



Decisions of the Council of the Doctoral School of Applied Informatics and Applied Mathematics

Resolution No. 187

Resolution No. 187/1: The Council of the Doctoral School of Applied Informatics and Applied Mathematics makes the following proposal to the MTTDHT for the members of the examination committees and the subjects of the complex examinations for the academic year 2023/2024, 2nd semester 2024 (the chairman of the examination is Prof.Dr.habil. Róber Fullér DSc who informally undertook this task)¹:

No	Name	Neptun Code	Supervisor/Research topic	Subjects studied:	Subject of Examination/Examiner
1	Gergics Borbála	ED3OCB	Dr. Drexler Dániel: Modelling in vivo physiological processes based on in vitro experiments	1. Physiological and pathophysiological regulations (Kovács Levente) 2. Modern robust controls and non-linear controls (Kovács Levente, Eigner György) 3. Application of biostatistical and regulatory methods in pathophysiological modelling (Kovács Levente, Ferenci Tamás) 4. Biomedical applications of regression models (Kovács Levente, Ferenci Tamás)	1. Modern robust controls and non-linear controls (Eigner György) 2. Biomedical applications of regression models (Ferenci Tamás)

¹DOCTORAL AND HABILITATORY REGULATIONS OF THE UNIVERSITY OF ÓBUDA, Budapest, 2023 (Version 11, in force from 19 September 2023, consolidated with the amendments)

The complex examination
25. §

(1) The complex examination shall be taken in public before a board. The board shall consist of at least three members. At least one third of the members of the committee shall not be employed by the institution operating the doctoral school. The chairperson of the committee may be a university professor, habilitated associate professor, habilitated college professor, Professor Emeritus or researcher with the title of Doctor of the Hungarian Academy of Sciences. All members of the Committee must hold an academic degree. The subject supervisor of the doctoral student taking the examination may not be a member of the committee (Article 12/A (2) of Act No. 387/2012 Coll.).



2	Krutilla Zsolt	PD8KKJ	Dr. Kővári Attila, Dr. Katona József: Investigating the practical application of natural language processing in the back office of the banking sector	1. Deep machine learning methods (Kertész Gábor) 2. Model-based software developments (Tick József) 3. Cognitive infocommunication (Kővári Attila) 4. Information systems in the field of human-computer interfaces (Katona József, Kővári Attila)	1. Deep machine learning methods (Kertész Gábor) 2. Model-based software development (Tick József)
3	Mogyorósi Péter	AYSZ47	Dr. Szénási Sándor: Development of a parallel geospatial database principle on GPU and definition of geospatial property flags using fuzzy logic	1. Use of geo-spatial thematic maps (Pődör Andrea) 2. GPU programming (Szénási Sándor) 3. Reduction possibilities of a fuzzy inference system (Laufer Edit) 4. Deep machine learning methods (Kertész Gábor)	1. Use of geo-spatial thematic maps (Pődör Andrea) 2. Fuzzy következtetési rendszer redukciós lehetőségei (Laufer Edit)
4	Naghi Mirtill Boglárka	W1TRBR	Dr. Kovács Levente, Dr. Szilágyi László: Development and application of advanced fuzzy clustering techniques for medical decision making	1. Biomedical applications of regression models (Kovács Levente, Ferenci Tamás) 2. Development and application of nature-inspired algorithms (Felde Imre) 3. Application of biostatistical and regulatory methods in pathophysiological modelling (Kovács Levente, Ferenci Tamás) 4. Blockchain & AI - Then and Now I (Szenes Katalin)	1. Biomedical applications of regression models (Ferenci Tamás) 2. Application of biostatistical and regulatory methods in pathophysiological modelling (Ferenci Tamás)
5	Sipos Miklós	AIU22H	Dr. Szénási Sándor: Research on blockchain-based technologies and algorithms for cybersecurity and data integrity applications	1. GPU programming (Szénási Sándor) 2. Modelling and design patterns for cloud services (Lovas Róbert) 3. Model-based software development (Tick József)	1. Modelling and design patterns for cloud services (Lovas Róbert) 3. Model-based software development (Tick József)



6	Zakota Tamás Zoltán	HUQ135	Dr. Fogarasi József: Efficient and sustainable urban tree management - applying remote sensing methods to the establishment and operation of urban tree inventories	1. Use of geo-spatial thematic maps (Pődör Andrea) 2. Application of biostatistical and regulatory methods in pathophysiological modelling (Kovács Levente, Ferenci Tamás) 3. From segmentation to object-oriented programming (Verőné Wojtaszek Malgorzata) 4. Modern methods for estimating efficiency and productivity (Fogarasi József)	1. Use of geo-spatial thematic maps (Pődör Andrea) 2. From segmentation to object-oriented programming (Verőné Wojtaszek Malgorzata)
7	Delphin Kabey Mwinken	U9B0EP	Dr. Imre Emőke: Mathematical Methods for Propagation Analysis in the Communications Trajectory	1. Convex functions (Baricz Árpád) 2. Special functions (Baricz Árpád) 3. Numerical methods in model fitting problems (Imre Emőke) 4. Models of Unsaturated Soil Mechanics (Imre Emőke) 5. Numerical Analysis (Abaffy József) 6. Calculus of variations and applications in partial differential equations (Kristály Sándor) 7. Differential Geometry and Calculus of Variations (Nagy Péter)	1. Calculus of variations and applications in partial differential equations (Kristály Sándor) 2. Differential Geometry and Calculus of Variations (Nagy Péter)
8	Erick Noboa	B0DKCV	Dr. Eigner György, Verőné Dr. Wojtaszek Malgorzata: Remote sensing and artificial intelligence methods for industry 4.0 related advanced decision support applications	1. Modern robust and nonlinear control (Kovács Levente, Eigner György) 2. Processing from segmentation to object- oriented classification (Verőné Wojtaszek Malgorzata)	1. Modern robust and nonlinear control (Takács Márta) 2. Processing from segmentation to object- oriented classification (Takács Márta)
9	Massimo Stefanoni	HXBE34	Dr. Odry Ákos, Dr. Sarcevic Péter: Development of sensor fusion-based indoor localization methods	1. Embedded Mobile Robotics (Odry Péter) 2. Issues of Mobile Robot Optimization (Odry Péter) 3. Fuzzy-based Decision Making (Takács Márta) 4. Robot Modeling and Control (Tar József)	1. Issues of Mobile Robot Optimization (Odry Péter) 2. Fuzzy-based Decision Making (Takács Márta)
10	Fleiner Balázs	Individual applicant	Dr. Tasnádi Attila, Dr. Cseh Ágnes: Computer and mathematical analysis of community decision, sharing and pairing problems	Two subjects must be selected	1. Tantárgy: Complexity of algorithms (Hegedűs Gábor) hegedus.gabor@nik.uni- obuda.hu 2. Tantárgy: Game theory (Kóczy Á. László) koczy.laszlo@gtk.bme.hu



11	Gottdank Tibor	Individual applicant	Dr. Kozlovszky Miklós, Dr. Gall Anthony: Supporting architectural history research with innovative IT methodology and visualisation tools	Two subjects must be selected	1. Modelling and design patterns for cloud services (Dr. habil. Lovas Róbert) 2. Fuzzy inference systems (Prof. Dr. Takács Márta)
12	Nemes Teréz Erzsébet	Individual applicant	Dr. Katona József, Dr. Kővári Attila: Design and evaluation of information security strategies using a game theory model	Two subjects must be selected	1. Information Systems in the field of Human-Computer Interfaces (Lecturers: József Katona, Attila Kővári, Questioner, Examiner: Dr. Ádám Csapó, Associate Professor, Corvinus University of Budapest, Email: csapo.adam@gmail.com https://www.uni-corvinus.hu/elerhetosegek/csapo-adam-balazs/ 2. Coatings, covers and their application (Lecturer: Antal Joós, Examiner: Dr. Joós Antal egyetemi docens, Dunaújvárosi Egyetem, Email: joosa@uniduna.hu
13	Ender Gábor	Individual applicant	Dr. Kozlovszky Miklós, Dr. Székely László: The use of digital 3D reconstructions as a decision support system in cardiac valve replacement	Two subjects must be selected	The subjects have already been identified in DIT Decision 162
14	Szántó Mária	Individual applicant	Dr. Kozlovszky Miklós, Dr. Székely László: Using digital 3D models in cardiac surgery	Two subjects must be selected	The subjects have already been identified in DIT Decision 162
15	Légrádi Gábor*	Individual applicant	Dr. Szénási Sándor: Using parallelism in compilers	Two subjects must be selected	The subjects have already been designated in DIT Decision 167

*AIAMDI DIT Decision 184/2: The Council of the Doctoral School of Applied Informatics and Applied Mathematics supported on 14 February 2024 the joint request of Gábor Légrádi PhD student and his supervisor, Prof. Dr. Sándor Szénási, to postpone the complex examination of Gábor Légrádi due to a death in his family.

Resolution 187/2: The Council of the Doctoral School of Applied Informatics and Applied Mathematics proposes to the MTTDHT the support of Dr. habil. Edit Laufer's proposal to include Dr. Zoltán Papp as co-supervisor with a 50% share of the PhD student Felisberto David Wandi Chivela.



Dr. Edit Laufer approaches fuzzy theory from a mechanical engineering application point of view, while Zoltán Papp has a deeper knowledge of its mathematical background. An additional advantage of his involvement would be that he is also well versed in educational technology and is familiar with the relevant work of Pál Dienes (relevant information: "Branko, Anđić ; Bakos, Bettina ; Maria, da Graça Bidarra ; Bordás, András ; Bordás, Andrea ; Dárdai, Zsuzsa ; Debrent, Edith ; Fehér, Zoltán ; Fenyvesi, Kristóf ; Hoffmann, Miklós et al. PUNTE: Methodological Study. Poly-Universe in Teacher Training Education Eger, Hungary : EKE Líceum Kiadó (2022) , 202 p. ISBN: 9789634962311).

Although www.doktori.hu does not currently list Dr. Zoltán Papp as a doctoral school instructor, he is not known to be a faculty member in the national training system, but according to the current EDHSz, there is no obstacle to his inclusion in the AIAMDI faculty and thus in the ODT database².

Dr. Zoltán Papp received his BSc and MSc degrees from the Faculty of Sciences and Mathematics at the University of Novi Sad, and subsequently his PhD degree in mathematics with his thesis "Projection based CG methods for large-scale nonlinear monotone systems". He obtained his PhD degree in 2020 from the University of Óbuda in the field of "Mathematics and Computer Science". His annotated publication record, freshly downloaded from MTMT2, plus the acceptance of a recent publication, meets the minimum publication requirements. His teaching and research activities are also significant. His materials are available at the link below:

²Teachers, topic writers and supervisors of the doctoral school

12. §

(1) Lecturers of the Doctoral School shall be those lecturers and researchers with academic degrees who, upon the recommendation of the Head of the Doctoral School, are deemed suitable by the Council of the Doctoral School (hereinafter referred to as DIT) to perform teaching, research and topic management tasks within the framework of the Doctoral School (Article 4 (2) of Decree No. 387/2012).

D5/B. Conditions for doctoral supervisors

(7) A doctoral supervisor shall be a person who

(a) holds an academic degree;

b) has 5 articles published in the ODT database in the last 5 years and 5 additional articles in the relevant discipline which meet the publication criteria set out in paragraphs 9 to 10 of Part D5/C;

c) undertakes to update the list in point b) on a regular basis and on a yearly basis.

(8) The conditions in paragraph (7)(b) and (c) will be regularly monitored by the DI.



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Resolution 187/3: *Since according to our current regulations "The members of the DI are approved by the EDHT on the recommendation of the DIT and appointed by the Rector", the Council of the Doctoral School of Applied Informatics and Applied Mathematics proposes to the EDHT to support Prof.Dr.habil. Péter Galambos to the EDHT. According to the link https://doktori.hu/index.php?menuid=192&lang=HU&sz_ID=19907 given on www.doktori.hu he obviously fulfils all the conditions. In addition, he was appointed as a professor in 2023 and has been working as Director of BARK and Deputy Director General of EKIK for a long time. The attachment "Péter Galambos Tud-O-Méter.pdf" contains further important science metrics, all of which strongly support his candidacy for the position of Chief Scientist. Relevant material is available at the link below:³*

³Basic provisions for doctoral schools

Establishment and termination of a doctoral school; members of the doctoral school

8. §

(4) A member of the School may be

a) with an academic degree, a lecturer, topic author, topic leader of a doctoral school

12. §

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D5/B. Conditions for doctoral supervisors

(7) Doctoral candidates shall have;

b) he/she is engaged in continuous, high-level scientific activity in the discipline of the doctoral school or in its research field, which scientific activity, not including artistic activity, is to be examined on the basis of the national scientific bibliographic database (hereinafter referred to as the Database) defined in Article 3(1)(o) of Act XL of 1994 on the Hungarian Academy of Sciences;[MTMT2]

d) has demonstrated his/her suitability to supervise doctoral students by having at least one doctoral student who has obtained a doctoral degree and;

e) a full-time lecturer or academic researcher employed full-time, in an employment relationship or in a civil service relationship at the higher education institution concerned, who has designated this higher education institution pursuant to Article 26(3) of Act CCIV of 2011 on National Higher Education (hereinafter: Nftv.) for the purpose of considering the existence of the operating conditions of the higher education institution (Article 2(3) of Act No. 387/2012 Coll.).

(7) A regular member shall

a) must comply with the requirements set out in Section 8 for at least one training cycle and for the duration of the degree-granting procedure for that cycle, and

b) he/she must also undertake to act as a subject supervisor in the doctoral school (§ 3 of the Act No. 387/2012 Coll.).

(9) The members of the DI shall be approved by the EDHT on the recommendation of the DIT and appointed by the Rector.

D5) Rules for compliance with the rules for the regular membership and the subject leadership



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Budapest, 13 April 2024.

Prof.Dr. Tar József
Chair of the DIT

Dr. Simon Gyula
Vice-Chair of the DIT

D5/A. Conditions of compliance with the rules of the staff

(1) The general personal conditions for the compliance with the staff regulations are laid down in § 8 (4) to (8) of these regulations (§ 2, § 3 of the Decree 387/2012).

(2) A regular member shall carry out more than 70% of his doctoral training activities in the DI of which he is a regular member.

(3) Age requirements for regular members:

(a) The head of the DI shall be 65 years of age in the year of the establishment of the DI, and in the year of the evaluation of a DI in operation - change of head the age of 70 years, even after a change of management;

(b) a university lecturer or researcher who is under 65 years of age in the year of the establishment of the DI or under 70 years of age in the year of the evaluation of the DI in operation.

(4) Have 5 articles published in the ODT database in the last 5 years and an additional 5 articles in the discipline, and update this list regularly each year.

5) Have an active thesis or active doctoral thesis.

(6) Regularly check the regularity of the compliance with the core curriculum on a yearly basis by EDHT.

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