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Katalin Harangus

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Work: Târgu-Mureş/Corunca, Calea Sighișoarei nr. 2., 540485 Târgu-Mureş (Romania)

EDUCATION AND TRAINING

PhD in Engineering Sciences, field of Mechanical Engineering

"Transilvania" University of Brașov [2010 – 2013]

City: Brașov | **Country:** Romania | **Level in EQF:** EQF level 8

Bachelor's Degree

Technical University of Cluj-Napoca, B.Eng. in Computer Science [1985 – 1992]

City: Cluj-Napoca | **Country:** Romania | **Level in EQF:** EQF level 6

WORK EXPERIENCE

Sapientia Hungarian University of Transylvania, Teacher Training Institute – Târgu-Mureș, Romania

Associate Professor

[2022 – Current]

Sapientia Hungarian University of Transylvania, Department of Applied Social Sciences – Târgu-Mures, Romania

Assistant Professor

[2015 – 2022]

Sapientia Hungarian University of Transylvania, Faculty of Technical and Human Sciences – Târgu-Mureș, Romania

Assistant Professor (Part-time)

[2006 – 2015]

Sapientia Hungarian University of Transylvania, Faculty of Technical and Human Sciences, Târgu-Mureș, Department of Electrical Engineering and Department of Applied Social Sciences

Sapientia Hungarian University of Transylvania, Faculty of Technical and Human Sciences – Târgu-Mures

Assistant lecturer (Part-time)

[2005 – 2006]

Sapientia Hungarian University of Transylvania, Faculty of Technical and Human Sciences, Târgu-Mureș, Department of Electrical Engineering

Sapientia Hungarian University of Transylvania, Faculty of Technical and Human Sciences – Târgu-Mures, Romania

Faculty Secretary

[2001 – 2015]

S.C. Procardia SRL – Târgu-Mures, Romania

Engineer

[1998 – 2001]

Ancona S.A. – Târgu-Mures, Romania

Engineer

[1992 – 1998]

LANGUAGE SKILLS

Mother tongue(s): Hungarian

Other language(s):

Romanian

LISTENING C2 **READING** C2 **WRITING** C1

SPOKEN PRODUCTION C2 **SPOKEN INTERACTION** C1

English

LISTENING B1 **READING** B1 **WRITING** B1

SPOKEN PRODUCTION A2 **SPOKEN INTERACTION** A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

POSITION AND EMPLOYER

[2022 – Current]

Associate Professor - Sapientia Hungarian University of Transylvania, Teacher Training Institute

OTHER PROFESSIONAL ROLES (NON-TEACHING)

[2020 – Current]

Program coordonator

Teacher Training Institute – location Târgu-Mureș

[2016 – 2020]

Deputy Head of Department

Sapientia Hungarian University of Transylvania, Department of Applied Social Sciences

[2016 – 2022]

Study program supervisor

Sapientia Hungarian University of Transylvania, Department of Applied Social Sciences, study program Public Health Services and Policies

[2015 – 2022]

Member of the Faculty Council

Sapientia Hungarian University of Transylvania, Faculty of Technical and Human Sciences, Târgu-Mureş

[2013 – 2022]

Member of the Quality Assurance Committee

Sapientia Hungarian University of Transylvania, Faculty of Technical and Human Sciences, Târgu-Mureş

TEACHING EXPERIENCE

Disciplines taught at Teacher Training Institute

Computer-assisted Teaching (lecture, seminar); Didactics (Engineering) (lecture, seminar); Pedagogical Practice (Engineering) I, II; Educational Research Methodology (lecture, seminar); Statistical Analysis of Educational Databases (lecture, seminar); Didactics of the Domain and Development in the Didactics of the Specialisation (Secondary School and Tertiary Education) (lecture, seminar)

Disciplines taught at Sapientia Hungarian University of Transylvania, Faculty of Technical and Human Sciences, Târgu-Mureş

Optimization of Mechatronic Systems (laboratory); Statistical Data Processing (lecture); Information and Communication Technologies (lecture, laboratory); IT and Health Services (lecture, laboratory); Statistics (lecture, laboratory); Experimental Data Processing (lecture, laboratory); Computer Usage and Internet Applications (lecture, laboratory); Introduction to Research Methods (laboratory); GIS and Health Geography (lecture, laboratory); Economic Statistics (lecture, seminar)

RESEARCH ACTIVITY

Research Grants and Projects

1. **2025:** *Problem-Solving Oriented Thinking in Engineering Education: Challenges and Opportunities for Future Professionals, f*unded by the Domus Hungarica Program, Hungarian Academy of Sciences, Individual Research Fellowships.
2. **2024:** *The Necessity of Mindset Change in Teacher Training: Evaluation of Digital Competencies (Phase III.)*, *f*unded by the Domus Hungarica Program, Hungarian Academy of Sciences, Individual Research Fellowships.
3. **2023:** *The Necessity of Mindset Change in Teacher Training: Evaluation of Digital Competencies (Phase II.)*, *f*unded by the Domus Hungarica Program, Hungarian Academy of Sciences, Individual Research Fellowships.
4. **2022:** *The Necessity of Mindset Change in Teacher Training: Evaluation of Digital Competencies (Phase I.)*, *f*unded by the Domus Hungarica Program, Hungarian Academy of Sciences, Individual Research Fellowships.
5. **2021:** *Analysis of Context-Based Algorithm Visualization in Teaching-Learning Practices*, *f*unded by the Domus Hungarica Program, Hungarian Academy of Sciences, Project Director.
6. **2021:** *Enhancing Knowledge Transfer Efficiency through Modern Methods in Technological Education for Engineering Teacher Training*, *f*unded by the Domus Hungarica Program, Hungarian Academy of Sciences, Individual Research Fellowships.
7. **2019:** *Implementing Modern Methods in Technological Education for Engineering Teacher Training,* funded by the Domus Hungarica Program, Hungarian Academy of Sciences, Individual Research Fellowships.
8. **2018-2019:** *Mental Health Status of University Students in the Carpathian Basin*, funded by the Domus Hungarica Program, Hungarian Academy of Sciences, Team Member.
9. **2017-2018:** *Socio-economic Status, Health Condition, and Job Satisfaction of Nurses in Transylvania,* funded by the Domus Hungarica Program, Hungarian Academy of Sciences, Team Member.
10. **2017-2018:** *Evaluating Complex Problem-Solving Capacities across Curricular Areas: Text Comprehension, Composition, and Mathematical/ Computational Thinking*, funded by the Institute of Research Programs, Team Member.
11. **2015–2016:** *The Status of Mother-Tongue Vocational Education: Structural and Participation Issues in a Bilingual System*, funded by the Institute of Research Programs, Team Member.
12. **2015–2016:** *Hungarostudy-Transylvania 2015-2016: Global Health Assessment of the Hungarian Population in Transylvania*, funded by the Institute of Research Programs, Team Member.
13. **2013-2014:** *Status and Challenges of Technical Education in the Mother Tongue: Perspectives of Students and Teachers*, funded by the Institute of Research Programs, Team Member.
14. **2006-2009:** *Theoretical (Finite Element Method) and Experimental Study of Fire Protection using Intumescent Paints*, funded by the Institute of Research Programs, Team Member.

PROFESSIONAL AND SCIENTIFIC MEMBERSHIPS

[2022 – Current]

President

PedPsi – Research Centre of the Teacher Training Institute of Sapientia Hungarian University of Transylvania

Reviewer

Springer „Lecture Notes in Networks and Systems” (2022-present);

Sustainability (2022-present);

Central European Journal of Educational Research (2021);

Infodidact (2019, 2020)

Professional Service and National Expertise

External Specialist and Peer-Reviewer for National School Textbooks, Ministry of Education (Romania), National Evaluation Committees (2018, 2019)

Member

Central Committee, National Multidisciplinary Competition "Bolyai Farkas" (12th Edition), Subcommittee for Subject Design and Grading Schemes (Grades 9-12) (2018)

[2018 – Current]

External Member

Hungarian Academy of Sciences

[2016 – Current]

Member

Hungarian Educational Research Association

[2015 – 2023]

Member

"*Quality of Life*" Research Group (Életminőség kutatóközpont), Research Center of the Department of Applied Social Sciences

[2011 – Current]

Member

"*Târgu Mureș Evaluation Working Group*" Research Group (Marosvásárhelyi Értékelési Munkacsoport)

MEMBER OF THE ORGANIZING COMMITTEE OF SCIENTIFIC EVENTS

[24/05/2026 – 25/05/2026]

Dialogue for the Future – Challenges and Perspectives of Organization and Research in Education

Conference of the Teacher Training Institute and PedPsi – Research Centre of the Teacher Training Institute of Sapientia Hungarian University of Transylvania

[12/06/2023]

Challenges of Teaching in Hungarian-language Pre-university Education in Romania

Conference of the Teacher Training Institute and PedPsi – Research Centre of the Teacher Training Institute of Sapientia Hungarian University of Transylvania

[17/05/2019 – 18/05/2019]

From Task-Solving to Problem-Solving

Conference of the Regional Committee in Cluj and Teacher Training Institute

[27/11/2017]

Human-Centered Science: An Application-Centered Approach in School Education

Conference of the Regional Committee in Cluj and Teacher Training Institute

[11/11/2016]

Science for Discovering Causes: Possibilities and Potentialities in Hungarian-language Vocational Education

Conference of the Regional Committee in Cluj and Teacher Training Institute

[06/11/2015]

The Evolution of Sciences: Real and Virtual Worlds

Conference of the Regional Committee in Cluj and Teacher Training Institute

PROFESSIONAL DEVELOPMENT

[04/2020 – 05/2020]

#impreunaonline Webinar Series

Organized by Politehnica University of Timișoara (ID/IFR and eLearning Center) in collaboration with IEEE Romania, the Romanian Alliance of Technical Universities (ARUT), and the EDEN Digital Learning Europe association.

[01/2019]

Professional Training

"ParteneriatE+" Workshop: Strategic Partnership Project Development, organized by ANPCDEFP (National Agency for Community Programmes in the Field of Education and Vocational Training)

[09/2017]

Advanced Training

Professional Development Course: "*Algorithms and Diagrams in Computer Science Education*", organized by the University of Debrecen, Hungary

[04/2017]

Specialized Training

"MOOC Course Design and Development", organized by the Óbuda University, Carpathian Basin Online Education Center, Hungary

[11/2006]

Leadership Training

"Organizational Development and Conflict Resolution", organized by the Sapientia Hungariae Foundation, Budapest

[04/2005]

Specialized Training

"EU Minority Rights Legislation and Higher Education Strategy", organized by the Sapientia Hungariae Foundation, Budapest

[12/2004]

Professional Training

"PR and Communication for Higher Education Professionals", organized by the Sapientia Hungariae Foundation, Budapest

[04/2003]

Professional Training

"Modern University" Training Series (10th Edition), organized by the Márton Áron College for Advanced Studies, Pécs, Hungary