Prof. ing. dr. Răzvan Rughiniș
Ph.D. coordination in "Computers and Information Technology"

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Research Profile

My research interests and supervision focus on the following areas:
- Cyber-security in communication networks and other complex information systems, including wireless sensor networks and Internet of Things architectures;
- Smart solutions for monitoring and remote control of activities in areas such as agriculture, medicine and health care, automotive industry and other IoT fields;
- Gamification and serious games with focus on education, digital badge architectures and serious games for learning;
- Ethical and learning challenges in engineering education and technology design.

Brief presentation:

- Author and co-author of 36 articles in ISI indexed journals and conference proceedings, 66 articles in BDI indexed journals and conference proceedings, 14 chapters in edited volumes and books;
- Executive director of CCNA.ro;
- Co-founder of the national, university-based tech acceleration program Innovation Labs;
- Co-chair for the international workshops Secure Internet of Things SIoT și Design and Spontaneity in Computer Supported Collaborative Learning DS-CSCL;
- Member of IEEE - Institute of Electrical and Electronics Engineers, IEEE Computer Society, ACM - Association for Computing Machinery, INSTICC - Institute for Systems and Technologies of Information, Control and Communication, ROSEdu – Romanian Open Source Education (founding member), DiGRA - Digital Game Research Association.

Proposed research topics

Title	Description, goal, objectives
Security in Internet of Things	- A conceptual and empirical study of current challenges of securing Internet of Things devices and architectures, proposing new models to create adequate solutions in relation with specific areas of activity, to develop and test innovative solutions - Goal: Contributing to the state of the art in security and data privacy in Internet of Things - Objectives - Identifying current challenges in securing IoT systems in various fields - Developing innovative security solutions and optimizing them through testing in relation with field-specific metrics
Smart devices for monitoring daily activities	- A conceptual and empirical study of present-day solutions in monitoring daily activities, as well as processes in specific field such as health care, agriculture or retail - Goal: Contributing to the state of the art in conceptual models and real-time monitoring technologies in various fields - Objectives: - Identifying areas with high transformative potential through monitoring and remote control - Identifying cutting edge technological challenges - Identifying ethical challenges associated with monitoring and remote control technologies - Proposing novel models for producing, processing, visualizing and using data acquired through monitoring processes and activities in a variety of fields - Developing, testing and optimizing creative solutions for monitoring and remote control
Gamified solutions for learning and knowledge production	- A conceptual and empirical study of serious games and gamified systems for learning in various fields, from military training to science, crowd-knowledge, literary authorship, STEM education etc. - Goal: contributing to the state of the art in Game Studies and gamification research focused on education and knowledge production, analyzing current products and proposing novel approaches - Objectives - Identifying trends in the conceptualization of gamification and serious games, within the emerging field of Game Studies - Identifying trends in the development of serious games and gamified systems for learning and knowledge production - Proposing novel conceptual models and development heuristics - Proposing novel solutions optimized for specific fields.