CURRICULUM VITAE

Personal information

Name, Surname:	**Anca Hangan**
Nationality:	Romanian
Researcher unique identifier(s) (ORCID, Researcher ID etc.):	Scopus Author ID: https://www.scopus.com/authid/detail.uri?authorId=24465133000 ORCID: https://orcid.org/0000-0003-4116-694X Scholar: https://scholar.google.com/citations?user=nph7rOIAAAAJ&hl=en Brainmap: https://www.brainmap.ro/anca-hangan
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Education

Year	Faculty/department - University/institution - Country
2014	Ph.D. - Faculty of Automation and Computer Science, Computer Science Department - Technical University of Cluj-Napoca - Romania Thesis title: Contributions to the development of parallel and distributed real-time systems
2006	Post-university studies - Faculty of Automation and Computer Science, Computer Science Department - Technical University of Cluj-Napoca – Romania Specialization: Information Systems
2005	Engineering degree in Computer Science - Faculty of Automation and Computer Science, Computer Science Department - Technical University of Cluj-Napoca - Romania

Positions - current and previous

Year	Job title – Employer - Country
2025-*	Professor – Department of Computer Science, Technical University of Cluj-Napoca - Romania
2020-2025	Associate Professor - Department of Computer Science, TU Cluj-Napoca - Romania
2015-2020	Senior Lecturer - Department of Computer Science, TU Cluj-Napoca - Romania
2014-2015	Junior Lecturer - Department of Computer Science, TU Cluj-Napoca - Romania
2006-2014	Research Assistant, Teaching Assistant - TU Cluj-Napoca - Romania

Project management experience

Year	Project title - Role – Funder – Budget – link to project webpage
2020-2022	Smart Urban Water-Based on Community Participation Through Gamification (WATERGAME) – **UTCN Project Manager** – PNCDI III – Budget: 42 375 Euro http://www.watergame.pub.ro *Research activities: Developed a system that uses edge devices and cloud services to collect, preprocess, and analyze water consumption data. Machine learning algorithms detect anomalies and trigger notifications to connected systems.*
2018-2019	Knowledge transfer services in innovative fields: sensor networks and RFID automatic identification – **Project Manager** – SC Compania de Informatica Aplicata SA – Budget: 9400 Euro *Research activities: Study the feasibility of implementing a distributed telemedicine system based on mobile sensory components and the innovative methods, procedures, and components for automatic ID recognition, based on RFID technologies.*

2017-2018	Anomaly detection in large sensor networks – **Project Manager** – UTCN internal competition – Budget: 4400 Euro *Research activities: Develop a platform for anomaly detection on sensor data that include tools for data acquisition processing and results visualization.*
2008-2011	Contributions to the development of parallel and distributed real-time systems – National Competition for PhD Student Grants - Budget: 14700 Euro *Research activities: Development of methods, algorithms, and simulation tools for real-time systems transactions scheduling.*

Project member experience in more than 10 projects, including:

Year	Project title - link to project webpage
2023-2025	Holistic Approach towards Empowerment of the DiGitalization of the Energy Ecosystem through adoption of IoT solutions - HEDGE-IoT 101136216/2023 (https://hedgeiot.eu/)
2020-2022	Cloud Cercetare UTCN – CLOUDUT https://cloudut.utcluj.ro/en/
2018-2020	Extensive use of experience in space and security activities PCCDI18/2018 (VESS) https://www.spacescience.ro/projects/vess/
2012-2016	Cyberwater, CNDI-UEFISCDI, project number 47/2012
2008-2010	CARDIONET - Sistem integrat pentru supraveghere continua in inteligenta e-Health a pacientilor cu afectiuni cardiologice

Other relevant professional experience

Year	Description - Role
2023-2025	Co-organizer of "VLDB Summer School" https://vldb.org/summerschool/2025
2024, 2025	Co-organizer of "Workshop on Enabling Machine Learning Operations for next-Gen Embedded Wireless Networked Devices" @ EWSN Conference
2023-*	Coordinator of the internal quality assessment activities for Computer Science undergraduate and master programs.
2020-*	Member in **Committees for PhD thesis coordination and defence**;
2018	Co-organizer of the Sixth International Conference on Mining Intelligence and Knowledge Exploration (MIKE 2018) https://www.mike.org.in/2018/
2012-*	**Journal reviewer:** Sensors (MDPI), The Journal of Systems & Software (Elsevier), Applied Sciences (MDPI), Electronics (MDPI)

Selected publications

1. Toderean L., Lazea D., Ofrim V., Dumbrava S., **Hangan A.,** and Cioara T. "Edge-Oriented Orchestration of Energy Services Using Graph-Driven Swarm Intelligence", EMERGE Workshop @ EWSN 2025, Leuven, Belgium, September 2025
2. Lazea D., **Hangan A.**, and Cioara T. "Building Equi-Width Histograms on Homomorphically Encrypted Data".Future Internet, 2025; 17(6):256 (2025)
3. Lazea D., Cioara T., **Hangan A**., and István Z. "Customizing Pre-Processing Algorithms for Streaming Sensor Data on Embedded Networked Devices. EMERGE" Workshop @ EWSN 2024, Abu Dhabi, UAE, December 2024
4. Arcas, G.I., Cioara, T., Anghel, I., Lazea, D. and **Hangan, A**., 2024. Edge Offloading in Smart Grid. *Smart Cities*, *7*(1), pp.680-711.
5. Surdea-Blaga, T., Sebestyen, G., Czako, Z., **Hangan, A**., Dumitrascu, D.L., Ismaiel, A., David, L., Zsigmond, I., Chiarioni, G., Savarino, E. and Leucuta, D.C., 2022. Automated Chicago Classification for Esophageal Motility Disorder Diagnosis Using Machine Learning. *Sensors*, *22*(14), p.5227.

6. Czako, Z., Surdea-Blaga, T., Sebestyen, G., **Hangan, A**., Dumitrascu, D.L., David, L., Chiarioni, G., Savarino, E. and Popa, S.L., 2021. Integrated relaxation pressure classification and probe positioning failure detection in high-resolution esophageal manometry using machine learning. *Sensors*, *22*(1), p.253.
7. **Hangan, A**., Chiru, C.G., Arsene, D., Czako, Z., Lisman, D.F., Mocanu, M., Pahontu, B., Predescu, A. and Sebestyen, G., 2022. Advanced techniques for monitoring and management of urban water infrastructures—an overview. *Water*, *14*(14), p.2174.
8. Tosa, A., **Hangan, A**., Sebestyen, G. and István, Z., 2021, December. In-Storage Computation of Histograms with differential privacy. In *2021 International Conference on Field-Programmable Technology (ICFPT)* (pp. 1-4). IEEE.
9. Czako, Z., Sebestyen, G. and **Hangan, A**., 2021. AutomaticAI–A hybrid approach for automatic artificial intelligence algorithm selection and hyperparameter tuning. *Expert Systems with Applications*, *182*, p.115225.

Narrative CV

Prof. Hangan research experience is in the area of cyber-physical and real-time systems. She has been involved in several projects that aimed to develop platforms for monitoring and managing water resources, urban water distribution, eHealth, IoT applications in the Cloud and anomaly detection. She has proposed models, methods, and techniques for monitoring cyber-physical systems, anomaly detection in sensor readings, parallelizing particle-in-cell simulations, real-time communication, scheduling, performance evaluation of parallel and distributed systems. Moreover, she has expertise in hardware acceleration of data processing and data processing on Edge devices.

Prof. Hangan has the ability to lead interdisciplinary research teams. She has managed three funded research projects in areas such as anomaly detection in sensor networks and monitoring urban water distribution systems, and has secured a four-year doctoral grant in a national competition. These projects reflect her ability to deliver research outcomes with both scientific and practical impact.

Her recent publications address privacy-preserving data analytics, energy-efficient data processing on edge devices, orchestration of services in the smart grid, anomaly detection in water consumption, and AI-driven healthcare applications, demonstrating her commitment to advancing computer science while addressing societal challenges.

In addition to research, Prof. Hangan contributes actively to the scientific community. She co-organizes international workshops (at EWSN Conference) and summer schools (sponsored by VLDB), has served as a reviewer for leading journals (*Sensors, Applied Sciences, Journal of Systems & Software*), is a PhD advisor and participates in PhD supervision and defense committees. At the Technical University of Cluj-Napoca, she also coordinates quality assurance activities for computer science programs at the Technical University of Cluj-Napoca.

Overall, Prof. Hangan's track record highlights a career that combines scientific innovation, project leadership, and community engagement, with research results that advance the state of the art in computer science while addressing key challenges in sustainability, healthcare, and cyber-physical systems.