Doctoral program name

Applied information technology and its theoretical background

Program Leader

Dr. Ispány Márton

Objectives of Doctoral Programme

The objective of the programme is to familiarize PhD students with the most recent applications of information technology, to comprehend their theoretical background, and to engage in research that establishes the foundation for the subsequent development of additional applications. The programme's fundamental objective is to provide scientifically rigorous answers to problems raised by practical needs.

Academic and Research Fields

Knowledge discovery in large databases and data warehouses. Statistical and symbolic data mining methods. Analysis of time-series and spatial data. Special data mining applications.

Modeling, performance analysis, and optimization of traditional and new types of databases, data warehouses, and information systems.

Software architectures and services, Internet of Things (IoT), sensor networks (SN), Quality of Service (QoS).

Modeling and technological implementation of smart city and other community-based applications. Analysis, modeling, and geoinformatic visualization of traffic data.

Research and applications related to virtual, augmented, and mixed reality.

Members of the doctoral programme

Name	Academic degree	Topic poster	Instructor
Dr. Adamkó Attila Tamás	PhD habil.	X	X
Dr. Biró Piroska	PhD	X	X
Dr. Gilányi Attila László	PhD habil.	X	X
Dr. Godó Zoltán Attila	PhD	X	X
Dr. Ispány Márton	PhD habil.	X	X
Dr. Jeszenszky Péter	PhD	-	X
Dr. Kovács László József	PhD habil.	X	-
Dr. Kovásznai Gergely	PhD habil.	X	X
Dr. Major Sándor Roland	PhD	-	X
Dr. Szathmáry László	PhD habil.	X	X
Dr. Tajti Tibor Gábor	PhD	X	X
Dr. Terdik György	DSc.	X	X
Dr. Tóth Róbert	PhD	-	X
Dr. Vágner Anikó Szilvia	PhD	X	X

Subjects

	Subject name	Credit	Subject teacher
Compulsory elective subjects	Stochastic data mining and its applications	2	Dr. Ispány Márton
	Statistics with application to Information Technology	2	Dr. Terdik György
	Advanced Architectures and Technologies in Software Engineering	2	Dr. Adamkó Attila Tamás
	Extended reality and its applications	2	Dr. Gilányi Attila László
	Urban informatics	2	Dr. Ispány Márton
	Symbolic Data Mining	2	Dr. Szathmáry László
	Statistics and time series with applications	2	Dr. Terdik György
	Verifying Systems by Modern Formal Methods	2	Dr. Kovásznai Gergely
Elective subjects	Development and Application of Software Frameworks	2	Dr. Biró Piroska
	Informatics in life sciences	2	Dr. Godó Zoltán Attila
	Reproducible Research and Scientific Computing in R	2	Dr. Jeszenszky Péter
	Geospatial application development	2	Dr. Tóth Róbert
	Large Language Models in Information Technology and Software Engineering	2	Dr. Tajti Tibor Gábor
	Architectural and Design Patterns	2	Dr. Major Sándor Roland
	Theory and Practice of Data Modeling: Classical and Emerging Models	2	Dr. Vágner Anikó Szilvia