Imre Kocsis

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WORK EXPERIENCE, EDUCATION AND SCHOLARSHIPS

2019-	**Assistant professor** at the Critical Systems Research Group (**FTSRG**) of the Department of Measurement and Information Systems, Budapest University of Technology and Economics (**BME DMIS**).
2019	**Ph.D. degree** from the Doctoral School of Informatics at BME (summa cum laude).
2014 May-August	**Seconded researcher** to ResilTech SRL in the CECRIS EU FP7 IAPP project, working on Error Propagation Analysis of early stage behavioral specifications of critical systems.
2009-2019	**Research associate**; from 2013, **assistant lecturer** at FTSRG.
2008-2009	Visiting PhD student of the **IBM Center of Advanced Studies Budapest**.
2006-2009	PhD student at FTSRG with state scholarship. Research topic: '**Model Based Design of Adaptively Resilient Systems**'.
2000-2006	MSc-equivalent degree in **software engineering** at BME; first four semesters completed in a scholarship preparatory program **in German**. Degree qualification: 'excellent'.
2002/03 autumn	DAAD-scholarship at the **TU Karlsruhe**, Germany.

KEY PROJECTS

2021-	Principal investigator of **proactive optimization of cloud utilization** R&D activities performed for a major multinational enterprise solution provider.
2020 (running)	**Project leader** and main contributor of the **EIT Digital** (an arm of the European Institute of Technology) funded Professional School course development project "**Blockchain for digital manufacturing and modern logistics**".
2020-	**Principal investigator** of the activities of the department in the ongoing research cooperation of BME and the **National Bank of Hungary** (**MNB**). Topic: design, implementation, smart contract programming and robustness of **Central Bank Digital Currency** (CBDC) systems.
2019 Q3 and Q4	**Technical project leader** of the **resilience of Kubernetes-based cloud native applications** R&D activities performed for a major multinational telecommunication solutions provider. Focus: measuring and analyzing Kubernetes-based resilience.
2019	As the main contributor, **co-created and conducted the "Blockchain for the decision maker"** blended (MOOC + f2f) course for the Professional School program of **EIT Digital**. Also co-created a Blockchain course offering at the **Budapest Institute of Banking**.
2018-	**National delegate to ISO/TC 307** - Blockchain and distributed ledger technologies

	(appointed through the Hungarian Standards Institution membership of the university).
2017-	**University-wide representative for the Hyperledger** project; participant of the Performance and Scale, and Education and Training workgroups (BME is a Hyperledger associate member).
2016-2017	Technical leader of **Hyperledger Fabric** v0.6 performance benchmarking and modelling (funded by a 2016 IBM Faculty Award, awarded to Prof. András Pataricza).
2013-2014	Project leader for the **Apache Virtual Computing Lab** (VCL) pilot at FTSRG. The project was awarded with a **STEM education innovation price** by the state-funded TEMPUS public foundation in 2014.
2010-2013	Project leader of the **Cloud Availability & Performance Management** R&D activities conducted for a major multinational telecommunication solutions provider.
2011	Project leader of the **Cloud Capacity Management** research conducted for a major multinational investment bank.
2006-2009	DEpendability and SEcurity through enhanced REConfigurability (**DESEREC**) FP6 EU project. Error propagation analysis contributions, 'metrics' workgroup: operative leader.
2006-2010	Short-term involvements in the EU FP6/7 projects DECOS, RESIST, AMBER and MOGENTES.

MAIN EDUCATIONAL ACTIVITIES

2021-	Co-lecturer of the PhD course **Empirical Systems Engineering and Modeling**.
2020-	Leader of the BSc topic lab (preparation for independent studies) track "**Modern service platforms**"
2018 Spring-	Developer and lecturer of the **Blockchain Technologies and Applications** elective course (started in 2018 with 200+ enrollment).
2017 Fall	Lead instructor of the **Blockchain technologies and applications** BSc topic lab.
2015-	Co-lecturer of the MSc course **Cyber-Physical Systems** (cloud and edge computing).
2013-	Developer and lecturer of the elective course **Big Data Analysis Techniques**.
2010-2014	Lecturer of the course **Autonomic and Fault-Tolerant Information Systems** in the 'Dependable System Design' MSc program.
2009-2015	Co-lecturer of the course **Intelligent System Management** (topic: cloud computing).
2006-	**Advisor** of numerous student project labs, student research conference works (**one 2nd prize at the national competition level**; **one 1st prize in 2021**) and BSc/MSc theses. Coordinator of the former FTSRG-IBM Hungary joint student advising program.
	Outlines of recent theses: https://diplomaterv.vik.bme.hu/en/Supervisors/Kocsis-Imre

OTHER SCIENTIFIC ACTIVITIES

2019-	Regular **program committee member** of the "DAPP" track of **ACM SAC**.
2019-	Regular participant of **PhD defense committees**
2018, 2020	**Program committee member** of the 37th and 39th IEEE International Symposium on Reliable Distributed Systems (**SRDS** 2018 and 2020).
2016-	**Steering committee member** of the 4th, 5th and 6th International IBM Cloud Academy

	Conferences (**ICACON** 2016, 2017 and 2018).
2016.09.12	**Tutorial** on Model-based Cloudification of Critical Applications at the 10th IEEE International Conference on Self-Adaptive and Self-Organizing Systems (**SASO 2016**).
2015	**Program co-chair** of the 3rd International IBM Academy Conference (**ICACON 2015**, Budapest, Hungary)
2014 October	Invited participant of the NII Shonan Meeting "Science and Practice of Engineering Trustworthy Cyber-Physical Systems" (TCPS)
2013	Member of the technical program committee for the **IEEE 2013 International Workshop on Measurements and Networking**.
2012	Member of the team winning an honorable mention prize in the '**Applications of R in Business**' competition of Revolution Analytics.

CORE TECHNICAL SKILLS

- Blockchain and Distributed Ledger Technologies
- Cloud computing, virtualization and containerization
- Dependability analysis
- Data analysis
- Optimization
- Modelling
- Service and system management tools

PUBLICATIONS

Google Scholar profile:
https://scholar.google.hu/citations?user=m5f9m8UAAAAJ&hl=hu

Budapest, 23. November 2021.