The Roska Tamás Doctoral School of Sciences and Technology at the Pázmány Péter Catholic University (hereafter: Doctoral School) was accredited by the Hungarian Accreditation Committee in 2001. The Organizational and Operational Rules of the Doctoral School have been set out on the basis of the “Doctoral Program and Degree Regulations” approved in September 2003 and severally amended (last in 2017) (hereinafter: PPCU Doctoral Regulations) in order to regulate the norms and processes subject to the competence of doctoral schools, taking into consideration the unique situation and features of the field.

The Doctoral School has connections to several new research trends that are very prominent in the international scientific community:

- Bio-inspired and neuromorphic information technology and bionics; fundamentally new principles of sensory computing,
- Molecular and nanocomputers; realizability studies of electronics and optics,
- Human and artificial language technologies, artificial understanding and telepresence.

The Doctoral School deals with the following disciplines:

- Information sciences
- Electrical engineering sciences
- Biological sciences

Programs:

Program 1: Info-bionics. Sensory and motoric cellular computers with manycore processors; neuromorphic information technology

Program 2: Computer technology based on kilocore processor chips; sensory and motoric analog computers; virtual cellular computers

Program 3: Feasibility of electronic and optical devices; molecular and nanotechnologies; nano-architectures; nano-bionic diagnostic and therapeutic tools
Program 4: Human language technologies, artificial understanding and telecommunication

Program 5: Study of vehicle on-board navigation systems

The Doctoral School website contains a more detailed description of the various programs and the associated main and subsidiary subjects as well as a list of the respective supervisors.

Doctoral School address and information: Roska Tamás Doctoral School of Sciences and Technology - short name: RT MT DI

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Website: www.itk.ppke.hu
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The Doctoral School organization

Section 1 The composition and operation of the Doctoral School Council and its Habilitation Committee

(1) The Doctoral School Council and the Habilitation Committee operate as one joint body. This body is called the Multidisciplinary Doctoral and Habilitation Council of Sciences and Technology. The short name of this council is MDH CST. The Chairman and the Vice Chairman, who is also the Head of the Doctoral School, may convene and chair the Multidisciplinary Doctoral and Habilitation Council of Sciences and Technology.

(2) The following members of the Multidisciplinary Doctoral and Habilitation Council of Sciences and Technology have been appointed by the Doctoral and Habilitation Council:

Chairman: Gábor Prószéky, Professor, Doctor of the Hungarian Academy of Sciences
Members:
BITÓ János, Doctor of the Hungarian Academy of Sciences, professor
CSURGAY Árpád, Full Member of the Hungarian Academy of Sciences, professor
DUX László, Doctor of the Hungarian Academy of Sciences, professor
FREUND Tamás, Full Member of the Hungarian Academy of Sciences, professor
FRIEDLER Ferenc, Doctor of the Hungarian Academy of Sciences, professor
KARMOS György, MD, CSc, Professor Emeritus
LEVENDOVSZKY János, Doctor of the Hungarian Academy of Sciences, professor
ORMOS Pál, Full Member of the Hungarian Academy of Sciences
PONGOR Sándor, External Member of the Hungarian Academy of Sciences, professor
PRÓSZÉKY Gábor, Doctor of the Hungarian Academy of Sciences, professor
SZEDERKÉNYI Gábor, Doctor of the Hungarian Academy of Sciences, professor
SZOLGAY Péter, Doctor of the Hungarian Academy of Sciences, professor, Vice Chairman, Head of the Doctoral School
ZARÁNDY Ákos, Doctor of the Hungarian Academy of Sciences, professor
Secretary: VIDA Tivadarné, PhD
Student representative: Selected according to the PPCU Doctoral School’s Articles of Association

(3) The MDH CST shall meet as necessary, but at least once every semester, to decide on the cases subject to its competence.

(4) The Chairman and members of the MDH CST shall be authorized to cast votes.

(5) The MDH CST shall pass its decisions with a simple majority. In the event of a tie, the Chairman’s vote shall be decisive. The MDH CST shall have a quorum if at least 2/3 of its members with voting rights participate in the vote.

(6) In general, the MDH CST shall pass decisions subjects to votes with an open voting procedure. If justified, any member may request, and the Chairman and Vice Chairman may initiate, that the voting take place by secret ballot.

(7) Minutes shall be drawn up on MDH CST meetings, which shall be available to the Doctoral School’s teachers and students no more than 5 workdays following the meeting and shall be stored in the Doctoral School’s archives.
(8) In justified cases, the MDH CST may also pass decisions by electronic means (via email) at the recommendation of the MDH CST Chairman or Vice Chairman; the time limits under point (7) shall apply in these cases, as well.

(9) The materials necessary for the agenda points to be decided on at MDH CST meetings shall be made accessible to members at least two workdays prior to the meeting; this may take place electronically. The members shall be informed of the time of the meeting at least 5 workdays prior to the respective meeting.

(10) The MDH CST shall decide on the following cases involving the Doctoral School (in line with the PPCU’s Doctoral Regulations):

   a) issues regarding the subjects of doctoral training (announcing subjects, approving topics, defining educational point values),
   b) issues regarding the subjects included in the theoretical part of the complex examination (the main and subsidiary subjects included in the theoretical part of the complex examination and their topics),
   c) announcement of the topics of organized training,
   d) approval of supervisors, with especial attention to the condition that the supervisor has to have achieved results since having obtained the PhD degree that are at least equal to the results achieved prior to having been awarded the PhD degree,
   e) approval of the work plan and report of doctoral students participating in organized training (the work plan and report shall include the research and study plan and report, with the compilation of the work plans and reports drawn up over the course of the semesters making up the students’ individual model curricula),
   f) approval of the requests for work plan amendments submitted by doctoral students in organized training,
   g) amendments to the discipline classifications of proposals for research topics announced for sciences bordering those dealt with by the Doctoral School, in line with the rules set out in Section 6 (4) of these Rules,
   h) adjudicating the requests for participation in individual preparation, for which the Doctoral School has competence; fulfilment of the publication and minimum language requirements required for admission,
   i) approval of the annual reports of the doctoral students participating in training,
   j) designation of the subjects included in the theoretical part of the complex examination,
   k) designation of members of the complex examination board of examiners and the committee of assessors for dissertation defense,
l) approval of exemptions from under examinations,
m) allocation and utilization of supports for which the Doctoral School has competence, within the School.

(11) The documents, certificates, and certifications required by the PPCU Doctoral Regulations for issues requiring the decision of the MDH CST shall be submitted in one hard copy (and, as far as possible, electronically as well to phd@itk.ppke.hu) to the MDH CST Secretary at least 7 workdays before the meeting, together with a “Request” addressed to the Chairman of the MDH CST requesting that a decision be made.

Section 2 The admission procedure, the conditions for earning a doctoral degree, and the doctoral degree procedure

(1) The admission procedure
a) The Doctoral School organizes admission procedures twice every year. Applications for the admission procedure may be submitted every year by May 31 and December 31 at the Doctoral and Habilitation Office. As part of the written application, the applicant shall provide a brief (1-3 page) description of results achieved, topics planned, plans, and the brief opinion of the student’s mentor (former teacher or the planned supervisor).

b) The oral admission procedure is held in the beginning of July or the 2nd week of January, respectively, and the decision is communicated to the applicant by August 1 or February 20. The members of the Doctoral Admissions Committee are the core members and Emeritus core members of the Doctoral School. The Chairman of the Admissions Committee is appointed by the MDH CST Chairman.

c) In the course of the admission procedure, the Admissions Committee scores the applicants' results according to the following four categories, the maximum of which yields 100 points:

1) Degree and final examination:
   - Degree: good: 25 points; excellent: 30 points,
   - Final examination: between 4.0 and 4.5: 5 points; higher than 4.5: 10 points,
   - Maximum score: 40 points

2) Language skills: an intermediate-level English language exam is required; all other intermediate-level language exams are worth 5 points and advanced-level language exams are worth 10 points (points are awarded for only one
language exam per language). A maximum of 10 points can be acquired for language skills.

3) A maximum of 20 points can be awarded for primary scientific activities. This includes TDK [National Conference for Student Researchers] awards (a maximum of 20 points for the top three places in the country and a maximum of 15 points for the top three places in the faculty), published articles (a maximum of 20 points for a peer-reviewed foreign journal), conference publications, and any patents.

4) Research inclinations and targets. Maximum 30 points. The discussion and scoring is based on familiarity with the important publications in the topic, the elaboration of unsolved problems, and knowledge of the separation of research and development tasks.

d) Based on the scores, the Admissions Committee shall set up a ranking. The Multidisciplinary Doctoral and Habilitation Council of Sciences and Technology shall decide on admission and the forms and amounts of financing by taking the availability of finances into account. Based on the MDH CST’s recommendation, the Faculty shall conclude study contracts with students who are not awarded a state scholarship.

e) The procedure under Section 2 (1) a)-d) applies to applicants in the Stipendium Hungaricum scholarship program, with the difference that in their case the oral admission interview will be conducted over Skype.

(2) The PPCU Doctoral Regulations lays down the general conditions and the order of procedure for obtaining the doctoral degree. Taking into account the specifics of the scientific field in question, the Doctoral School’s minimum requirements for publications and language exams, the organization of the home defense, and the preparation of the co-authoring declarations are set out in these Organizational and Operational Rules.

(3) The Doctoral School’s 4-year (8-semester) study and exam order providing 240 credit points

a) The first part of the study and exam order is the four-semester study and research stage, which is generally built on 2 subjects and research seminar series each semester (worth 5 credits each), as well as 4 hours of teaching every week (worth 5 credits). In total, this provides participants with 15 credits. The research work can naturally be started during this stage. The research work is conducted by the doctoral student under the leadership of the Supervisor. Every semester, the Supervisor shall provide a written assessment of the doctoral student’s research activities. The written assessment can be provided electronically. The doctoral student and the head of the Doctoral
School shall receive copies of this assessment. The head of the Doctoral School shall base any other evaluations (e.g. the initiation of MDH CST decisions) on the Supervisor’s assessment of the research work conducted in the semester. The Supervisor shall provide a hard copy or electronic written substantiation of any exceptional acknowledgement or negative assessment. A negative assessment is equivalent to a written warning having been issued to the student. After two subsequent negative assessments, the student can be dismissed from the doctoral training (15 credits per semester).

b) The first two-year stage ends with the complex examination, which includes an assessment of the acquired theoretical knowledge and a review of the research results: an evaluation of the preparatory works for the dissertation and the student’s scientific results and publications.

In the first part of the complex examination, the student recounts his knowledge of the main subject and the two subsidiary subjects defined and selected according to the doctoral subprogram. Should the student receive a failing grade, this part of the examination can be repeated one time in the respective exam period.

In the second part of the complex examination, the student reports on the fulfilment of the study and teaching obligations in the first two years, presents any acquired language exams and any publications, and provides a report on the dissertation preparatory work. If this part of the examination is invalid, it can be repeated in the subsequent exam period at the earliest.

c) In the second two-year, research and dissertation stage, doctoral students devote their entire time to publications and preparations. In the third year, the two semesters are equal to 30 credit points each if the suitable research (15 credits) and publication (15 credits) progress takes place.

d) Doctoral students are also given the option to end their doctoral studies with a postgraduate vocational thesis after having received their final certificates.

e) The final certificate must be obtained by August 31 or January 31, respectively, at the end of the fourth year.

f) Additional remuneration is due for classes taught in addition to the teaching obligations; however, this may not exceed 4 hours per week.

g) In the third and fourth years, students focus only on their dissertations and research work.

h) Any foreign study trips are included in the 4 years of preparation for the doctoral degree, during which doctoral students shall be registered for passive semesters. Erasmus study trips are exceptions to the above.

(4) The minimal publication requirement for obtaining the doctoral degree is the publication of at least two articles in professionally recognized, internationally
peer-reviewed foreign language journals. In exceptionally justified cases, the MDH CST may decide, by a qualified majority, that it accepts a patent or a full-length communication published in a prestigious, international, foreign-language, and peer-reviewed conference publication instead of one of the articles. The publication of the articles shall be proven with an offprint or a copy of the submitted article and the letter certifying its acceptance.

(5) When the dissertation is submitted, the MDH CST shall examine whether the minimum publication requirements are met. If the MDH CST considers the publication requirements to not have been met, the dissertation will not be issued for defense.

(6) The minimum language skill requirements for obtaining a doctoral degree is at least an intermediate-level type “C” language exam (or other equivalent accredited language exam, or a certificate equivalent to a language exam) in English and a language exam in another European language necessary for the particular field of science.

(7) The home defense of the doctoral dissertation to be submitted shall be held at the place of research and within the Doctoral School. Minutes, including an attendance sheet, shall be drawn up of the home defense. The attendance sheet shall include the names, workplaces, and degrees of the participants. The Doctoral School Council shall request two opponents with academic degrees to participate in the home defense. The written opinion of the opponents shall be attached to the minutes. At least two Doctoral School core members or MDH CST members shall be present at the home defense.

(8) Simultaneously to the submission of the publications, doctoral students shall attach co-authoring statements in the format required by these Rules (Annex 1), issued by the foreign co-authors of the publications listed for the minimum publication requirements.

(9) All of the Doctoral School’s teachers, students, and graduates shall be invited to the home defense and the public defense.

(10) Additional provision to section 1. e) of the “PPCU MDH CST’s additional provision for the procedure for the nostrification of doctoral degrees obtained abroad”: the Doctoral School shall forego the imposition of the procedural fee if the applicant is a full-time teacher or researcher employed by the Faculty.

(11) Doctoral students may be dismissed for formal reasons and may be deleted from the student records if they fail to comply with the scientific advancement obligations laid down in these Rules, thus especially for the negative assessment of
a foreign study trip during passive student status, implemented with the support of the Supervisor, permitted at the student’s request, and considered part of the student’s studies, as well as on the basis of the Supervisor’s statement on renouncing the supervisory post and negatively assessing the doctoral student’s scientific progress.

a) Appeals against decisions on dismissal may be submitted within fifteen calendar days of receipt of the decision. Decisions on deletion shall become final after fifteen calendar days.
b) Students who have been deleted with a final decision are obligated to provide prompt settlement for the tangible assets owned by the University and in the student’s possession. The applicable provisions of the Civil Code shall apply to a failure to provide such settlement.
c) Doctoral students who fail to comply with study-related obligations or the obligations laid down in these Rules, or who default on the performance of any obligations, shall be liable to pay the separate procedural fee applicable to postgraduate students.
d) The disciplinary regulations applicable to doctoral students are laid down in the supplement to the Student Disciplinary and Compensation Policy pertaining to doctoral students.

Section 3 Doctoral students participating in 8-semester programs

(1) Doctoral students can complete their studies and obtain their final certificates by acquiring 240 credits during the program’s 8 semesters.

a) **Study** (academic) credit points can be awarded for participation in formal education (participation in contact hours, preparation for exams and the performance of tasks, supervised individual studies, completion of testing requirements).

b) **Research** credit points can be awarded for progress in scientific research work, for publication of the results of scientific work in an important international forum, and for patents.

c) **Teaching** credit points can be awarded for the 4 hours per week teaching activity performance in the first 4 semesters of the program. The teaching activity includes mentoring foreign doctoral students arriving as part of the Stipendium Hungaricum program.
d) **Publication** credit points can be awarded (a maximum of 15 in each of the last two semesters) for publication in prominent international journals.

(2) At the recommendation of the supervisor, study (academic) credit points may be awarded for doctoral subjects completed at other doctoral schools (also including foreign universities), on the basis of the student’s work plan as approved by the MDH CST. The MDH CST shall decide on whether to accept such performance.

(3) The individual curricula for students are included in the work plans and reports for the semester. Students shall submit the work plans and reports for the semester both electronically and in hard copy format, the latter of which shall be signed by the Supervisor, Advisor, and the Head of the Program, in addition to the student. This obligation shall persist throughout the period of the doctoral program when credits may be obtained.

(4) The Supervisor shall evaluate the student’s performance after the student’s semester report, both by assigning a grade (on a scale of 1-5) and by providing a written evaluation. If considered necessary by the Head of the Doctoral School, the written evaluation shall also be uploaded to the Neptun system.

(5) In agreement with their supervisors, doctoral students shall prepare the proof of having fulfilled their study-related obligations by indicating the names of the fulfilled tasks/subjects and their study point values. The MDH CST shall then provide its approval. Once the MDH CST has granted its approval, the final certificate shall be issued by the Doctoral and Habilitation Office at the PPCU Faculty of Information Technology and Bionics.

(6) In the 4th semester, doctoral students participating in organized training may request the MDH CST to approve the theoretical subjects included in the complex examination and to appoint the board of examiners.

(6) Students participating in organized training shall take the complex examination at the end of the 2nd year, after the board of examiners has been appointed. The application for permission to take the complex examination shall be submitted to the MDH CST together with the annexes required by the PPCU Doctoral Regulations. When granting the permission, the MDH CST examines the level of competence in the field and whether the minimum publication and language requirements have been met. The application is not granted in absence of these.

(7) In the first part of the complex examination, students recount their theoretical knowledge acquired in the main subject and two subsidiary subjects selected by the MDH CST. Should the student receive a failing grade, this part of the examination can be repeated one time in the respective exam period. In the second part of the examination, students report on their academic status and present their language
exams, research results, publications, and the progress made with the dissertation. If this part of the examination is invalid, it can be repeated in the subsequent exam period at the earliest. Applicants can start the second 4-semester training period only after having successfully passed all parts of the complex examination.

(8) The annual reports of students participating in organized training consist of oral and written parts. No exemption can be granted from under preparation of the written part. The supervisor shall provide an opinion on the report. At the recommendation of the supervisor, individual student schedules shall be approved by the Doctoral School Council every semester.

(9) The oral part of the annual reports of the doctoral students participating in organized training is held as part of a publically announced mini-conference, to which all students and teachers of the Doctoral School and any other doctoral schools operating in the same field are invited. The oral part of doctoral students’ annual reports is public. In justified cases (e.g. sickness, trips abroad, etc.), the Head of the Doctoral School may grant exemption from the obligation pertaining to the oral part of the annual report.

Section 4 Doctoral students participating in 4-semester programs

(1) Students may join the doctoral program at the start of the second part of the training; such applicants shall prepare for the complex examination individually. The application for permission to take the complex examination shall be submitted to the MDH CST together with the annexes required by the PPCU Doctoral Regulations. When granting the permission, the MDH CST examines the level of competence in the field and whether the minimum publication and language requirements have been met. In the absence of these, the MDH CST shall not support the application or, if the above requirements are only met in part, shall accept the application classified as self-funding.

(2) In case of applicants applying for individual preparation, the minimum publication requirements shall have to be met in the 5 years preceding the submission of the application.

(3) The complex examination shall be organized for applicants to the 4-semester program in line with Section 3 (6), as well. Students shall start the 4-semester research and dissertation stage as at successful completion of the complex examination.
(4) Students shall be obligated to prepare and submit their work plans and reports for the semester by the end of the period set out in Section 3 (3) and (4) for obtaining credits.

(5) Point 18 of the PPCU Doctoral Regulations shall apply to the submission of the dissertation.

Section 5 Individual preparation

(1) The application for permission to prepare individually shall be submitted to the MDH CST together with the annexes required by the PPCU Doctoral Regulations. When granting the permission, the MDH CST examines the level of competence in the field and whether the minimum publication and language requirements have been met. The application is not granted in absence of these.

(2) In case of applicants applying for individual preparation, the minimum publication requirements shall have to be met in the 5 years preceding the submission of the application.

(3) The complex examination may be taken within 1 year of the individual preparation having been authorized. Failure to do so shall cause the procedure to terminate.

(4) Point 18 of the PPCU Doctoral Regulations shall apply to the submission of the dissertation.

Section 6 Supervisors and advisors

(1) At the Doctoral School, supervisors to doctoral students and advisers providing consultancy in individual preparation shall be persons with an academic degree suited for managing the academic topic and with adequate performance as regards publications. The publication criteria shall be considered adequate if the person who acquired the degree has again met the publication requirements set out by the Doctoral School as prerequisites for obtaining a PhD degree.

(2) The MDH CST shall examine the suitability of supervisors and advisors simultaneously to evaluating the application for supervision.

(3) Supervisors shall assess the progress made by doctoral students based on the subjects defined at the start of the given semester, as well as their scientific progress, by evaluating the semester reports.
(4) In the case of proposals for research topics announced for sciences bordering those dealt with by the Doctoral School, there is a possibility for the Doctoral School Council to consider and permit, on one occasion during the program and at the initiation of the Supervisor, a change in the discipline classification defined at the time of the student’s admission. Such change shall be based on the “Supervisor’s Statement” (hereinafter: Statement) issued by the Supervisor (or, in case of two supervisors, by both supervisors).

The Statement shall include a brief presentation of the student’s research work thus far and the Supervisor’s (or Supervisors’) statements on the disciplines (technical or natural sciences) and fields (electrical engineering, information technology, or biology) in which the student’s dissertation theses under preparation can be considered to provide new scientific achievements.

A compulsory prerequisite when reclassifying the student’s research into another field is that the student have a master’s degree classified as multidisciplinary. The Doctoral School Council shall have scope and competence to determine whether the compulsory prerequisite is met.

(5) Besides the multidisciplinary nature of the Doctoral School that allows for co-supervision, the Doctoral School only has a certain limited scope of competence in research. Doctoral students wishing to conduct research in the direction of other competences may transfer their work from the Doctoral School.

Section 7 The core and invited members (hereinafter: members) of the Doctoral School

(1) The list of the MDH CST’s members may change according to a decision of MDH CST as required. In this case, the Chairman of the MDH CST or, if (s)he is prevented from exercising his functions, the Vice Chairman shall initiate the necessary appointment(s) and/or exemption(s) at the Chairman of the University Doctoral Council.

(2) The members of the Doctoral School shall be authorized to announce doctoral subjects for doctoral students participating in the school’s organized training. They may also, without any further examination being required, be supervisors and advisors to doctoral students and advisors to doctoral candidates participating in individual preparation.

(3) The members and invited members of the Doctoral School shall be notified of MDH CST meetings and their respective agendas, and shall also receive copies of the minutes of such meetings for informational purposes.
(4) Members shall be invited to the public defenses, annual oral reports held by doctoral students, and year-end assessment meetings organized by the Doctoral School.

(5) The agenda of the year-end assessment meeting shall include a review of the Doctoral School’s operations, its scientific and educational orientation, and the quality thereof. The heads of the doctoral schools dealing with similar research topics shall also be invited to such meetings.
Appendix

Annex 1

CO-AUTHORING STATEMENT

I, the undersigned, ................................................................., as co-author, hereby declare that … %/ the following part: ...... * of our academic work entitled: ........................................................................................................ is the result of the own scientific work performed by the doctoral student ........................................................................................................

I hereby declare that I acknowledge that the statements in the theses of the doctoral student ................................................................. are the results of his/her own scientific work.

Budapest, ....................... 20....

___________________________
(Signature)

* please select the appropriate part