Europass Curriculum Vitae



Personal information

Surname / First name	ONIGA, Ștefan
Telephone	+40 362 401265, ext. 234
E-mail	stefan.oniga@ieec.utcluj.ro

Work experience

1992–present	• Full Professor (October 2016–present); Associate Professor (2006–September 2016); Senior Lecturer (1996–2006); Assistant Lecturer (1992–1996). • Employers: Technical University of Cluj-Napoca (since 2012); North University of Baia Mare (1992–2012). • Undergraduate courses: Digital Circuits, Logic Design, Microcontrollers, Integrated Systems. • Master's courses: Embedded Systems for IoT, Integrated Hardware–Software Design of Embedded Computing Systems, Edge Computing. • Coordinator of the Applied Electronics degree programme.
2016–present	PhD supervisor.
2013–present	Director, Intelligent Embedded Systems Research Centre.
2007–2011	Head of the Department of Electronics and Computers. Coordination of teaching and research activities, curricula, staffing and scientific events.
2000–2002	Technical Manager, SC Electronics Engineering SA, Baia Mare. ASIC and FPGA research and design; team coordination; project manager in 12 projects and team member in one project.
1990–1992	Electronics Engineer, Maramureș Geological Prospecting and Exploration Enterprise, Baia Mare – Computing Office.
1985–1990	Trainee Engineer / Electronics Engineer, Bucharest Geological and Geophysical Prospecting Enterprise, Baia Mare branch; research and development.

Education and training

2022	Habilitation in Computer Science, University of Debrecen.
2016	Habilitation in Electronic Engineering, Telecommunications and Information Technologies, Technical University of Cluj-Napoca.
1998–2005	PhD in Electronic Engineering and Telecommunications, Politehnica University of Timișoara.
1980–1985	Engineering degree in Electronics and Telecommunications, Traian Vuia Polytechnic Institute of Timișoara.

Personal skills and competences

Mother tongues	Hungarian, Romanian.
Other languages	English: listening C1, reading C1, spoken interaction C1, spoken production C1, writing B2. French: listening B2, reading B2, spoken interaction B1, spoken production B1, writing B1.
Organisational skills	Project management; leadership of the Department of Electronics and Computers (2007–2011), coordination of the Applied Electronics programme (since 2000) and the research centre; organisation of six international conferences and symposia (four in Baia Mare and two in Debrecen); management of the editorial team of Carpathian Journal of Electronic and Computer Engineering.
Technical and research expertise	FPGA/SoC Design, Hardware Acceleration, Embedded Systems, Edge AI, Biomedical Signal Processing, Computer Vision, Intelligent Sensing.
Technologies and tools	AMD/Xilinx Vivado, Vitis, PYNQ, Python, C/C++, MATLAB/Simulink, OpenCV.

Scientific activity

Publications	Author/co-author of 7 books, book chapters, collections and laboratory manuals; over 150 scientific papers (source CV reports 64 Web of Science-indexed and 40 indexed in other international databases).
Research projects	Principal investigator/coordinator of 7 competitively awarded national and international projects and 12 contracts with a Romanian R&D company; team member in 7 national and 2 international projects.
Citations (22 Oct 2026)	Google Scholar: 1,718 (h-index 21); Scopus: 857 (h-index 16); Web of Science: 584 (h-index 12).

Additional information

Visiting/associated professor	2010–present: Faculty of Informatics, University of Debrecen. Doctoral School of Informatics: PhD supervision (three graduates: 2017, 2023, 2026), PhD examination committees and the course “Reconfigurable Embedded Systems based Cyber-Physical Systems”.
Editorial roles	Editor-in-Chief, Carpathian Journal of Electronic and Computer Engineering (2008–present); Editorial Board member, International Review of Applied Sciences and Engineering (ISSN 2062-0810).
Awards	• AGEPI Medal for a group of inventions presented at “INVEST-INVENT SIR 21”, Republic of Moldova. • Best Paper Award, Internet of Things for the Global Community (IoTGC), Madeira, Portugal (2017). • Best Adviser, 11th Digilent Design Contest, EU Region, Cluj-Napoca (2015).
Conference organisation	• Embedded Systems Design and Applications (ESDA), Baia Mare: 2007, 2008, 2009, 2010. • Embedded Systems and Wireless Sensor Networks Design and Applications, Debrecen: 2011, 2012.
Scientific committees	• Conference on Information Technology and Data Science (CITDS): 2020, 2022, 2024, 2026. • International Carpathian Control Conference (ICCC): 2010, 2012–2018, 2020–2026. • International Conference ELECTRONICS, Palanga: 2017–2019. • International Conference on Biomedical Engineering and Applications (ICBEA): 2018. • IEEE International Conference on Future IoT Technologies, Eger: 2018. • Internet of Things for the Global Community (IoTGC), Madeira: 2017. • Embedded World Conference, Nuremberg: 2014–2016. • Soft Computing Models in Industrial and Environmental Applications, Burgos: 2015. • International Conference on Hybrid Artificial Intelligence Systems, Salamanca: 2013. • International Symposium for Design and Technology of Electronic Packages (SIITME): 2007–2014. • Building Services, Mechanical and Building Industry Days, Debrecen: 2009–2011. • International Symposium on Applied Informatics and Related Areas, Székesfehérvár: 2010. • Regional Conference on Embedded and Ambient Systems (RCEAS), Budapest: 2007.
Conference session chair	• Embedded Hardware I, RCEAS, Budapest (22–24 November 2007). • Student Forum 2, 11th International Conference on Optimization of Electrical and Electronic Equipment (OPTIM), 2008.
Workshops and schools	• Xilinx University Professor Workshop, DSP Primer, Debrecen (2011). • Xilinx University Professor Workshop, Partial Reconfiguration, Montpellier (2011). • Altera Workshop, Debrecen (2009). • Xilinx University Professor Workshop, Embedded Design Kit, Cluj-Napoca (2008). • 3rd GOSPEL School, Crete (2007). • Automated Test Summit, National Instruments Europe, Debrecen (2007). • Xilinx University Professor Workshop, DSP, Budapest (2004).

International academic visits	• Beijing University of Posts and Telecommunications, China (April–May 2015, 4 weeks). • Saxion University, Enschede and Deventer (21–28 June 2010). • University of Cambridge Nanoscience Centre (16 May 2008). • University of Oxford, Begbroke Science Park (17–19 May 2008). • Imperial College / London Centre for Nanotechnology (16 May 2008). • University of Sheffield, Kroto Research Institute and Centre for Nanoscience (17 May 2008). • Centre Tecnològic de Telecomunicacions de Catalunya, Barcelona (2008). • Sapienza University of Rome (2007). • École Supérieure d'Ingénieurs en Informatique de Luminy, Aix-Marseille II (1999, 8 weeks). • Institut Universitaire de Technologie de Béthune (1997, 8 weeks).
Student competitions	• NORDTech (2008, 2009, 2011). • International PLC Programming Competition, Debrecen. • National Student Competition in Electronic Interconnection Techniques, Pitești (2008).
Educational projects	• Mentor and short-term expert, DidaTec project, POSDRU/87/1.3/S/60891. • Collaborating expert, "Doctoral Studies in Schools of Excellence" project, POSDRU/5/1.5/S/2.

Research and development projects led (from source CV)

CEEX-M3 PASED, contract 253/01.08.2006 (2007–2010).	Development of national and international partnerships in embedded systems; project director.
Human Activity Recognition System Using Artificial Neural Networks (2015).	Joint project with Beijing University of Posts and Telecommunications; partner Prof. Yongjiang Guo; supported by Balassi Institute / Campus Hungary, B2/4R/16048.
Future Internet Research, Services and Technology – Internet of Things (2012–2014), TÁMOP-4.2.2. C-11/1/KONV-2012-0001.	Research topic lead: "ICT tools for smart homes and assisted living for elders", University of Debrecen.
Soft Processor Core (2002).	Contract with SC Electronics Engineering SA, Baia Mare; microcontroller core.
Power Optimizer of FPGA Implemented Designs (2001).	Contract with SC Electronics Engineering SA, Baia Mare.
Xilinx University Program Grant 5310-XUP-1-AKLBXH (2015).	Development of FPGA teaching infrastructure and the research laboratory.
Xilinx Grants 5310-XUP-26482–4 / 5310-XUP-48209-10 (2004/2006).	Development of FPGA research infrastructure.
Xilinx Grants XUP-7017-8 / 2511-XUP-19570–1 (2001/2003).	Equipment for the FPGA research laboratory.