PERSONAL INFORMATION



Gyöngyi Kocsisné Dr. Szilágyi

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Sex Female | Date of birth 27/05/1971 | Nationality Hungarian

PERSONAL STATEMENT

A highly motivated researcher with nearly 30 years of research and teaching experience in the field of Computer Science and Artificial Intelligence.

EDUCATION AND TRAINING

1995-1998PhD degree (summa cum laude) in Mathematics and Computer ScienceUniversity of Szeged, HungaryTitle of Thesis: Dependency Analysis and Learning Methods of Declarative Languages

1990-1995	M. Sc. and B.Sc. in Computer Science
	University of Szeged, Hungary
	Title of Thesis: The Horn Clauses and The Linear Programming
1989	School-leaving exams

Sagvari Endre High School, Szeged, Hungary

WORK EXPERIENCE

2003 - present	Assistant Professor Eötvös Loránd University, Faculty of Informatics <i>https://www.elte.hu/en/</i> • Artificial Intelligence, Mathematical Logic, Programing, JAVA, ADA,
2008 - present	CEO, Research Director I-QRS International Ltd. • Telemedicine, Artificial intelligence, Biosignal processing, Expert Systems
2014 - 2015	Research Leader and Senior Manager Corvex Ltd. • Animal Health and Sport Research
2013 - 2014	Research Leader and Senior Manager Satrax Ltd. • Extreme Stress Research

1998 - 2003 Research Associate

University of Szeged, Research Group on Artificial Intelligence of the Hungarian Academy of Sciences

https://www.u-szeged.hu/english

 Programming, Artificial Intelligence, Programming in Pascal and C, Logic Programming, Algorithms and Data Structures, Operations Research, Compilers, Attribute Grammars, Structured Systems Analysis and Design Method (SSADM),

2003 Guest Researcher

France, Rennes

Slicing of Constraint Logic Programs

2002 Guest Researcher

Friedrich -Alexander University, Erlangen, Germany Logic Programming, Constraint LogicProgramming, Slicing, Debugging

1998 Guest Researcher

Department of Computer and Information Science, Linköping University, Sweden

Logic Programming, Constraint Logic Programming, Slicing, Debugging

1997 Guest Researcher

National Technical University of Athens

Attribute Grammars, Parallel Programming

1996 - 1999 Lecturer

Gábor Dénes College, Szeged

http://dennis-gabor-college.eu/

Programming, Artificial Intelligence

1994 - 1995 Demonstrator

University of Szeged, Research Group on Artificial Intelligence of the Hungarian Academy of Sciences

PERSONAL SKILLS		
Mother tongue(s)	Hungarian	
Other language(s)		
English	Highly proficient in both spoken and written English.	
German	Basic communication skills.	
Communication skills	 Good communication skills gained through my experience as teacher Media and press interviews 	

Organizational / managerial skills

- Leadership in large R&D projects in cooperation with the representatives of education, health care, software and hardware technology, telecommunication and other special sectors
- Senior manager and research leader in several EU funding grants and R&D projects
- Management of large R&D projects from the planning phase, through the phases of organization of consortia, development of research and development plans, financial and labor plans, cash flow planning, selection of employees with appropriate professional knowledge, management of R&D projects, knowledge engineering, solving artificial intelligence problems, development, coding, testing, documentation to the project closure phase.

Research areas

 Artificial Intelligence, Time Series Analysis, Machine Learning, Expert Systems, Biosignal Analysis, Medical Applications, Stem cells, Proteins, Data Mining, Text Mining, Local Position Measurements, Kalman Filters, Distributed Systems, Constraint Solving, Knowledge Engineering, Logic Programming (LP), Inductive Logic Programming (ILP), Constraint Logic Programming (CLP), Learning of CLP (ICLP), Attribute Grammars (AG), Learning of AG's, Debugging, Program Analysis, Slicing of Logic and Constraint Logic Programs.

Projects as a Research	COVID-19 Telemedicine Platform
Leader	A special health and safety solutions for COVID-19 based on digitizing and monitoring space,
	time, motion and physiology parameters with smart IoT and artificial intelligence.
	 Expert Systems for Selections of Ancestral Cell Donor
	A special expert model capable of providing a high level of decision support in the process of
	umbilical cord transplantation.
	 Analysis of HLA-encoded Genetic Properties and Bacterial Flora Relationship
	Differences of Autonomic Nervous System Regulation at Physical and Psychological
	stress
	 PLANT-BIOINFO Decision Support System - For Hungarian farmers
	A web-based expert system that processes a large amount of biological and chemical data to
	make prediction for plants to be grown for different medium / irrigation water combinations.
	 Analysis of Nuclear magnetic resonance spectroscopy (NMR) data derived from
	biological molecules
	Analysis of the relationships between the parameters characterizing the dynamics of different
	proteins (relaxation parameters, NOE values, order parameters) and the sequence of
	proteins, and their role in biological functions, diseases - using artificial intelligence.
	Text Mining
	Automate the processing of thousands of scientific articles related to specific topics using
	web mining, data mining, text mining technologies, and build mathematical and IT models of
	hidden information for specific health purposes.
	Tactical Training Support Expert System for Police
	An intelligent agent for automatic, real time and continuous detection, analysis of motion and
	physiology signals to support the tactical training of the Police.
	• POCKET-DOKI
	Development of an Integrated Smart Health Device Family.
	Pulse Oximetry Signal Processing
	Blood Oxygenation Measurement analysis to get Heart Rate and SpO2.
	Sensor fusion Algorithms
	Development of special sensor fusion algorithms for fine analysis of motion and physiology
	signals (Kalman Filters, Heuristic algorithms, Mahony and Madgwick Filters)
	 Hungarian Ministry of Interior's International Training Centre – Extreme Stress Research
	Development of a special methodology and the related telemetry tool family, which is suitable
	for the comprehensive monitoring and analysis of the physiological effects of the extreme
	physical and psychological stress, as well as for the preventive treatment of stress.
	TracksyBrain
	Working time tracking controlled by artificial intelligence.

 Real Time Animal Health and Training Platform 	
A sophisticated, highly sensitive, real-time, on-line, tele, biometric data monitoring,	
warehousing and analysis Platform. The system provides information for monitoring vital	
(ECG, temperature, physiological characteristics, etc.) and motion (speed, step, sprints,	
motion style, performance, reaction time, position, 3D animation, etc.) parameters of horses,	
in real time and monitoring during exercise, rehabilitation, injury/healing tracking,	
transportation or resting.	
 Exercise Physiology Decision Support System 	
The system is capable of evaluating the physiological and physical condition and hardiness,	
as well as analyzing overload before, during and after the sports activity, giving advice	
concerning the rate of loading in case of underload or overload.	
Sport Telemetric System	
An intelligent agent to measure and analyze the mechanical, physiological and mental	
performance indicators of sportsmen and make it possible to measure their fastness,	
performance, actual speed and physical condition, as well as the quantity and quality of their	
movement, performance diagnostics and, based on objectively measured data, support	
genetically, physiologically, technically and tactically individualized counselling and training.	
 Application of Artificial Intelligence Methods for Mobile ECG Data Analysis 	
Comprehensive analysis of Telemetric ECG data: arrhythmias, Heart Rate Variability, the	
status of the sympathetic and parasympathetic nerve system.	
 Indoor and Outdoor Kid Tracking System 	
 Body Composition Expert System 	
Web based system for professional, precise and multi-faceted analysis of body composition,	
 Web based system for professional, precise and multi-faceted analysis of body composition, broken down into body parts, taking into account genetic traits based on Heath-Carter typing 	
 Web based system for professional, precise and multi-faceted analysis of body composition, broken down into body parts, taking into account genetic traits based on Heath-Carter typing and Drinkwater method. 	
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Driving license В

ADDITIONAL INFORMATION

Publications	 More than 20 international publications (Many industrial research results could not be published.)
Memberships	 Hungarian Academy of Sciences (MTA) Telemedicine Association Editorial board member of American Journal of Data Mining and Knowledge Discovery
Patent and	Patent P0800043: "DEVICE AND METHOD FOR MONITORING SIGNS OF LIFE"
Certifications	 Experience in various certifications (CE, Medical, ISO)
Grants	 Doctoral Fellowship:1995-1998, Hungary, University of Szeged Erasmus: 1997. Greece, National Technical University of Athens Erasmus: 2002. Germany, Friedrich -Alexander University
EU and State	VEKOP-2.1.7-15: "Prototype of a framework based on local positioning technology with an automatic
Supported Grants	 Iawn mower application integrated into the framework" GOP-2.1.1-11/M-2013-2777: "Tender supporting the development of the Company's Site" Innocsekk Plus: "Internet-based Body Composition Expert System" SZIME3D (Public Procurement): "I-QRS Telemetric System" GOP-1.1.1-2012-0258 "Research on Medically Validated Stress Markers and Test Methodology and Development of a Mobile Telemetry Device Family"

Curriculum Vitae

 GOP-2011-1.1.1. "Telemetry tool family and expert systems to support equestrian sports and horse health (TELO)"

Innovation and	 Innovation Techshow 2011., 6th rank
awards:	 Innovation Techshow 2010., Body Composition Expert System
	 The show Magyarok a csúcson (Hungarians on Top), selected as one of the top 30 most outstanding results in Hungary, the products developed by our team
	 Innovation Techshow 2009., 4th rank
Selected Presentations and Media	 Elon Musk: Neuralink wires up monkey to play video games. Hit Radio: Focus, 2021. Can robots revolt against humanity? Hit Radio: Center Point, 2020. Discussion on the future role and dangers of Artificial Intelligence. Radio: Center Point, 2020. Artificial Intelligence Strategy Plan. Radio: Center Point, 2020. The Development of Artificial Intelligence. Hit Radio: Faith public days, 2019 Uránia Hard Talk – Debate on Artificial Intelligence, TvEger - 2019. Presentation: Researchers' Night, 2014. RTL Klub TV report 2015. DIGI Sport, Morning Start. Tv report 2014. The I-QRS Telemetric System, INFORADIO – 2012 Presentation: Evita National Technology Platform, eVITA Forum, 2011 MTV1, Relay, 2011. Presentation: Hungarian Research Agency - Strategic Plan for Research, 2009 Presentation: Budapest New Tech Meetup 2009. Duan TV, News, 2009. TV2, News, 2009. MTV1, Delta - Scientific Magazine 2008 MTV1, Evening 2009: Info Radio: Telemetric Systems Genius Magazine 2009. MR1 Kossuth Radio, 2009.