

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

### Decision No 210

**Resolution No. 210/1:** The Council of the Doctoral School of Applied Informatics and Applied Mathematics recommends the EDHT (University Doctoral and Habilitation Council) that Lehel Dénes-Fazakas, doctoral student, be awarded a summa cum laude doctoral degree in computer sciences (within engineering sciences), in recognition of his performance in his public defense, which was graded at 97%.

**Resolution No. 210/2:** Zoltán Biczó, PhD student, submitted a request to the Doctoral School to postpone the initiation of the doctoral degree acquisition process by one year for family reasons. The Council of the Doctoral School of Applied Informatics and Applied Mathematics approves the request.

**Resolution No. 210/3:** Gyula Ádám Nemes, PhD student, submitted an application to the Doctoral School, in which he requests the involvement of Dr. habil. Rita Fleiner as co-supervisor, as her expertise would greatly assist his research. The Council of the Doctoral School of Applied Informatics and Applied Mathematics approves the request.

**Resolution No. 210/4:** The Council of the Doctoral School of Applied Informatics and Applied Mathematics approves the research topic "Integrated application of rule-based and machine learning techniques to automate bank complaint handling" to be announced under the supervision of Dr. habil. Rita Fleiner.

**Resolution No. 210/5:** The Council of the Doctoral School of Applied Informatics and Applied Mathematics approves the following four research topics to be announced under the supervision of Dr. Bálint Varga:

- „Development of a Rehabilitation Robot using Human-Variability-Respecting Optimal Control”
- „Modelling and Handling Human–Cobot Interaction in Indoor Settings”
- “Shared Controlled Teleoperation of Collaborative Robots in Indoor Environments”
- “Stochastic Potential Differential Game Human Motion Model for the Application of Shared Control”

**Resolution No. 210/6:** The Council of the Doctoral School of Applied Informatics and Applied Mathematics approves the following two research topics to be announced under the supervision of Dr. Anna Vörösné Bánáti-Baumann:

- "Application of Artificial Intelligence-based methods to support and extend the design of cyber practices in the automotive domain"
- "Adaptive attack detection using AI-based anomaly detection and real-time response automation in general IT and 5G environments"

**Resolution No. 210/7:** The Council of the Doctoral School of Applied Informatics and Applied Mathematics approves the research topic "Application of Stochastic Approximation Methods to Machine Learning" to be announced under the supervision of Dr. Béla András Frigyik.

**Resolution No. 210/8:** The Council of the Doctoral School of Applied Informatics and Applied Mathematics approves the research topic "Development of adaptive model-based sensor fusion algorithms for reliable localization of mobile robots" to be announced under the joint supervision of Dr. Ákos Odry and Dr. Péter Sarcevic.

**Resolution No. 210/9:** The Council of the Doctoral School of Applied Informatics and Applied Mathematics approves the research topic "Quantum networks based on the entanglement of spatially separated localized spaces" to be announced under the joint supervision of Dr. Attila István Bencze and Dr. István Németh.

**Resolution No. 210/10:** The Council of the Doctoral School of Applied Informatics and Applied Mathematics approves the research topic " Mobile robot localization" to be announced under the joint supervision of Prof. Dr. Gyula Simon and Dr. Károly Széll.

**Resolution No. 210/11:** The Council of the Doctoral School of Applied Informatics and Applied Mathematics approves the research topic "Investigating learning-based approaches for robotic manipulation of objects" to be announced under the joint supervision of Dr. Károly Széll and Prof. Dr. Péter Galambos.

**Resolution No. 210/12:** The Council of the Doctoral School of Applied Informatics and Applied Mathematics approves the research topic "Testing point cloud-based geodetic data collection methods" to be announced under the supervision of Dr. Zoltán Tóth.

**Resolution No. 210/13:** The Council of the Doctoral School of Applied Informatics and Applied Mathematics approves the research topic "Better understanding of the mode of activation of translesion polymerases and their role in G0 and G1 cell cycle phases" to be announced under the supervision of Dr. Gergely Róna.

**Resolution No. 210/14:** The Council of the Doctoral School of Applied Informatics and Applied Mathematics approves the research topic "Bioinformatics approach to unravel non-genetic mechanisms of antibiotic resistance" to be announced under the joint supervision of Dr. Judit Tóth and Dr. Rita Hírmondó.

**Resolution No. 210/15:** Dr. András Béla Frigyik indicated that Prof. Dr. Tibor Illés is not able to participate in his habilitation committee due to health reasons, and Prof. Dr. Ádám Balázs Csapó (Corvinus University of Budapest) will be a member of the committee instead.

Budapest, 16 June 2025

Dr. Gyula Simon  
professor  
Chair of the Council of the Doctoral School

