field of Electrical Engineering the number of doctoral advisors in the area of study who are still active in their scientific field, obtaining, based on scientific results within the past 5 years, more than 25% of the score requested by NCAUTDC minimal standards to obtain the habilitation qualification (100%) is 14. The corresponding percentage is: 100%*

Recommendations:

The indicator is fulfilled.

Domain B. EDUCATIONAL EFFECTIVENESS

**general description of domain analysis.*

Criterion B.1. The number, quality and diversity of candidates enrolled for the admission contest

**general description of the criterion analysis.*

Standard B.1.1. The institution organizing doctoral studies has the capacity to attract candidates from outside the higher education institution or a number of candidates exceeding the number of seats available.

**general description of the standard analysis.*

Performance Indicator *B.1.1.1. *The ratio between the number of graduates of masters' programs of other higher education institutions, national or foreign, who have enrolled for the doctoral admission contest within the past five years and the number of seats funded by the state budget, put out through contest within the doctoral domain is at least 0.2 or the ratio between the number of candidates within the past five years and the number of seats funded by the state budget put out through contest within the doctoral studies domain is at least 1,2.*

- *In the past five years, there have been 76 budget-funded places in the area of study. During this time, a number of 13 graduates from other institutions registered for the admission exam, amounting to a ratio of $0,171 < 0,2$*
- *The ratio between the number of candidates in the past five years and the number of budget-funded places advertised in the Electrical Engineering area of study is $103/76 = 1,355 > 1,2$*



Recommendations:

The indicator is fulfilled.

Standard B.1.2 Candidates admitted to doctoral studies demonstrate academic, research and professional performance.

**general description of the standard analysis.*

Performance Indicator *B.1.2.1. Admission to doctoral study programs is based on selection criteria including previous academic, research and professional performance, their interest for scientific or arts/sports research, publications in the domain and a proposal for a research subject. Interviewing the candidate is compulsory, as part of the admission procedure.

- The selection criteria for admission to doctoral study programs are specified in the Doctoral School Regulations
- Candidates for doctoral admission are assessed according to the level of training and information in the field, the ability to address specific research problems, formulate innovative solutions and the quantifiable results of previous scientific research.
- The rate of rejected students is 0%.

Recommendations:

The indicator is fulfilled.

Performance Indicator B.1.2.2. The expelling rate, including renouncement / dropping out of doctoral students 3, respectively 4, years after admission⁴ does not exceed 30%.

- Within the doctoral field ELECTRICAL ENGINEERING, Total of registered students 2015-2019:95 PhD students expelled after 3 years: 17; Dropout rate: 17,89 % < 30%.

Recommendations:

The indicator is fulfilled.

Criterion B.2. The content of doctoral programs

**general description of the criterion analysis.*

Standard B.2.1. The training program based on advanced university studies is appropriate to improve doctoral students' research skills and to strengthen ethical behavior in science.

**general description of the standard analysis.*

Performance Indicator B.2.1.1. The training program based on advanced academic studies includes at least 3 disciplines relevant to the scientific research training of doctoral students; at least one of these disciplines is intended to study in-depth the research methodology and/or the statistical data processing.

⁴ 3 years for the doctoral university studies with the duration stipulated at Article 159, paragraph (3), respectively 4 years for the doctoral university studies with the duration stipulated at Article 174, paragraph (3) of the Law of national education No. 1/2011 with subsequent amendments and additions.



- *The curriculum contains 3 relevant subjects for the preparation of doctoral students in scientific research: Academic ethics and integrity, Research methods, A specialised subject of the PhD advisor's choice in collaboration with the PhD student, or Individual study (as an optional subject, to be chosen by the CCPD).*

Recommendations:

The indicator is fulfilled.

Performance Indicator B.2.1.2. *At least one discipline is dedicated to Ethics and Intellectual Property in scientific research or there are well-defined topics on these subjects within a discipline taught in the doctoral program.*

- *In addition to the Ethics and Academic Integrity course, Research Methodology in the Doctoral School -SD IEE contains the subject "Academic Ethics and Integrity".*

Recommendations:

The indicator is fulfilled.

Performance Indicator B.2.1.3. *The IOSUD has mechanisms to ensure that the academic training program based on advanced university studies addresses „the learning outcomes“, specifying the knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities⁵.*

- *At the level of the Doctoral in Electrical Engineering, mechanisms are developed to ensure that the training program based on advanced university studies, related to the evaluated fields, aims at "learning outcomes", specifying the knowledge, skills and abilities that Doctoral students should acquire after going through each subject.*
- *The files of the courses in the curriculum specify the competencies, responsibility and autonomy acquired by the doctoral students after completing the related training program. The course sheets are analyzed and approved by the SD-SFI Committee.*
- *The procedure that ensures that level 8 of qualification is met according to the national qualifications framework (NQF) and the european qualifications framework (EQF) codepo.csud.14.*
- *The procedure for the initiation, approval, monitoring and periodic evaluation of doctoral programmes.*

Recommendations:

The indicator is fulfilled.

⁵ Or by what the graduate should know, understand and to be able to do, according to the provisions of the Methodology of 17 March 2017 regarding inscription and registration of higher education qualifications in the National Register of Qualifications in Higher Education (RNCIS) approved by the Order No.3475/2017 with subsequent amendments and additions.



Performance Indicator B.2.1.4. All along the duration of the doctoral training, doctoral students in the domain receive counseling/guidance from functional guidance commissions, which is reflected in written guidance and feedback or regular meeting.

- All doctoral students benefit during the entire doctoral training period from the counseling/guidance of Advisory committees composed of the doctoral supervisor and three specialists in the field/fields in which the doctoral student carries out his / her activity.
- For the entire duration of the doctoral program, PhD students in the area of Electrical Engineering benefit from the counseling/guidance of functional advisory committees also reflected in guidance and opinions expressed in writing or during regular meetings.
- Quality management at Technical University “Gheorghe Asachi” IASI proposes a model to approach the total quality of services and processes, focused on the procedural and systemic approach, on the total involvement of each employee, and aims at long-term success, by meeting the requirements of internal and external customers and creating benefits for the university and society.
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Recommendations:

The indicator is fulfilled.

Performance Indicator B.2.1.5. For a doctoral study domain, the ratio between the number of doctoral students and the number of teaching staff/researchers providing doctoral guidance must not exceed 3:1.

- A number of PhD students at the time of the evaluation: 88 PhD students are on internship + 20 in grace period (extension)=108.
- A number of instructors/researchers providing guidance: 50.
- The ratio between the number of PhD students and the number of instructors/researchers providing guidance: $108/50=2,16$.
- The ratio is lower than 3:1

Recommendations:

The indicator is fulfilled.

Criterion B.3. The results of doctoral studies and procedures for their evaluation.

**general description of the criterion analysis.*

Standard B.3.1. Doctoral students capitalize on the research through presentations at scientific conferences, scientific publications, technological transfer, patents, products and service orders.

**general description of the standard analysis.*

Performance Indicator B.3.1.1. For the evaluated domain, the evaluation commission will be provided with at least one paper or some other relevant contribution per doctoral student who has obtained a doctor's title within the past 5 years. From this list, the members of the evaluation commission shall



randomly select 5 such papers / relevant contributions per doctoral study domain for review. At least 3 selected papers must contain significant original contributions in the respective domain.

- The Technical University “Gheorghe Asachi” IASI has a system for the periodic evaluation of teaching, research and management activities that is constantly used, improved from year to year and which has become a basic component in the culture of quality.
- The university remains a regional leader in the field of higher education, through the study programs it offers and the importance of research contracts;
- There are competent human resources, organized pyramidally, for each study program; University research has international and national recognition, transparency in the university's ranking among top research universities, based on a large number of research contracts, ISI listed publications, investment in infrastructure and involvement of young researchers, PhD students, postdocs extended;
- There are 21 PhD students who completed the doctoral studies programme in the in the area of Electrical Engineering.
- There is at least one relevant contribution per area of study and for each of the PhD students who defended their thesis in 2016 – 2020.

Recommendations:

- Recommendation for Electrical Engineering to insist on applied science papers. In the future Electrical Engineering according to trends in the development of electrical vehicles and renewable energy and waste energy.

The indicator is fulfilled.

Performance Indicator *B.3.1.2. The ratio between the number of presentations of doctoral students who completed their doctoral studies within the evaluated period (past 5 years), including posters, exhibitions made at prestigious international events (organized in the country or abroad) and the number of doctoral students who have completed their doctoral studies within the evaluated period (past 5 years) is at least 1.

- The 21 doctoral students who were awarded the PhD title in the last 5 years have 30 papers presented at prestigious international scientific events (conducted in the country or abroad). Ratio is $1,42 > 1$.

Recommendations:

The indicator is fulfilled.

Standard B.3.2. The Doctoral School engages a significant number of external scientific specialists in the commissions for public defence of doctoral theses in the analyzed domain.

**general description of the standard analysis.*



Performance Indicator *B.3.2.1. *The number of doctoral theses allocated to one specialist coming from a higher education institution, other than the evaluated IOSUD should not exceed two (2) in a year for the theses coordinated by the same doctoral thesis advisor.*

- *The number of doctoral theses assigned to any one reviewer from an institution of higher education other than the evaluated IOSUD must not be higher than two (2) for theses supervised by the same PhD advisor in one year.*

2016	2017	2018	2019	2020
2	1	1	1	1

Recommendations:

The indicator is fulfilled.

Performance Indicator *B.3.2.2. *The ratio between the doctoral theses allocated to one scientific specialist coming from a higher education institution, other than the institution where the defense on the doctoral thesis is organized, and the number of doctoral theses presented in the same doctoral study domain in the doctoral school should not exceed 0.3, considering the past five years. Only those doctoral study domains in which a minimum of ten doctoral theses have been presented within the past five years should be analyzed.*

- *Number of PhD theses defended in the area of electrical Engineering in the past five years:21.*
- *The maximum number of doctoral theses allocated to a certain scientific referent from another higher education institution in the last 5 years is: 5.*
- *Maximum ratio: $5 / 21 = 0,23 < 0,3$.*

Recommendations:

The indicator is fulfilled.

Domain C. QUALITY MANAGEMENT

**general description of domain analysis.*

Criterion C.1. Existence and periodic implementation of the internal quality assurance system

**general description of the criterion analysis.*

Standard C.1.1. *There are an institutional framework and procedures in place and relevant internal quality assurance policies, applied for monitoring the internal quality assurance.*

**general description of the standard analysis.*

Performance Indicator C.1.1.1. *The Doctoral school in the respective university study domain shall demonstrate the continuous development of the evaluation process and its internal quality assurance following a procedure developed and applied at the level of the IOSUD, the following assessed criteria being mandatory:*

- (a) the scientific work of Doctoral advisors;*
- (b) the infrastructure and logistics necessary to carry out the research activity;*
- (c) the procedures and subsequent rules based on which doctoral studies are organized;*
- d) the scientific activity of doctoral students;*
- e) the training program based on advanced academic studies of doctoral students;*
- f) social and academic services (including participation at different events, publishing papers etc.)*

and counseling made available to doctoral students.

- *The scientific activity of doctoral supervisors was carried out during an academic year. This is the number of publications in relevant journals and the degree of fulfillment of the minimum standards for the award of the habilitation certificate, in force in the academic year subject to evaluation, the number of doctoral students who have completed their studies within three years from the date of enrolment out of the total number of doctoral students and who have publicly defended the thesis.*
- *Infrastructure and facilities necessary for carrying out the research activity is analysed how the funds of the doctoral school were used to improve the infrastructure and facilities necessary to carry out the research activity in the academic year subject to evaluation like the number of doctoral students financially supported to publish/participate in conferences; organizing symposia, summer schools, etc.*
- *Subsequent procedures and rules based on which doctoral studies are organized like analysis of the degree of fulfillment of the obligations mentioned in the curriculum by the doctoral students coordinated by each doctoral supervisor.*
- *Analysis of the reasons why the doctoral students could not be complete the doctoral program within three years from the date of enrolment.*
- *The regulation for the running and organization of the TUIASI Center for career orientation, counseling and social inclusion <https://campus.tuiasi.ro/centrul-de-consiliere-orientare-in-cariera-si-incluziune-sociala/>*

Recommendations:

The indicator is fulfilled/.

Performance Indicator *C.1.1.2. *Mechanisms are implemented during the stage of the doctoral study program to enable feedback from doctoral students allowing them to identify their needs, as well as their overall level of satisfaction with the doctoral study program to ensure continuous improvement of the academic and administrative processes. Following the analysis of the results, there is evidence that an action plan was drafted and implemented.*

- *In the Technical University “Gheorghe Asachi” IASI there is a Quality Council (CC) led by the rector, coordinated by the vice-rector with quality problems, which has in its structure the*



Commission for evaluation and quality assurance (CEAC) and the Quality Department (CoC). .
The Commission for quality evaluation and assurance and the Quality Department is structured with composition and attributions in the field of quality, approved by the Senate.

- The Technical University “Gheorghe Asachi” IASI has a system for the periodic evaluation of teaching, research and management activities that is constantly used, improved from year to year and has become a basic component in the culture of quality.
- Recognition of the professional-scientific value of the members of the academic community from Technical University “Gheorghe Asachi” IASI by participation in management commissions and boards and quality assurance of education and scientific research at the national level;
- The quality of experts for the evaluation of scientific research projects and programs and educational, at national and international level;
- The quality of reviewers or members in the editorial committees of some representative magazines from the main international scientific flow.
- The quality of the study was distributed like a questionnaire. 98% of PhD student was told that is an excellent study.

Recommendations:

The indicator is fulfilled.

Criterion C.2. Transparency of information and accessibility of learning resources

**general description of the criterion analysis.*

Standard C.2.1. Information of interest to doctoral students, future candidates and public interest information is available for electronic format consultation.

**general description of the standard analysis.*

Performance Indicator C.2.1.1. *The IOSUD publishes on the website of the organizing institution, in compliance with the general regulations on data protection, information such as:*

- (a) the Doctoral School regulation;*
- (b) the admission regulation;*
- (c) the doctoral studies contract;*
- (d) the study completion regulation including the procedure for the public presentation of the thesis;*
- (e) the content of training program based on advanced academic studies;*
- (f) the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data;*
- (g) the list of doctoral students within the domain with necessary information (year of registration; advisor);*
- (h) information on the standards for developing the doctoral thesis;*
- (i) links to the doctoral theses' summaries to be publicly presented and the date, time, place where they will be presented; this information will be communicated at least twenty days before the presentation.*

- *The Doctoral School of Electrical and Energy Engineering provides all doctoral students with access to the resources necessary to carry out doctoral studies, by:*
 - access to the literature;
 - depending on the topic of the thesis;
 - access to modern research laboratories, which are very well equipped;
 - access to the research teams to which the doctoral students are integrated;
 - access to specialized laboratories at industrial partners -under research and development contracts

➤ <http://www.tuiasi.ro/rectorat/consiliul-pentru-studiile-universitare-de-doctorat>

Recommendations:

- *More PhD and postdoctoral PhD study of Electrical Engineering based on English language.*
The indicator is fulfilled.

Standard C.2.2. The IOSUD/The Doctoral School provides doctoral students with access to the resources needed for conducting doctoral studies.

**general description of the standard analysis.*

Performance Indicator C.2.2.1. *All doctoral students have free access to one platform providing academic databases relevant to the doctoral studies domain of their thesis.*



- *Established as a reference and research technical library, TUIASI Library has a central library and six branches. It is recognised as one of the most beautiful in the world and integrates new technology into traditional learning and research.*
- *The library of the TUIASI., access doctoral students to more phases of full text multidisciplinary scientific data, specialized full text, bibliographic and bibliometrics (TUIASI being a member of the ANELIS PLUS Association): Science Direct Freedom Collection , Springerlink Journals,*



Cambridge Journals, Ebsco Business Source Complete, American Institute of Physics - Journals (AIP), IEEE/IET Electronic Library (IEL), MathSciNet, Clarivate Analytics - Web of Science Core Collection, InCites Journal Citation Reports, Derwent Innovations Index, Scopus, both from the university campus based on the recognition of institutional IPs, as well as from outside it (access mobile for PhD students, teachers and researchers).

- The library has about one million volumes archived according to the international cataloguing and indexing practices and supports teaching and research in a wide range of subjects on engineering and technology, science, economics and law.

Recommendations:

The indicator is fulfilled.

Performance Indicator C.2.2.2. Each doctoral student shall have access, upon request, to an electronic system for verifying the degree of similarity with other existing scientific or artistic works.

- Doctoral students are granted access to the system of verifying the degree of similarity with other scientific creations through the verifying system of Technical University "Gheorghe Asachi" IASI. having an electronic system for verifying the degree of similarity: with sistemantiplagiat.ro.
- Sistemantiplagiat.ro is a computer program for comparing documents in text format. It was created in 2002 by the Polish company Plagiat.pl, and in 2012 it was launched in Romania.
- Sistemantiplagiat.ro detects similarities in documents written in any language that uses the Latin, Cyrillic, Greek, etc. alphabets.

Recommendations:

The indicator is fulfilled.

Performance Indicator C.2.2.3. All doctoral students have access to scientific research laboratories or other facilities depending on the specific domain/domains within the Doctoral School, according to internal order procedures.

- All doctoral students have access to scientific research laboratories or other facilities specific to the field of Electrical Engineering, according to internal rules.
- All doctoral students are granted access to scientific research laboratories within the Research Centres mentioned at the criterion A.2.1.1. Doctoral students within the field of ELECTRICAL ENGINEERING carry out research activities within the Research center
- Some doctoral students have access to research laboratories or testing laboratories within companies with which some doctoral supervisors have concluded research contracts
- Doctoral students have access, based on ID, to libraries, reading rooms, laboratories, rooms equipped with computers of the faculty, according to the provisions of study contracts and legislation in force on the schooling of all students.

Recommendations:

- Build virtual joint access laboratory for better online activities of PhD students. This means virtualize real laboratories and give access to students to training in virtual space, before starting real laboratory work.



The indicator is fulfilled.

Criterion C.3. Internationalization

**general description of the criterion analysis.*

Standard C.3.1. There is a strategy in place and it is applied to enhance the internationalization of doctoral studies.

**general description of the standard analysis.*

Performance Indicator *C.3.1.1. *IOSUD, for every evaluated domain, has concluded mobility agreements with universities abroad, with research institutes, with companies working in the field of study, aimed at the mobility of doctoral students and academic staff (e.g., ERASMUS agreements for the doctoral studies). At least 35% of the doctoral students have completed a training course abroad or other mobility forms such as attending international scientific conferences. IOSUD drafts and applies policies and measures aiming at increasing the number of doctoral students participating at mobility periods abroad, up to at least 20%, which is the target at the level of the European Higher Education Area.*

- *Through the International Mobility and Community Programs Service, the university supports student mobility, especially under the Erasmus program. The situation of students incoming and outgoing for the academic year 2018-2019 is presented below.*
- *The number of mobility agreements with foreign universities: 22 (EU)+16 (non-EU).*
- *A number of PhD students with mobilities: 15 Mobility percentage: $15/21 \times 100 = 71,4\%$.*
- *The IODS develops and implements policies and action plans designed to increase of the number of PhD students participating in scholarships abroad to up to at least 20%, the target of the European Higher Education Area.*
- *Briefly, among these measures we can find:*
 - *the development of the Erasmus program;-*
 - *the partnership with the platform phd-hub.eu;*
 - *the set-up of summer schools for PhD students;*
 - *the introduction of the European PhD;*
 - *encouraging participation in programs of the COST type;*
 - *posting international events dedicated to doctoral studies on the website, scholarships in the European and non-European areas.*

Recommendations:

- *The institution must increase the number of PhD students in Erasmus projects incoming and outgoing abroad. Internationalization is a key to educational success in the future.*

The indicator is fulfilled.

Performance Indicator C.3.1.2. *In the evaluated doctoral study domain, support is granted, including financial support, to the organization of doctoral studies in international co-tutelage or invitation of leading experts to deliver courses/lectures for doctoral students.*

- *The number of joint international supervision agreements: 0.*



- *First-rank experts that held classes/lectures before the PhD students in 2016 - 2020:21.*

The indicator is fulfilled.

Performance Indicator C.3.1.3. *The internationalization of activities carried out during the doctoral studies is supported by IOSUD through concrete measures (e.g., by participating in educational fairs to attract international doctoral students; by including international experts in guidance committees or doctoral committees etc.).*

- *The internationalisation of activities in the area of doctoral studies is also supported by other specific measures, such as:*
 - *participation to educational fairs in order to attract international PhD students;*
 - *the inclusion of international experts in advisory committees or PhD thesis defense committees;*
 - *joint-supervision theses;*
 - *participation in international PhD defense committees;*
 - *the establishment of the European PhD;*
 - *the inclusion of doctoral studies in specialised European networks etc.*

Recommendations:

- *Internationalization is a key for a future for an excellent University. This level of Erasmus, Ceepus and other mobilities must be doubled in the future.*

The indicator is fulfilled.

IV. SWOT Analysis

<p>Strengths:</p> <p>The university remains a regional leader in the field of higher education, through the study programs of Electrical Engineering it offers and the importance of research contracts;</p> <p>The university offers to study a program in an area of Electrical Engineering for a doctorate for full-time, part-time and distance learning;</p> <p>One of the best Doctoral school is Electrical Engineering</p> <p>The university offers study programs with teaching in English, for master's studies; http://www.phd-school.ee.tuiasi.ro/</p> <p>There is an adequate material basis for education and research activities, in continuous improvement and modernization;</p> <p>There are competent human resources, organized pyramidally, for each study program;</p>	<p>Weaknesses:</p> <p>The low share of research funding from private funds;</p> <p>The low level of attractiveness of the teaching and/or research career; big companies have more money than universities.</p> <p>Some areas do not have continuity in doctoral training.</p> <p>Case studies are not always the result of practical work done by PhD students;</p> <p>Low efficiency of technology transfer in case of research results (with poor funding), in the current economic environment; Insufficient visibility concerning EU universities.</p> <p>Increased level of internationalization is a key for a future for an excellent University.</p>
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<p>University research has international and national recognition, transparency in the university's ranking among top research universities, based on a large number of research contracts, ISI-listed publications, investment in infrastructure and involvement of young researchers, PhD students, postdocs extended;</p> <p>The University has adopted and implemented a strategy and operational plan for research and innovation compatible with the latest trends at the European and national level;</p> <p>The Research Center „Metrology, Measurement Systems and Innovative Materials” integrates young and experienced researchers with the Department of Electrical Measurements and Electrotechnical Materials, Faculty of Electrical Engineering, Technical University of Iași, Romania.;</p> <p>The intensification of the European mobility programs Erasmus, Erasmus +, Erasmus Mundus has continued;</p> <p>The general principles of quality assurance take into account transparency, compatibility and convertibility. In the strategic plan of the University , the quality is essential and constantly improving;</p> <p>The material base is characterized by the existence of modern equipment for education and research, provides optimal conditions for teaching, as well as practical work in pilot units and experimental stations;</p> <p>All students have access to library services, databases, Internet, dormitory accommodation, social programs, sports facilities, as well as canteens-restaurants.</p> <p>PhD students are very satisfied with their level of education. Many of them are working and continue working in other Universities in Romania or big Companies in Romania.</p>	
<p>Opportunities:</p> <p>Development of collaboration networks and partnerships with foreign universities;</p> <p>Accessing specific grants for student practice;</p>	<p>Threats:</p> <p>Funding for higher education and research may lead to insufficient funding for the academic process;</p>

<p>Collaboration with the economic environment for possible technological transfers, service offers, consultancy, initiation of study programs;</p> <p>The interest was shown by young people from various countries in and outside the European space to pursue doctoral degree programs, through the educational offer in languages of international circulation;</p> <p>Use the HORIZON 2020 strategy to encourage and support the university's research programs;</p> <p>Development of new European programs such as "Lifelong learning", Postdoctoral studies and e-Platforms;</p> <p>Development of existing partnerships with public institutions and the private environment, with the role of generating new sources of financing;</p> <p>Reconfiguring the relations between the public authorities, the university and the economic environment;</p> <p>Generalization of the values of a culture of quality at the level of university education and research;</p> <p>The existence of a dynamic economic environment that requires graduates;</p> <p>The possibility of accrediting new doctoral fields, full of English language;</p> <p>Development of partnerships with other European universities for doctoral studies;</p> <p>Imposing the organization as a partner for the regional economic and social environment;</p> <p>Requirements for participation in projects with companies and institutions in the area of Electrical Engineering</p>	<p>Domestic and international competition: open competitions to attract students, quality resources and funds;</p> <p>An aggressive policy of Electrical Engineering in attracting doctoral and postdoctoral students;</p> <p>National legislation that does not stimulate the attraction of foreign students (from outside the EU);</p> <p>A lack of interest of high school graduates for the Doctoral Study;</p> <p>The current economic context, only with a few relevant economic actors;</p> <p>The payment of state employees does not allow financial incentives for research activity;</p> <p>The risk of absorbing funds lower than forecast and for which expenses have been incurred;</p> <p>.</p>
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V. Overview of judgments awarded and of the recommendations

No.	Type of indicator (*, C)	Performance indicator	Judgment	Recommendations
1	A.1.1.1.	<p>The existence of specific regulations and their application at the level of the Doctoral School of the respective university doctoral study domain:</p> <p>(a) the internal regulations of the Doctoral School;</p> <p>(b) the Methodology for conducting elections for the position of director of the Council of doctoral school (CSD), as well as elections by the students of their representative in CSD and the evidence of their conduct;</p> <p>c) the Methodologies for organizing and conducting doctoral studies (for the admission of doctoral students, for the completion of doctoral studies);</p> <p>d) the existence of mechanisms for recognizing the status of a Doctoral advisor and the equivalence of the doctoral degree obtained abroad;</p> <p>e) functional management structures (Council of the doctoral school), giving as well proof of the regularity of meetings;</p> <p>f) the contract for doctoral studies;</p> <p>g) internal procedures for the analysis and approval of proposals regarding the training for doctoral study programs based on advanced academic studies.</p>	The indicator is fulfilled.	
2	A.1.1.2.	<p>The doctoral school' Regulation includes mandatory criteria, procedures and standards binding on the aspects specified in Article 17, paragraph (5) of the Government Decision No. 681/2011 on the approval of the Code of Doctoral Studies with subsequent amendments and additions.</p>	The indicator is fulfilled	
3	A.1.2.1.	<p>The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic backgrounds.</p>	The indicator is fulfilled	Translate all documents on the website to English.

4	A.1.2.2.	The existence and use of a software program and evidence of its use to verify the percentage of similarity in all doctoral theses.	The indicator is fulfilled	Using an international expert in commission for PhD study and always translate doctoral thesis into English. In this way similarity on English and translation part of the thesis will be reduced to the minimum.
5	A.1.3.1.	Existence of at least one research or institutional/human resources development grant under implementation at the time of submission of the internal evaluation file, per doctoral study domain under evaluation or existence of at least 2 research or institutional development / human resources grant for the doctoral study domain, obtained by doctoral thesis advisors operating in the evaluated domain within the past 5 years. The grants address relevant themes for the respective domain and, as a rule, are engaging doctoral students.	The indicator is fulfilled	University must use more EU grants for foreign PhD and postdoctoral students to have the possibility to be excellent in education and to increase the internationality of the study of Electrical Engineering.
6	*A.1.3.2.	The percentage of doctoral students active at the time of the evaluation, who for at least six months receive additional funding sources besides government funding, through scholarships awarded by individual persons or by legal entities, or who are financially supported through research or institutional/human resources development grants is not less than 20%.	The indicator is fulfilled	In the future is recommended more private sources for doctoral and postdoctoral study.
7	*A.1.3.3.	At least 10% of the total amount of doctoral grants obtained by the university through institutional contracts and of tuition fees collected from the doctoral students enrolled in the paid tuition system is used to reimburse professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad, publication of specialty papers or other specific forms of dissemination etc.).	The indicator is fulfilled	
8	A.2.1.1.	The venues and the material equipment available to the doctoral school enable the research activities in the evaluated domain to be carried out, in line with the assumed mission and objectives (computers, specific software, equipment, laboratory equipment, library, access to	The indicator is fulfilled	

		international databases etc.). The research infrastructure and the provision of research services are presented to the public through a specific platform. The research infrastructure described above, which was purchased and developed within the past 5 years will be presented distinctly.		
9	A.3.1.1.	Minimum three doctoral thesis advisors within that doctoral domain, and at least 50% of them (but no less than three) meet the minimum standards of the National Council for Attestation of University Degrees, Diplomas and Certificates (CNATDCU) in force at the time when the evaluation is carried out, which standards are required and mandatory for obtaining the enabling certification.	The indicator is fulfilled	
10	*A.3.1.2.	At least 50% of all teaching/research staff involved in teaching/research activities related to training programs for advanced university studies or in individual research/art creation programs have a full-time employment contract for an indefinite period with the IOSUD.	The indicator is fulfilled	
11	A.3.1.3.	The study subjects in the education program based on advanced higher education studies pertaining to the doctoral domain are taught by teaching staff or researchers who are doctoral thesis advisors / certified doctoral thesis advisors, professors / CS I or lecturer / CS II, with proved expertise in the field of the study subjects they teach, or other specialists in the field who meet the standards established by the institution in relation with the aforementioned teaching and research functions, as provided by the law.	The indicator is fulfilled	
12	*A.3.1.4.	The percentage of doctoral thesis advisors who concomitantly coordinate more than 8 doctoral students, but no more than 12, who are themselves studying in doctoral programs ⁶ does not exceed 20%.	The indicator is fulfilled	

⁶ 3 years for the doctoral university studies with the duration stipulated at Article 159, paragraph (3), respectively 4 years for the doctoral university studies with the duration stipulated at Article 174, paragraph (3) of the Law of national education No.1/2011 with subsequent amendments and additions, with additional extension periods approved as per Article 39, paragraph (3) of the Code of doctoral studies approved by the GD No. 681/2011 with subsequent amendments and additions.

13	A.3.2.1.	<p>At least 50% of the doctoral thesis advisors in the evaluated domain have at least 5 Web of Science - or ERIH-indexed publications in magazines of impact, or other achievements of relevant significance for that domain, including international-level contributions that indicate progress in scientific research - development - innovation for the evaluated domain. The aforementioned doctoral thesis advisors enjoy international awareness within the past five years, consisting of: membership on scientific boards of international publications and conferences; membership on boards of international professional associations; guests in conferences or expert groups working abroad, or membership on doctoral defense commissions at universities abroad or co-leading with universities abroad. For Arts and Sports and Physical Education Sciences, doctoral thesis advisors shall prove their international visibility within the past five years by their membership on the boards of professional associations, membership in organizing committees of arts events and international competitions, membership on juries or umpire teams in artistic events or international competitions.</p>	<p>The indicator is fulfilled</p>	
14	*A.3.2.2.	<p>At least 50% of the doctoral thesis advisors in a specific doctoral study domain continue to be active in their scientific field, and acquire at least 25% of the score requested by the minimal CNATDCU standards in force at the time of the evaluation, which are required and mandatory for acquiring their enabling certificate, based on their scientific results within the past five years.</p>	<p>The indicator is fulfilled</p>	
15	*B.1.1.1.	<p><i>The ratio between the number of graduates of masters' programs of other higher education institutions, national or foreign, who have enrolled for the doctoral admission contest within the past five years and the number of seats funded by the state budget, put out through contest within the doctoral domain is at least 0.2 or the ratio between the number of candidates within the past five years and the number of seats funded by the state</i></p>	<p>The indicator is fulfilled</p>	

		<i>budget put out through contest within the doctoral studies domain is at least 1,2.</i>		
16	*B.1.2.1.	<i>Admission to doctoral study programs is based on selection criteria including: previous academic, research and professional performance, their interest for scientific or arts/sports research, publications in the domain and a proposal for a research subject. Interviewing the candidate is compulsory, as part of the admission procedure.</i>	The indicator is fulfilled	
17	B.1.2.2.	<i>The expelling rate, including renouncement / dropping out of doctoral students 3, respectively 4, years after admission⁷ does not exceed 30%.</i>	The indicator is fulfilled	
18	B.2.1.1.	<i>The training program based on advanced academic studies includes at least 3 disciplines relevant to the scientific research training of doctoral students; at least one of these disciplines is intended to study in-depth the research methodology and/or the statistical data processing.</i>	The indicator is fulfilled	
19	B.2.1.2.	<i>At least one discipline is dedicated to Ethics and Intellectual Property in scientific research or there are well-defined topics on these subjects within a discipline taught in the doctoral program.</i>	The indicator is fulfilled	
20	B.2.1.3.	<i>The IOSUD has mechanisms to ensure that the academic training program based on advanced university studies addresses „the learning outcomes“, specifying the knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities</i>	The indicator is fulfilled	
21	B.2.1.4.	<i>All along the duration of the doctoral training, doctoral students in the domain receive counselling/guidance from functional guidance commissions, which is reflected in written guidance and feedback or regular meeting.</i>	The indicator is fulfilled	
22	B.2.1.5.	<i>For a doctoral study domain, the ratio between the number of Doctoral students and the number of teaching staff/researchers providing guidance shall not exceed 3:1.</i>	The indicator is fulfilled	

⁷ 3 years for the doctoral university studies with the duration stipulated at Article 159, paragraph (3), respectively 4 years for the doctoral university studies with the duration stipulated at Article 174, paragraph (3) of the Law of national education No. 1/2011 with subsequent amendments and additions.

23	B.3.1.1.	For the evaluated domain, the evaluation commission will be provided with at least one paper or some other relevant contribution per doctoral student who has obtained a doctor's title within the past 5 years. From this list, the members of the evaluation commission shall randomly select 5 such papers / relevant contributions per doctoral study domain for review. At least 3 selected papers must contain significant original contributions in the respective domain.	The indicator is fulfilled	Recommendation for Electrical Engineering to insist on applied science papers. In the future Electrical Engineering according to trends in the development of electrical vehicles and renewable energy and waste energy.
24	*B.3.1.2.	<i>For the evaluated domain, the evaluation commission will be provided with at least one paper or some other relevant contribution per doctoral student who has obtained a doctor's title within the past 5 years. From this list, the members of the evaluation commission shall randomly select 5 such papers / relevant contributions per doctoral study domain for review. At least 3 selected papers must contain significant original contributions in the respective domain.</i>	The indicator is fulfilled	
25	*B.3.2.1.	<i>The number of doctoral theses allocated to one specialist coming from a higher education institution, other than the evaluated IOSUD should not exceed two (2) in a year for the theses coordinated by the same doctoral thesis advisor.</i>	The indicator is fulfilled	
26	*B.3.2.2.	<i>The ratio between the doctoral theses allocated to one scientific specialist coming from a higher education institution, other than the institution where the defense on the doctoral thesis is organized, and the number of doctoral theses presented in the same doctoral study domain in the doctoral school should not exceed 0.3, considering the past five years. Only those doctoral study domains in which minimum ten doctoral theses have been presented within the past five years should be analyzed.</i>	The indicator is fulfilled	
27	C.1.1.1.	<i>The Doctoral school in the respective university study domain shall demonstrate the continuous development of the evaluation process and its internal quality assurance following a procedure developed and applied at the level of the IOSUD, the following assessed criteria being mandatory: (a) the scientific work of Doctoral advisors; (b) the infrastructure and logistics necessary to carry out the research activity;</i>	The indicator is fulfilled	

		<p>(c) the procedures and subsequent rules based on which doctoral studies are organized;</p> <p>d) the scientific activity of doctoral students;</p> <p>e) the training program based on advanced academic studies of doctoral students;</p> <p>f) social and academic services (including for participation at different events, publishing papers etc.) and counselling made available to doctoral students.</p>		
28	*C.1.1.2.	<p>Mechanisms are implemented during the stage of the doctoral study program to enable feedback from doctoral students allowing to identify their needs, as well as their overall level of satisfaction with the doctoral study program in order to ensure continuous improvement of the academic and administrative processes. Following the analysis of the results, there is evidence that an action plan was drafted and implemented.</p>	The indicator is fulfilled	
29	C.2.1.1.	<p>The IOSUD publishes on the website of the organizing institution, in compliance with the general regulations on data protection, information such as:</p> <p>(a) the IOSUD/Doctoral School regulation;</p> <p>(b) the admission regulation;</p> <p>(c) the doctoral studies contract;</p> <p>(d) the study completion regulation including the procedure for the public presentation of the thesis;</p> <p>(e) the content of the study programs, based on advanced academic studies;</p> <p>(f) the academic and scientific profile and thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data;</p> <p>(g) the list of doctoral students within the school, with necessary information (year of registration; Advisor);</p> <p>(h) information on the standards for developing the doctoral thesis;</p> <p>(i) information on the opportunities for doctoral students aiming to attend conferences, to publish articles, awarding scholarships etc.</p>	The indicator is fulfilled	

		(j) links to the doctoral theses' summaries to be publicly presented and the date, time, place where they will be presented; this information will be communicated at least twenty days before the presentation.		
30	C.2.2.1.	All doctoral students have free access to one platform providing academic databases relevant to the doctoral studies domain of their thesis.	The indicator is fulfilled	
31	C.2.2.2.	Each doctoral student shall have access, upon request, to an electronic system for verifying the degree of similarity with other existing scientific or artistic works.	The indicator is fulfilled	
32	C.2.2.3	All doctoral students have access to scientific research laboratories or other facilities depending on the specific domain/domains within the Doctoral School, according to internal order procedures.	The indicator is fulfilled	Build virtual joint access laboratory for better online activities of PhD students. This means virtualize real laboratories and give access to students to training in virtual space, before starting real laboratory work.
33	*C.3.1.1.	IOSUD, for every evaluated domain, has concluded mobility agreements with universities abroad, with research institutes, with companies working in the field of study, aimed at the mobility of doctoral students and academic staff (e.g., ERASMUS agreements for the doctoral studies). At least 35% of the doctoral students have completed a training course abroad or other mobility forms such as attending international scientific conferences. IOSUD drafts and applies policies and measures aiming at increasing the number of doctoral students participating at mobility periods abroad, up to at least 20%, which is the target at the level of the European Higher Education Area.	The indicator is fulfilled	The institution must increase the number of PhD students in Erasmus projects incoming and outgoing abroad. Internationalization is a key to education success in the future.
34	C.3.1.2.	In the evaluated doctoral study domain, support is granted, including financial support, to the organization of doctoral studies in international co-tutelage or invitation of leading experts to deliver courses/lectures for doctoral students.	The indicator is fulfilled	

35	C.3.1.3.	The internationalization of activities carried out during the doctoral studies is supported by IOSUD through concrete measures (e.g., by participating in educational fairs to attract international doctoral students; by including international experts in guidance committees or doctoral committees, etc.).	The indicator is fulfilled	<i>Internationalization is a key for a future for an excellent University. This level of Erasmus, Ceepus and other mobilities must be doubled in the future.</i>
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VI. Conclusions and general recommendations

After full evaluation Technical University "Gheorghe Asachi" IASI, Doctoral study of Electrical Engineering, documents and talking with professors, rectors, deans, students and after reading plans and programs, annexes, and all other documents, I have only one decision. Doctoral study of Electrical Engineering is an extremely quality University. From 35 indicators all indicators are fulfilled. In the future, Technical University "Gheorghe Asachi" needs more collaboration activities every year according to the Internationalization Doctoral Study and the quality of resources for this study. Technical University "Gheorghe Asachi" must in the future period invest in new applications for building virtual platforms and virtual laboratories. Recommendation is investing in a Doctoral study on English. Translating all Doctoral studies to the English language will be a big step for Technical University "Gheorghe Asachi" IASI and Technical University "Gheorghe Asachi" IASI will have more foreign students. With foreign students internationalization will be more focused on Technical University "Gheorghe Asachi" IASI and give a new dimension in a future.

Technical University "Gheorghe Asachi" IASI, Doctoral study of Electrical Engineering is evaluated that fulfilled or necessary indicators to establish Doctoral Study.

Date: 22. September 2021

**International Evaluator
Prof. DR Tihomir Latinovic**



VII. Annexes

ADMISSION FOR EU

The citizen of EU, EEA country and the Swiss Confederation apply for admission under the same conditions, including in terms of tuition fees, as the Romanian citizens.

STEP I: CHOOSE AND DIRECTLY CONTACT YOUR DESIRED PHD COORDINATOR

Depending on the domain of doctorate you are interested in and your specific research areas, choose and informal, directly contact by phone or E-mail the professor who you would like to be the scientific coordinator of your doctoral program. If he basically agrees to supervise your doctoral program, he will assist you from the very beginning, in the not very simple process of preparing and submitting the documentation for admission and subsequently for matriculation.

STEP II: REQUESTING RECOGNITION OF GRADUATED STUDIES

All EU, EEA, Swiss Confederation citizens must obtain a certificate for the recognition of graduated studies needed for admission in a Romanian higher education institution.

For detailed information about the documents included in this file application please read [HERE](#).

Submitting the file to the university must be done until 15 August 2018 for the admission session from September 2018.

STEP III: SUBMITTING THE APPLICATION FILE TO GHEORGHE ASACHI TECHNICAL UNIVERSITY OF IASI

1 Application form (filled in 2 copies), addressed to Romanian Centre for Equivalence and Recognition of Diplomas (CNRED)– please download [HERE](#).

2 When receiving the certificate(s) issued by the Romanian Centre for Equivalence and Recognition of Diplomas (CNRED) recognizing the diploma of previous studies abroad, they will be added to the admission file by the University Foreign Students' Office.

3 The study documents (copy and legally certified translation in Romanian, English or French, if they were issued in other language):

- the baccalaureate diploma,
- the bachelor's degree diploma,
- the master's degree diploma (or their equivalent);

4 Birth certificate (copy and legally certified translation);

5 Copy of the passport – valid at least 6 months after the application day;

6 If necessary, name change documents (marriage certificate, legal decision, etc) – (copy and legally certified translation);

7 Medical certificate (in English) to prove that the person to be registered for studies does not suffer from infectious diseases or other illnesses that are incompatible with the future profession. On the medical certificate it must be specified that 'The candidate is not registered with mental illnesses and infectious or contagious diseases'. If the candidate is registered with mental illnesses, he / she will have to bring the psychologist's / psychiatrist's approval that the candidate can perform the studies to be



registered to;

8 Internationally recognized English language certificate. If the candidate does not submit such a certificate, he can pass an English proficiency exam organized by our University Foreign Languages Department. This exam will be organized the day before the admission interview.

9 2 photos (3 x 4 cm);

10 Application Form addressed to Technical University of Iasi, to apply for admission colloquium in the September 2018 session PhD (doctoral) programs in English, please download [HERE](#).

STEP IV: ADMISSION

The admission colloquium consists of an interview focused on the topic the candidate wishes to address and deepen during the doctoral stage.

This interview can be held directly (face-to-face with the admission committee) or on-line (using Skype).

The formula for calculating the overall average admission mark to doctoral studies is as follows:

$AAM = 0.5 \times \text{Interview A} + 0.3 \times \text{License A} + 0.2 \times \text{Dissertation A}$, where:

- AAM = average admission mark;
- Interview A = average mark obtained at interview;
- License A = average obtained at the diploma / license exam;
- Dissertation A = average obtained at the dissertation exam;

STEP V: MATRICULATION AND FEES

A) The academic year starts around 1 October. For the enrollment, all three main diplomas, (baccalaureate, bachelor, master) and the other documents listed in the paragraph "Step III" must be submitted in original.

B) Tuition fee is 2500 lei per year (just informative, 1 € = 4.65 lei). Tuition fee-paying students must pay in advance the first semester fee (1250 lei).



ADMISSION FOR NON-EU

STEP I: CHOOSE AND DIRECTLY CONTACT YOUR DESIRED PHD COORDINATOR

Depending on the domain of doctorate you are interested in and your specific research areas, choose and informally, directly contact by phone or E-mail the professor who you would like to be the scientific coordinator of your doctoral program. If he basically agrees to supervise your doctoral program, he will assist you from the very beginning, in the not very simple process of preparing and submitting the documentation for admission and subsequently for registration.

STEP II: SUBMITTING THE APPLICATION FILE TO GHEORGHE ASACHI TECHNICAL UNIVERSITY OF IASI

The application file containing all documents required for admission must be submitted to Technical University of Iasi, Foreign Students' Office, Mangeron Str. No 67, room B102, 700050- Iasi, Romania, by postal service or by E-mail (scanned documents): admissions@tuiasi.ro

Submitting the file to the university must be done in the interval 15 May-15 August 2018.

1 Application form (filled in 2 copies), for requiring the Letter of Acceptance, issued by Romanian Education Ministry, please download [HERE](#).

2 The study documents (copy and legally certified translation in Romanian, English or French, if they were issued in other language):

- the baccalaureate diploma,
- the bachelor's degree diploma,
- the master's degree diploma (or their equivalent);

Original diplomas issued in countries which have NOT ratified the Hague Apostille Convention must be superlegalized by the Ministry of Foreign Affairs of the issuing country and by the Embassy/Consular Office of Romania in that country.

3 Birth certificate (copy and legally certified translation);

4 Copy of the passport – valid at least 6 months after the letter of acceptance to studies is issued;

5 If necessary, name change documents (marriage certificate, legal decision, etc) – (copy and legally certified translation);

6 Medical certificate (in English) to prove that the person to be registered for studies does not suffer from infectious diseases or other illnesses that are incompatible with the future profession. On the medical certificate it must be specified that 'The candidate is not registered with mental illnesses and infectious or contagious diseases'. If the candidate is registered with mental illnesses, he / she will have to bring the psychologist's / psychiatrist's approval that the candidate can perform the studies to be registered to;

7 Internationally recognized English language certificate. If the candidate does not submit such a certificate, he can pass an English proficiency exam organized by our University Foreign Languages Department. This exam will be organized the day before the admission interview;

8 Copy of the document proving permanent residence abroad.

9 Copy of the document proving payment of the file processing fee of the amount equivalent in



Romanian currency (lei) of 80 euros. On the bank document, the candidate will have to mention his / her name and the text (file processing fee). The file processing fee will be transferred to the bank account below:

- Beneficiary: Universitatea Tehnica „Gheorghe Asachi” din Iasi
- CIF: 4701606
- Address: Iasi, 67 Prof. dr. docent Dimitrie Mangeron Street
- Cod IBAN: RO44TREZ 4062 0F33 0500 XXXX
- Bank: TREZORERIA Iasi

The fee in Romanian currency (lei) will be calculated according to the National Bank of Romania official exchange rate on the day of the payment.

10 When receiving the Letter of Acceptance issued by Romanian Education Ministry, it will be added to the admission file by the University Foreign Students' Office.

STEP III: ADMISSION INTERVIEW

The admission colloquium consists of an interview focused on the topic the candidate wishes to address and deepen during the doctoral stage.

This interview can be held directly (face-to-face with the admission committee) or on-line (using Skype).

STEP IV: MATRICULATION AND FEES

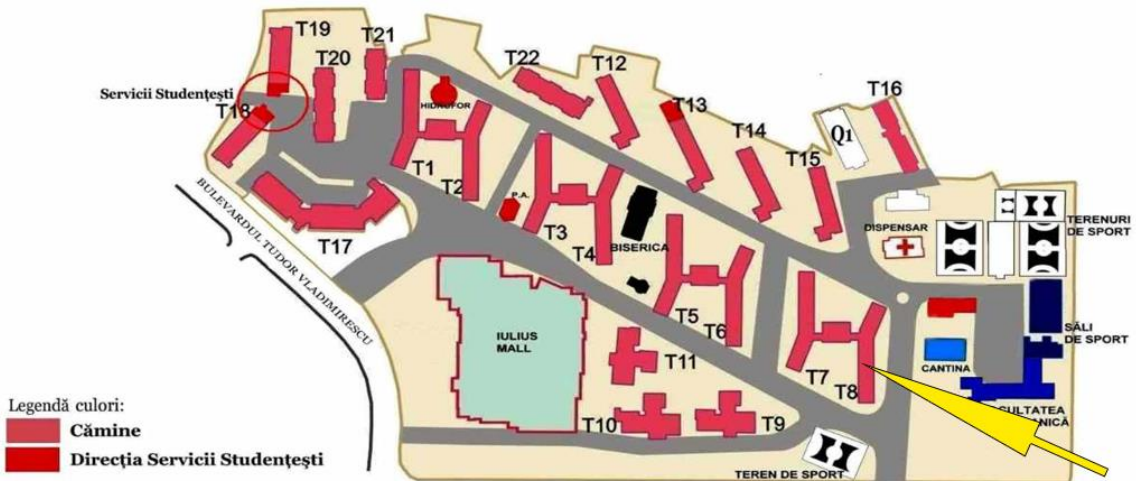
A) The academic year starts around 1 October. Anyway, enrollment in doctorate program is carried out as planned by our University no later than the end of the first semester of the academic year for which it was issued approving the laws in force.

B) At registration, candidates shall also submit the documents in the application file in the original, be authenticated by the Romanian Embassy in The Hague Apostille issuing country.

C) Passport with valid visa purposes "studies" must be presented. Details about receiving visa are here provided ([LINK](#)).

D) 4 passport-size photos;

E) Tuition fee is 290 € per month. Aiming to obtain "studies" visa, the tuition fee must be paid in advance for one year.



T8 hostel in "Tudor Vladimirescu" student campus - Excellent living, eating and accommodating facilities for best student prices! The campus "Tudor Vladimirescu" has an area of 137,148 square meters, being in the immediate vicinity of the academic area of the university. The campus consists of 21 student hostels accommodating around 7,526 students and has a student canteen at the most affordable prices in the city, a medical dispensary and a sports base consisting of six open-air sports fields, a fitness room, a gymnasium aerobics, a power room and a team games hall.

For Erasmus+ and PhD students is booked the hostel T8, located in the central area of the campus; it could be easily found on Google Maps at link. It has 143 double rooms but it is possible, on request, to book and rent the room for single use. Students have free access to the cable television networks, which includes a vast grid of 82 TV channels, some of which are international programs. At the same time, students benefit from free internet access in their rooms, by simple registering at follow link. Each room has its own bathroom. On each floor there is an open access kitchen between 06.30 - 23.00, where students can cook various culinary products.

To ensure student security, the hostel is monitored by an advanced video surveillance system, consisting of 45 video-cameras installed both inside and outside the building. At the same time, access to the T8 hostel is allowed on the basis of a personalized card, provided free of charge by the campus administration. The sports base of the university is about 100 meters away from the T8 hostel. From Monday to Friday, between 18.00 and 22.00, Saturday and Sunday between 08.00 and 22.00, students have free access to the sports base on the basis of prior reservations!



Student Campus



Student Campus



Student Campus

RESEARCH CENTER METROS,

The Research Center „Metrology, Measurement Systems and Innovative Materials” integrates young and experienced researchers with the Department of Electrical Measurements and Electrotechnical Materials, Faculty of Electrical Engineering, Technical University of Iași, Romania.

About Metros Center,

The Metros Center is also presented on the ERRIS platform of the Romanian Research Infrastructure, follow the link [here](#).



The 26 research services, including over 70 state-of-the-art testing and control equipment, have allowed only the successful completion of 45 grants / research contracts won in national competitions over the last 5 years, 6 research contracts won in international competitions, amounting to more than three and a half million euros. This Center has been recognized by the CNCSIS (National Council of Scientific Research in Higher Education) as Center of Excellence, having the Accreditation Certificate no. 6 EC / 12.10.20.

This national recognition was confirmed by the ulterior achievements, synthetically here presented:

- 43 grants / research contracts won in national competitions in the last 5 years;
- 6 research contracts won in international competition (FP6 , bilateral cooperation) also in the last 5 years;



The main research domains are:

- Methods and techniques for the characterization of bio and nano materials;
- Techniques and methods for monitoring the environmental parameters;
- Distributed systems for measurement and control;
- Research on measuring and reducing the electromagnetic pollution;
- Advanced techniques for determining the electro-chemical properties of materials;

Our laboratories have modern equipment; the value of investments done in the last three years in the modernization of research infrastructure exceeds the equivalent of 1 million euro.

We are deeply involved in developing new or already existing partnerships and scientific collaborations with universities, research institutes and companies from home and abroad.

Domains of activity:

- Electrical and Optical Engineering Facilities;
- Materials Synthesis or Testing Facilities;
- Environmental Management Infrastructures;



Coordinator: Prof.dr.eng. Burlică Radu

Research profile:

The field of research activity refers to: Electrical Power, Advanced solutions for integrated control and management of energy in order to increase energy efficiency, Electrical power equipment design and testing, Management of transmission and distribution networks, Renewable energy sources, Research on the power networks, High Voltage Technologies and testing, Non-thermal plasma advanced oxidation technologies.

STRUCTURE

- Research Laboratories:

- Electrical Power Equipment design, testing and monitoring;
- Energy management / Energy quality optimization;
- Power distribution / Smart-Grids design and applications;
- Insulation testing for High-voltage equipment;
- Testing Design and monitoring of renewable energy systems;
- Non-thermal Plasma Laboratory;

- Staff:

- Prof. dr. eng. Marcel Istrate
- Prof. dr. eng. Adam Marcel
- Prof. dr. eng. Mihai Gavrilăș
- Prof. dr. eng. Munteanu Florin
- Prof. dr. eng. Burlică Radu
- Prof. dr. eng. Pleșca Traian
- Conf. dr. eng. Nemeș Ciprian
- Conf. dr. eng. Grigoraș Gheorghe
- Sl. dr. eng. Scarlatache Florina
- Sl. dr. eng. Ivanov Ovidiu



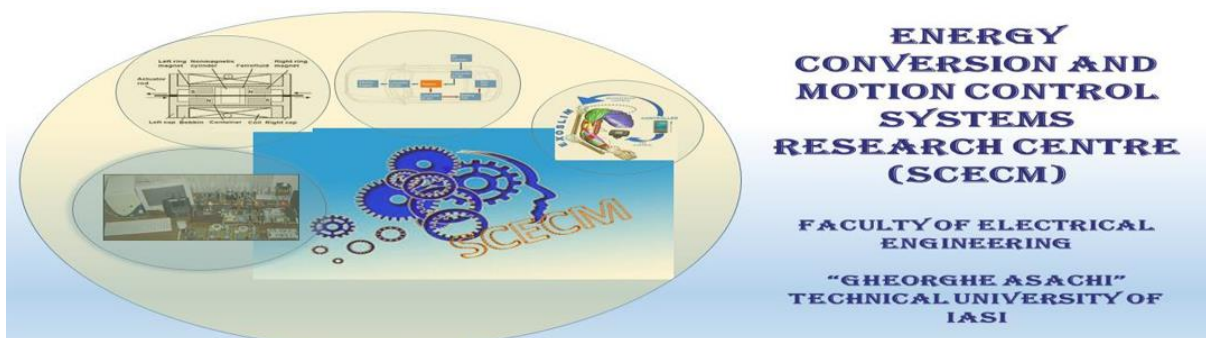
- Sl. dr. eng. Beniuga Oana
- Sl. dr. eng. Astanei Dragoș
- Sl. dr. eng. Neagu Bogdan
- Sl. dr. eng. Andrușca Mihai

COLLABORATION

- International:
 - Universite d'Orleans, France, Politecnico di Torino Italy, University of Catania Italy, ESIGELEC Rouen, SUPELEC Paris, Universite d'Angers France, University of Bologna Italy, Florida State University USA.
- National:
 - Integrated control and management platform of energy carriers flows for increasing energy efficiency at SME, Grant PN-III-P2-2.1-CI-2017-0190, Research Project 105CI/25.07.2017, Project Manager: Grigoraș Gheorghe
 - Integrated system for the optimization of energy consumption of pumping groups within irrigation systems, Grant PN-III-P2-2.1-CI-2017-0169, Research Project 17CI/25.07.2017 Project Manager: Scarlatache Florina
 - Software tool for the management of transactions on the electricity market, Grant PN-III-P2-2.1-CI-2017-0328, Research Project t 45CI/25.07.2017, Project Manager: Ivanov Ovidiu
 - Intelligent system for electricity network congestion forecasting and control, Research grant supported by CNCSIS - PNCDI II Partnership program (2008-2011)
 - Software tool for electricity market transaction management – GT Market Research grant supported by PNCDI III Partnership program (2017)
 - Increasing the Agricultural Production in Greenhouses using Non- Thermal Plasma Activated Water Technology for Irrigation, PN III, PCE – 15/2017.
 - Hydrogen production using Non-Thermal Plasma Technologies, PNII– IDEI 331/uefiscdi_RO, PI. Burlica Radu
 - Demand-Side Management of residential prosumers with photovoltaic systems. Project PN-III-P2-2.1-CI-2017-0823, contract no.145 CI/10.10.2017.
 - Research on renewable energy integration: studies towards the development of electricity supply service. Project PERFORM-ERA, ID – 57649, 2010 - 2013, POSDRU/89/1.5/S/57649 (2007-2013).
 - M. Adam, Intelligent system for monitoring and diagnostic of electrical equipment – SIMDE, Grant PNCDI 2-Parteneriate, Contract nr. 2014, 2007-2010.
- Industrials:
 - Dynamic loading of overhead electric lines based on on-line assessment of transmission capacity, Research project supported by Transelectrica S.A. Transmission Branch Bacău (2012-2013).
 - Research and technical assistance for technical losses reduction in the distribution network of EON Moldova Distribution, Research project supported by E.ON Moldova Distribution S.A. (2014-2016).
 - Active energy losses forecast for the electricity distribution network operated by Delgaz Grid S.A., Research project supported by Delgaz Grid S.A. (ex. E.ON Moldova Distribution), (2017).
 - Experimental research on the design, operation and exploitation of photovoltaic panels and intelligent optimization of biaxial orientation. Polytech contract no. 2274P / 17.12.2012 - 15.06.2014.
 - Scientific research contract no. 27373/22.12.2015, Data analysis and interpretation, creation of data processing algorithms, computer assisted simulation and generation of the simulation reports. Beneficiary: Power System' s Maintenance Service Society, SMART S.A

KEY PUBLICATIONS

- Burlică, R.; Shih, K-Y; Locke, B. R., Formation of H-2 and H2O2 in a Water-Spray Gliding Arc Nonthermal Plasma Reactor, Industrial & Engineering Chemistry Research, Volume: 49 Issue: 14 Pages: 6342-6349 2010
- Burlică, Radu; Shih, Kai-Yuan; Hnatiuc, Bogdan; Locke, Bruce Hydrogen Generation by Pulsed Gliding Arc Discharge Plasma with Sprays of Alcohol Solutions, Industrial & Engineering Chemistry Research Volume: 50 Issue: 15, Pages:9466-9470, 2011
- Burlică, Radu; Finney, Wright C.; Locke, Bruce R., Effects of the Voltage and Current Waveforms and Discharge Power on Hydrogen Peroxide Formation in Water-Spray Gliding Arc Reactors, IEEE Transaction on Industry Applications, Volume: 49 Issue: 3 Pages: 1098-1103 2013
- Avishek Banerjee, Mihai Gavrilăş, Gheorghe Grigoraş, Samiran Chattopadhyay, Minimization of reliability indices and cost of power distribution systems in urban areas using an efficient hybrid meta-heuristic algorithm, Soft Computing, 2017, on-line, ISSN: 1432-7643, (FI = 2.472)
- Gheorghe Grigoraş, Florina Scarlatache, An assessment of the renewable energy potential using a clustering based data mining method. Case study in Romania, Energy, Volume 81, pp. 416, 2015, ISSN: 0360-5442 (FI = 4,52)
- Gheorghe Grigoraş, Gheorghe Cârţină, The fuzzy correlation approach in Florina Rotaru, Gianfranco Chicco, Gheorghe Grigoraş, Gheorghe Cârţină, Two-stage distributed generation optimal sizing with clustering-based node selection, International Journal of Electrical Power & Energy Systems, Vol. 40, Nr. 1, pp. 120–129, 2013, ISSN: 0142-0615 (FI = 3,289)
- Ciprian Nemeş, Munteanu F., Astanei D., Analysis of grid-connected photovoltaic system integration on low-voltage distribution network, Journal of sustainable energy, vol. 7, nr. 1, pp. 9 – 14, ISSN 2067-5534.
- Dragoş Machidon, Marcel Istrate, Weather Influence Analysis on the Lightning Protection Current Estimation, Acta Electrotehnica, Number 3-2015, Proceedings of The 6th International Conference on Modern Power Systems, MPS 2015, Romania, pp.161-164, ISSN 1841-3323.
- Machidon D., Istrate M., A new model based on electro-geometrical theory for estimating the lightning protection zones, Published in Advanced Topics in Electrical Engineering (ATEE), 2013 8th International Symposium, May, Bucharest, pp.1-5, Print ISBN: 978-1-4673-5979-5.
- M. Adam, A. Munteanu, C.M. Pancu, M. Andruşcă, Method and apparatus for monitoring and diagnosis of joint coils, request patent, no. a 00233, 2017.
- M. Andruşcă, M. Adam, A. Baraboi, A. Dragomir, A. Munteanu, Using Fuzzy Logic for Diagnosis of Technical Condition of Power Circuit Breakers, 8th EPE, pp. 268-273, Iaşi, România, 2014.



Energy Conversion and Motion Control Systems Research Centre (SCECM) RESEARCH PROFILE

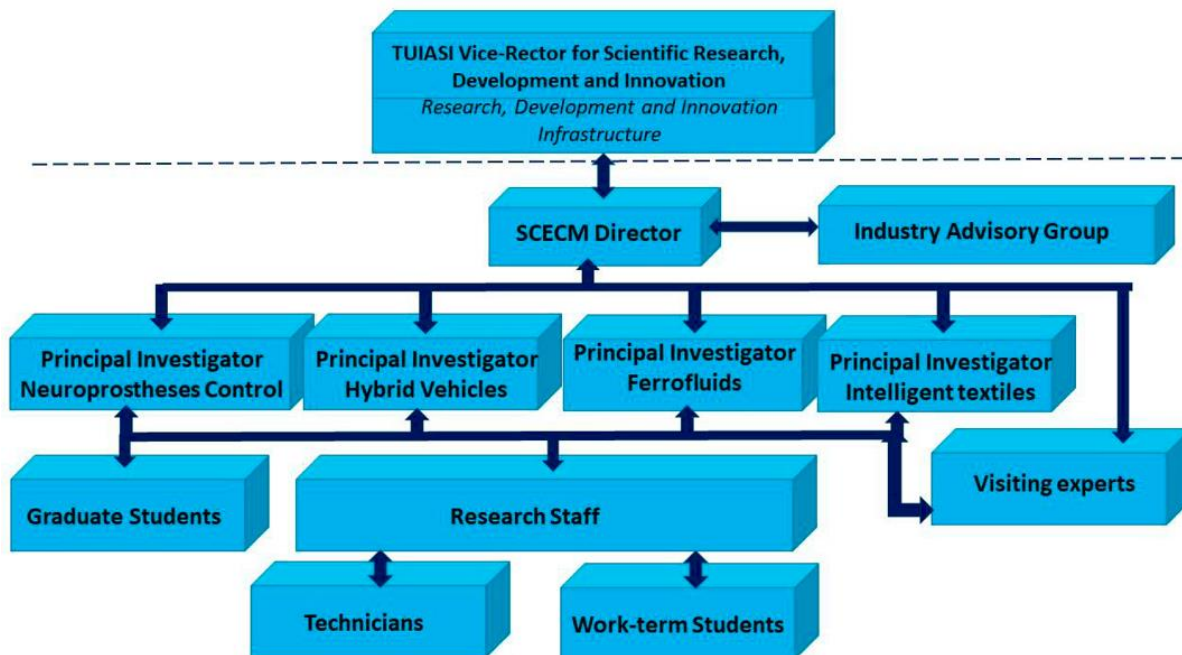
1. Goals

To strengthen the engineering research in fields as: Functional Electrical Stimulation (FES) and Brain-Computer Interfaces (BCI) based neurorehabilitation, Optimal design of electromagnetic devices, Electromechanical systems control, Functional and technological design and manufacturing of knitted products, as well as to enhance the technological transfer process towards industry of the research outcomes.

2. Field of activity

- FES & BCI based control in neuroprostheses field; embedded systems for neurorehabilitation;
- Electromechanical systems with improved performances (servos, field oriented control in electrical actuation systems, power electronics);
- Real time control for hybrid vehicles and industrial robots;
- Electromagnetic systems based on permanent magnets and ferrofluids;
- Functional and technological design of knitted products.

3. Structure



4. Staff

- Prof. Marian-Silviu Poboroniuc: SCECM Director and Neuroprostheses Control Principal Investigator. Professor for Robotics, Neuroprostheses Control and Systems Theory at the Faculty of Electrical Engineering (IEEIA-TUIASI). His current research interests involve mobile robots control, human motion analysis and synthesis, neuroprosthetics, biomechanics, and rehabilitation robotics.
- Prof. Gheorghe Livint: Hybrid Vehicles Field Principal Investigator. Domains of competence and research interest: Systems Theory, Robust control of electrical systems, Fuzzy logic, H infinity Control, CRONE control, Hybrid electric vehicles.
- Prof. Radu Olaru: Ferrofluids Field Principal investigator. Main research interests: electromagnetic devices and systems for measuring, control and actuation.
- Prof. Antonela Curteza: Intelligent Textiles Field Principal Investigator. Full professor at the Knitting and Clothing Engineering Department within the Faculty of Textile - Leather Engineering and Industrial Management. Main research interest: Design, Clothing comfort and functions, Smart and functional textile products, Sustainable fashion.
- Prof. Dorin Lucache, is professor at Utilizations of Electrical Energy disciplines. Main research interest: energy efficiency utilization, modern lighting, smart electric installations, optimal design of electromagnetic devices, devices for diagnostic based on alternative and complementary medicine.
- Prof. Cristian-Gyozo Haba, Faculty of Electrical Engineering. His current research interest is in the fields of: Embedded System Design, Design of digital systems, Remote measuring systems, Digital control of electrical machines.

- Prof. Camelia Mihaela Petrescu holds a full professorship tenure at Faculty of Electrical Engineering. Her research interest is in finite element analysis, optimization of electromagnetic devices using stochastic algorithms, high frequency dielectric heating, power quality, magnetic actuators.
- Assoc. Prof. Mihai Albu: Director of the Department of Energy Utilization, Actuation and Industrial Automation at IEEIA. Main research: Power Electronics and Urban and railway vehicles: design, monitoring and diagnosis.
- Assoc. Prof. Georget Paicu holds a professorship tenure at Faculty of Electrical Engineering. His current research interest are in the field of motion control systems analysis and design, neuroprostheses control and design.
- Assoc. Prof. Nicoleta-Laura Macovei, Knitting and Clothing Engineering Department, Faculty of Textile. Main research interest: Knitting Technologies and Machines, Textile products for people with special needs, Development and optimisation of knitting technologies.
- Assoc. Prof. Viorica Crețu, Faculty of Textile, Leather Engineering and Industrial Management. Main research interest: Knitting Technologies and Machines, Textile Metrology, Functional and technological design of knitted products, Technical textile products, Textile products for people with special needs, Design and product development, etc.
- Lecturer Mitica Temneanu, IEEIA, expertise area is in Algorithms, Numerical Methods, Systems Theory, Control Engineering, Industrial Informatics.
- Lecturer Gabriel Chiriac, IEEIA, research area covers: electric transport, lighting, furnaces.
- Lecturer Costica Nituca, IEEIA, research interest's covers the vehicles power collecting, Electrical traction, Technical creativity, Modelling and simulation of the electrical equipment.
- Lecturer Elena Serea, IEEIA, deals with design of indoor and outdoor lighting installations, including road and urban lighting, architectural floodlighting, tunnel and underpass lighting, plants growth lighting.
- Lecturer Daniel Sticea, IEEIA, deals with Power Electronics, Electrical Drives, Electronic Power Systems, Microprocessors, Scalar Control of Electrical Drives, Vector Control of Electrical Drives and Numerical Control Systems.
- Assist.Prof. Danut-Constantin Irimia, IEEIA, deals with Brain-Computer Interface (BCI) based rehabilitation; Functional Electrical Stimulation based rehabilitation, Design and control of neuroprostheses etc.
- Assist. Prof. Emil-Constantin Loghin holds its position at Faculty of Textiles, Leather and Industrial Management. His research interests include industrial engineering and electromagnetic shielding materials.

5. Highlights and achievements

- Grand prize EUROINVENT2017 – “Mechatronic glove for hand rehabilitation” (Patent application No. 00072/10.02.2017)- among 544 exhibited inventions from 39 countries.
- INTELLIGENT SYSTEMS AWARD and GOLD MEDAL, CYBER-ARM (OSIM no.693/15.09.2014), 7th Int. Fair of Inventions and Practical Ideas, INVEST-INVENT2016, 15-17.09.2016, Iasi, RO.
- GOLD MEDAL. Curteza A., V. Cretu, L. Macovei, M.Poboroniuc, M. Buzdugan, M. Radu, S. T. Radu, Knitted product with embeded knitted electrodes as neuroprosthesis to rehabilitate the disabled people due to a neuromotor handicap; Poster and product. INVENTICA2016-The XX-th Int. Salon of Research, Innovation and Technological Transfer, Iasi, 29.06-01.07.2016.
- CYBERLIFE AWARD - Poboroniuc M. S., Irimia D.C., Serea F., Hartopanu S., Future Medical Devices controlled by means of Brain-Computer Interface. Euroinvent2014.
- GOLD MEDAL - Diplom awarded by Int. Salon of Inventions and New Technologies “NEW TIME” from Sevastopol, Ukraine, Paper: Designing functional products for persons with neuromotor diseases (Curteza A., Macovei L., Cretu V.,Poboroniuc M. S., Kalaoglu F., Karakas H., Gorgun B.), Inventica 2011.

6. Scientific events

- International Conference and Exposition on Electrical and Power Engineering (EPE2016 and every two years), Iasi, Romania - <http://www.epe.tuiasi.ro/>;
- International Conference on Electromechanical and Power Systems (SIELMEN2017 and every two years), Chisinau, Republic of Moldavia - <http://www.sielmen.tuiasi.ro/2017/>;
- Functional Electrical Stimulation postuniversity course, together with “Gr T. Popa” Medicine and Pharmacy University of Iasi and Clinical Rehabilitation Hospital of Iasi (10 editions).

7. Collaborations

International (selection)

- FP7 project, "Strategic Alignment of Electrical and Information Engineering in European Higher Education Institutions (SAEIE)" No. 527877-LLP-1-2012-1-UK-ERASMUS-ENW, 2012-2015, Coodinator: University of York, UK; Project responsible P12-TUIASI: Marian Poboroniuc (WP3 leader) – more than 30 universities across Europe - <http://www.saleie.co.uk/>;
- FIPPTex-Advanced Materials and Products Designed for Persons with Special Needs – Romania-Turkey bilateral cooperation – Capacities Module III – 2010-2011, project no.408/03.05.2010); Members: Antonela Curteza (coordinator), Marian Poboroniuc;
- Slovene-Romanian Bilateral Scientific and Technological Cooperation Project: "Standing-up motion augmentation in paraplegia by means of FES and robot technology " (2005- 2007).

National (selection)

- PNII project, IHRG-"AN INTELLIGENT HAPTIC ROBOT GLOVE for the PATIENTS SUFFERING A CEREBROVASCULAR ACCIDENT" No. 150/2012, 2012-2015, Coodinator: University of Bucharest; Project responsible TUIASI: Marian Poboroniuc (other partners: University of Craiova; Rehabilitation Hospital of Iasi);
- PNII project, EXOSLIM -"A HYBRID FES-EXOSKELETON SYSTEM TO REHABILITATE THE UPPER LIMB IN DISABLED PEOPLE" No. 180/2012, 2012-2015, Coodinator: University of Iasi; Project coordinator: Olaru Radu, Scientific director TUIASI: Marian Poboroniuc (Other partners: Technical University of Cluj, Rehabilitation Hospitals of Iasi and Cluj).

Industrial (selection)

- PNII project NOVAFES, no.267/2014, Innovative garments with embedded electrodes for functional electrical stimulation based rehabilitation, UEFISCDI- Romania, 2014-2016, Director: Marian Silviu Poboroniuc (partners: Clinical Rehabilitation Hospital of Iasi, SC Magnum SX SRL, SC RO-GALU SRL, Bucharest).

8. Key publications

- Poboroniuc M. S., Naaji, A., Ligusova, J., Grout, I., Popescu, D., Ward, T., Grindei, L., Ruseva, Y., Bencheva, N. & Jackson, N. (2017). ICT security curriculum or how to respond to current global challenges. World J. on Educational Technology: Current Issues. Vol.9(1), 39-48, 2017.
- Grigoras V.-A., Irimia D.C., Poboroniuc M. S., Popescu C.D., 2016, Testing of a Hybrid FES-Robot Assisted Hand Motor Training Program in Sub-Acute Stroke Survivors, AECE J., Vol.16(4), pp. 89-94, ISSN: 1582-7445, e-ISSN: 1844-7600, DOI: 10.4316/AECE.2016.04014.
- Curteza A., Cretu V., Macovei L., Poboroniuc M. S., 2016, The Manufacturing of Textile Products with Incorporated Electrodes, AUTEX Research J., DOI: 10.1515/aut-2015-0049.
- Radu Olaru, Alexandru Arcire, Camelia Petrescu, Marius Mugurel. Mihai, Bogdan Gîrtan, A novel vibration actuator based on active magnetic spring, Sensors and Actuators A-Physical, vol. 264, 1 September 2017, pp.11-17. ISSN 0924-4247. DOI: 10.1016/j.sna.2017.07.041.
- Livint Gheorghe, Horga Vasile, Sticea, Daniel, Ratoi Marcel, Albu Mihai, Hybrid Electric Vehicle Experimental Model with CAN Network Real Time Control, Advances in Electrical and Computer Engineering, Vol.10, Issue No.2, 102-107, 2010.

RESEARCH LABORATORY



EPE 2020

11th INTERNATIONAL CONFERENCE AND EXPOSITION
ON ELECTRICAL AND POWER ENGINEERING

October 22-23, 2020

IASI, ROMANIA

"Gheorghe Asachi" Technical University of Iasi
Faculty of Electrical Engineering



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Important dates

Extended abstract submission
May 15, 2020
New deadline: June 1, 2020

Extended abstract notification
July 15, 2020

Full paper submission
September 30, 2020
October 10, 2020

Registration and fee payment
September 30, 2020
October 10, 2020

Conference
October 22-23, 2020

THANK YOU!

I would like to thank all the participants for their contribution to the success of this year's conference, held online but without sacrificing the scientific level of the debates. Perhaps on the contrary, the constraint of everyone being present online and the ease of moving from one section (virtual chamber) to another has increased the density of participation.

The synthetic data for the EPE 2020 edition include the following:
 - proposed articles: **178**
 - accepted articles: 149
 - articles presented: **146 (82%)**

Level of participation registered in Microsoft Teams (more than 200 persons):
 - number of active users on October 22: **147**
 - number of active users on October 23: **135**

Number of IEEE members present at the conference: 43

WELCOME!

On behalf of the Program Committee, it is a honour and pleasure to invite you to attend the 11th International Conference and Exposition on Electrical and Power Engineering (EPE 2020) to be held in Iasi, Romania, on October 22-23, 2020. Organized by the Faculty of Electrical Engineering of Iasi and SETIS Association, the EPE Conference is now a tradition, being confirmed as an important international event in the electrical engineering area. Starting in 1999 with the 1st edition, EPE reaches today the 11th anniversary. EPE Conference is organized every two years with the intent of attracting a wide national and international audience from both academic and industrial communities. Contributions from all research communities working in the field of electrical engineering or in appropriate fields are welcomed to join our conference. The EPE Conference is technically co-sponsored by IEEE Romanian Section, being included in the IEEE Conference database with record number [#50722](#). Accepted papers will be submitted for inclusion into IEEE Xplore. The Proceedings of the Conference will be also submitted to a number of citation and indexing bodies including Clarivate Analytics Web of Science (former Thomson Reuters ISI Conference Proceedings Citation Index). The last 4 editions of EPE have been already included in this prodigious database.

News and updates

DOWNLOAD the TECHNICAL PROGRAM

How to join EPE2020 on [Microsoft Teams](#)

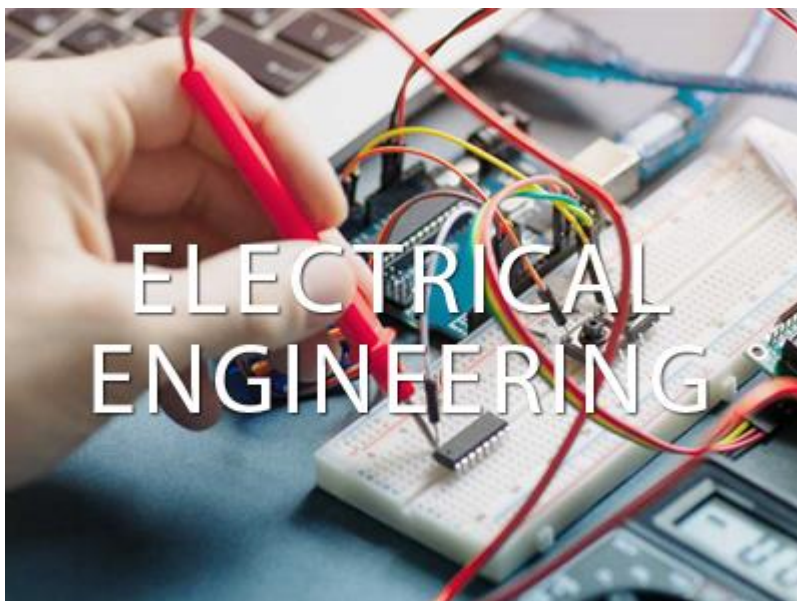
FINAL PROGRAM has been posted

The full paper submission, registration and fee payment deadlines have been extended to **October 10, 2020**.

The abstract submission deadline has been extended to **June 1, 2020**.

The electronic submission interface will open on **March 15, 2020**.

Call for papers has been released.





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