Stelian Brad

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WORK EXPERIENCE

CURRENT Cluj-Napoca, Romania
ENTREPRENEURSHIP AND MANAGEMENT IN THE PRIVATE SECTOR VARIOUS EMPLOYERS

- June 2018 – current: Chair of Coordination Board: Digital Innovation Hub DIH4Society (dih4society.ro) [focus on digital transformation, AI, smart robotics, cybersecurity]
- July 2015 – current: President: Cluj IT Cluster (clujit.ro) [80+ IT companies; 11 universities; 2 research institutes; 10 catalyst organizations]
- July 2001-current: Founder and Administrator: Vplus (research and consultancy company in innovation engineering and management)
- October 2020 - current: President: Association for Science and Application of Artificial Intelligence (ASAIA)
- October 2020 – current: President: European TRIZ Association (ETRIA) (etria.eu) [official association of scientists and experts in systematic innovation]
- October 2016 – April 2019: Innovation manager: INCDTIM Cluj-Napoca (research institute)
- February 2019 – December 2019: Chair: Danube-Black Sea Macro-Regional Hub
- January 2016 – October 2017: President Administration Council: Bihor Industrial Parks
- January 2016 – December 2016; January 2019 – December 2019: President: Balkan, Black and Baltic Seas ICT Clusters Network (20+ ICT clusters from 9 countries)
- November 2012 – current: Member Board of Directors: Cluj IT Cluster; Coordinator: Work Group "Innovation" Cluj IT Cluster (January 2013-January 2016); Coordinator: Work Group "Business Projects" Cluj IT Cluster (May 2016-Jan. 2019)
- June 2009 - current: Member of the Advisory Board: Sport Club "Politehnica" Cluj-Napoca
- April 2014 – July 2021: Vice-president: Romanian Association for Knowledge Transfer (address: Romanian-American University, B-dul Expoziției, Bucharest)
- December 2003 – January 2009: Co-founder and CEO: ArtSoft Consult (IT company – software development :: customers in 15 countries); 100+ projects [2003-2009]
- June 2000- June 2001: Executive & Research Director: abaXX Technology Romania (branch of abaXX Technology Germany; IT company – software development)

CURRENT Cluj-Napoca, Romania
EXPERTISE IN DIGITALIZATION VARIOUS EMPLOYERS

- Ph.D. in robotics.
- Teach university students robotics since 1996, artificial intelligence, robot programming, advanced object-oriented programming, robotic applications since 2008.
- Industrial robots programming ABB, Fanuc, Motoman, Kuka, Comau, RobotStar, UR, RU Factory.
- Certificates in PLC programming Siemens.
- Programming skills in Python, C++, C#, Java, Processing.
- Programming in specialized modules for Artificial Neural Networks TensorFlow, Keras, Pandas, Open CV, Numpy
- Programming in NET Logo, ROS, QiChat.
- Robotic Aided Design in RobotStudio, Process Simulate, RoboDK, Choregraphe, Visual Components.
- Programming intelligent social robots (NAO, Pepper) in various programming languages.
- Skilled in using cloud-based software management tools: JIRA, Confluence, MIRO, MURAL.
- Skilled in web development with WordPress, CSS, CSS3, JavaScript, HTML, Joomla.
- Courses for technical staff on intelligent social robots, industrial robot programming.
- Multimedia processing with Camtasia.

- CEO of a software company.
- Serial entrepreneur in the software industry.
- Project manager for an innovative technology on autonomous mobile robots.
- Articles, speeches, and conferences on digital transformation, AI, software innovation, smart city.
- President of the Association for Science and Application of Artificial Intelligence (ASAIA).
- Coordinator of the national framework for blockchain/DLT (2021+).
- Member of the working groups Artificial Intelligence; Cybersecurity at JRC/European Digital SME Alliance.
- Expert for JRC/DG Connect to design a Digital Maturity Assessment Model (DMA) for E-DIHs
- Member of CHECK for Cybersecurity4Europe.
- Innovation manager for H2020 cyber-GEIGER.
- Patents in robotics and reconfigurable control.
- Development of several software solutions (innDrive, businessexplorer, INOVEX, eQOST, etc.).
- Development of AI solutions with application in predictive analytics, smart territory, autonomous virtual assistants, etc.
- Coordinating many university projects with students in robotics, artificial intelligence.
- Coordinator of the Digital Innovation Hub DIH4Society (dih4society.ro) [focus on digital transformation, AI, smart robotics, cybersecurity] (fully operational).
- International specializations in robotics in Germany, UK, South Korea.
- Certified digital product manager.

CURRENT N/A, Romania

EXAMPLES OF RESEARCH PAPERS IN THE FIELD OF DIGITALIZATION [1/3] N/A

Examples of papers: *Multidisciplinary Design of Industrial Robotic Automation Solutions,* UT Press, ISBN 978-606-737-246-5, Cluj-Napoca, 240 pg., 2018; Industrial Robots, Robotic Manufacturing Systems and Technologies, Romanian Academy of Scientists Publishing House, Bucharest, ISBN 978-606-8371-48-1, 190 pg., 2011; Computer Aided Manufacturing Robotization, Ed. UT Press, ISBN 978-973-662-361-5, 220 pg., 2008; *TRIZ Driven Identification of AI Application to Improve Navigation of Mobile Autonomous Robots*. In: Cavallucci D., Brad S., Livotov P. (eds) Systematic Complex Problem Solving in the Age of Digitalization and Open Innovation. TFC 2020. IFIP Advances in Information and Communication Technology, vol 597. Springer, Cham. https://doi.org/10.1007/978-3-030-61295-5_2; *CALDET: A TRIZ-Driven Integrated Software Development Methodology*. In: Benmoussa R., De Guio R., Dubois S., Koziołek S. (eds) New Opportunities for Innovation Breakthroughs for Developing Countries and Emerging Economies. TFC 2019; *Development of a Robotic Driven Handheld Laparoscopic Instrument for Non-invasive Intraoperative Detection of Small Endoluminal Digestive Tumors,* 197-210, in: New Trends on Medical and Service Robots. Springer, ISBN: 978-3-319-30673-5, 2016; *Designing a Multi-modal Human-Robot Interaction Interface for an Industrial Robot*, 255-263, in: Advances in Robot Design and Intelligent Control. Springer, ISBN: 978-3-319-21289-0, 2015; *Sm art Units to Support Competitive Design of Control Systems in Surgical Robotics*, 11-26, in: New Trends on Medical and Service Robots. Springer, ISBN: 978-3-319-01591-0, 2013; *Fundamentals of Competitive Design in Robotics. Principles, Methods and Applications*, Ed. Academiei Românei, Bucharest, ISBN 973-27-1065-9, 410 pg., 2004 ("Traian Vuia" award in technical sciences of the Romanian Academy); *Lifecycle Design of Disruptive SCADA Systems for Waste-Water Treatment Installations*, Sustainability, 2021, 13, 4950; *Algorithm for Designing Reconfigurable Equipment to Enable Industry 4.0 and Circular Economy-Driven Manufacturing Systems*. Applied Sciences. 2021, 11, 4446; Hepatocellular Carcinoma Automatic Diagnosis within CEUS and B-mode Ultrasound Images using Advanced Machine Learning Methods. Sensors, 2021, 21; *New inductive proximity sensor platform for precise localization of small colorectal tumors*, Materials Science & Engineering C, Vol. 106, January 2020, 110146, https://doi.org/10.1016/j.msec.2019.110146. DOI: 10.1016/j.msec.2019.110146, WOS: 000501616000017, ISSN 0928-4931; eISSN: 1873-0191.

CURRENT N/A, Romania

EXAMPLES OF RESEARCH PAPERS IN THE FIELD OF DIGITALIZATION [2/3] N/A

Managing Earthwork Construction Business Institutions Applying Industry 4.0 Relating Technologies – The Case of German SMEs, Balkan Region Conference on Engineering and Business Education, Sciendo, vol. 3(1), DOI: 10.2478/cplbu-2020-0035, pp. 299-306, ISSN 2391-8160, 2019; *Design of Smart Connected Manufacturing Resources to Enable Changeability, Reconfigurability and Total-Cost-of-Ownership Models in the Factory-of-the-Future,* International Journal of Production Research, 56 (6), 2018, 2269-2291, DOI: 10.1080/00207543.2017.1400705, WOS:000433967100012, ISSN 0020-7543, eISSN 1366-588X; *Dual Arm Robot Grippers' Teach-in and Control Architecture for Handling of Small Objects with Complex Shapes towards Elder Care Services*, Acta Technica Napocensis, Series: Applied Mathematics, Mechanics, and Engineering, 59(1), 127-134, 2016; *E-Maintenance Ontology-Based Approach for Heterogeneous Distributed Robotic Production Capabilities*, International Journal of Computer Integrated Manufacturing, Taylor & Francis, DOI:

10.1080/0951192X.2014.880802, 28(2), 200-212, 2015; *Employing Smart Units and Servitization towards Reconfigurability of Manufacturing Processes*, Procedia CIRP, Elsevier, 30 (2015), 498-503, 2015; *Monitoring and Control of Dual-arm Industrial Robot Tasks Using IoT Application and Services*, Applied Mechanics and Materials: Mechatronics and Robotics, Vol. 762, pp. 255-260, SCOPUS, 2014; *Increasing the Efficiency of Robotic Manufacturing Systems by Layout Optimization*, Applied Mechanics and Materials: Mechatronics and Robotics, Vol. 762, pp. 283-290, SCOPUS, 2014; *Smart Buildings Using IoT Technologies,* Construction of Unique Buildings and Structures, ISSN 2304-6295, Russia, 5(20), 15-27, 2014; *Framework for Developing a Multimodal Programming Interface Used on Industrial Robots,* Robotica & Management, ISSN 1453-2069, 19(2), 29-33, 2014; *Novel Architecture of Intelligent Axes for Fast Integration into Reconfigurable Robot Manipulators: A Step towards Sustainable Manufacturing*, Romanian Journal of Technical Sciences: Applied Mechanics, 58 (1-2), Special Issue: New Trends in Advanced Robotics, ISSN 0035-4074, 107-128, 2013; *Knowl edge Modelling of E-Maintenance in Industrial Robotics,* Special Issue: Interdisciplinary Research in Engineering: Steps towards Breakthrough Innovation for Sustainable Development, Editors: Vlaicu A, Brad, S., Advanced Engineering Forum, ISSN 2234-9898 (ISBN-13: 978-3-03785-785-4), 8, 603-610, 2013.

CURRENT N/A, Romania
EXAMPLES OF RESEARCH PAPERS IN THE FIELD OF DIGITALIZATION [3/3] N/A

Providing Configurability and Plug-and-Play Capability to Simple Sensors: A Step towards Smart Sensors for Smart Factories, Journal of Applied Mechanics and Materials, 162, 597-606, ISSN: 1662-7482, SCOPUS**,** DOI: 10.4028/www.scientific.net/AMM.162.597, 2012; *Future Internet and ITIL for Intelligent Management in Industrial Robotic Systems*, Buletinul Institutului Politehnic din Iași, Tomul LVIII (LXII), Fasc. 1, section: Automation Control and Computer Science, ISSN 1220– 2169, 83-91, 2012; *Method for Planning Multitasking Robot Application Programs in RAPID*, Journal of Solid State Phenomena (special issue: Robotics and Automation Systems), 166 (1), 69-76, ISSN 1012-0394, DOI: 10.4028/www.scientific.net /SSP.166-167.69, ISI Web of Science, 2010; *Reconfigurability Function Deployment in Software Development*, Informatică Economică (EBSCO), ISSN 1453-1305, 15 (2), 130-141, 2011; *Swarm Intelligence-Based Evolutionary Algorithm for Conceptual Design of Reconfigurable Manufacturing Equipments*, Acta Technica Napocensis, Series: Applied Mathematics and Mechanics, ISSN 1221-5872, 53(3): 393-398, 2010; *Innovative Design of a High Precision Robot Gripper*, Acta Mecanica Slovaca 2-A/2008, ISSN 1335-2393, 12, 105-120, 2008; *Industrial Equipment Enhancement Using Cyber Physical Systems Towards Smart Equipment,* 2016 International Conference on Production Research, 347-354, 2016; *Rapid Development of Control Algorithms and Interfaces for Remote Monitoring of Robotic Arm through Internet of Things (IoT),* EUCOMES 2014, Guimaraes, Portugal, (in: New Trends in Mechanisms and Machine Science, DOI: 10.1007/978-3-319-09411-3, Springer), 941-948, 2014; *Du al-arm Robot-assisted Handling and Assembling of Small Objects with Complex Surfaces*, MESROB 2014, EPFL, Laussane, 2014; *Monitoring and Controlling of Smart Equipments Using Android Compatible Devices towards IoT Applications and Services in Manufacturing Industry,* AQTR 2014, Cluj-Napoca, IEEE 78-1-4799-3730-1/14, 2014; *Design Framework of a Robot System for Cleaning External Glass Walls of Modern Buildings*, METNET 2014, Moscow, ISSN 1795-4231, 142-152, 2014; *Control Architecture for Plug-and-Play Intelligent Axes within Fast Reconfigurable Manufacturing Equipments*, 23rd CIRP Design Conference, Bochum, Germany, March 11 - 13, în volumul: Smart Product Engineering, Lecture Notes in Production Engineering (ed. M. Abramovici, R. Stark), Ed. Springer, Springer Link, ISBN 978-3-642-30816-1, 159-168, 2013; *Software Platform for Supporting Open Innovation*, 2008 IEEE-TTTC International Conference AQTR, ISBN 1-4244-0361-8, 224-229, 2008.

CURRENT Various, Romania
EXAMPLES OF PROJECTS IN THE FIELD OF DIGITALIZATION VARIOUS EMPLOYERS

Piloting of Digital Maturity Assessment Questionnaire for EDIH customers (SMEs): JRC/DG Connect, 2021; *Cyberse curity Counter*, Acronym: GEIGER, Code: 883588, H2020, 2020-2023; *Intelligent, autonomous and quickly reconfigurable robotic system with applications in the automotive industry and agriculture I*, Code: 133789, call POR / 686/1/2 / 2020-2023; *Increasing Quality Performance in Cooperative Processes in SMEs through Expert Systems in Engineering and Innovation Management*, acronym INOVEX, CEEX II Contract no. 140 / 02.10.2006, ANCS, Cod. 628, 2006-2008; *Design and development of a package of mobile Apps for quality reporting, product improvement and safety interventions*, CSi Industries B.V. Holland, Grant Agreement no. 192/23.05.2016 (2016-2018); *Innovative design of the security fences for fast assembly and instalation*; CSi Industries B.V. Holland, Grant Agreement no. 28343/10.11.2015 (2015-2016); *Expert System for Smart Robots*, CSi Industries B.V. Holland, Code 2013111901 (2013-2016); *Smart Redesign of Clamp-Hook Tool to Achieve a Mass Reduction with 70%*, CSi Industries B.V. Holland, 2013111902 (2013-2014); *Conception, design, execution, experimental testing and optimization of intelligent and networked equipment for sublimation of benzoic acid in the resins of the plant Styrax*, no. 2366 / 28.01.2020, beneficiary: Plantextrakt, Cluj-Napoca, 2020-2021; *Informatization strategy for Cluj county*, beneficiary: Cluj County Council, no. 21.127 / 184 / 20.06.2018, 2018-2019; *Integrated Informatization Strategy of Oradea Municipality*, Contract no. 137340 / 19.05.2016, Contractor (Cluj IT), Beneficiary: Oradea City Hall, 2016-2017; *Active perception techniques for flexible handling of objects in*

intelligent manufacturing, program BG, PN-III-P2-2.1-BG-2016-0140, 2016-2018; *Endeavour Space Hub*, Code: 870480, H2020-SPACE-2018-2020/H2020-SPACE-2019, 2019-2021; *Smart city strategy for Alba-Iulia Municipality*, SMIS code 128599, no. 76160 / 04.08.2020, Beneficiary: Alba-Iulia City Hall, 2020-2021; *Analysis and technical support services in the digitization of the monitoring of the operation of the Integrated Waste Management Center* (no. 44804) from 29.12.2020, Beneficiary: CJ Cluj, 2021.

CURRENT Various, Romania
EXPERTISE IN RESILIENCE, SUSTAINABILITY, CIRCULAR ECONOMY VARIOUS EMPLOYERS

- Consultancy on BS 8001 for the circular economy.
- Delivery of training on sustainable development of smart communities (2021).
- Delivery of training courses on Principles of Circular Economy; Schools of Thought on Circular Economy; Business Skills for Green Entrepreneurship; Shared Value Entrepreneurship; Business Models based on Circular Economy.
- MSc in Energy Management.
- Development of a maturity model for the circular economy.
- Consultancy for resilience, business continuity plan for companies (ISO 22316:2017; ISO 22301:2019).
- Consultancy for companies on assessing sustainability using living system models.
- Development of a canvas for value chain analysis against circular economy principles.
- Development of a canvas to analyze outputs and outcomes of products in relation to the circular economy.
- Design for life-cycle: methods, methodologies, frameworks.
- Development of business model innovation on servitization.
- Development of models for economic analysis of resilience.
- Development of models for lifecycle costing.
- Participation to pilot training and review of models for sustainability (Improve).

CURRENT N/A, Romania
EXAMPLES OF RESEARCH PAPERS IN THE FIELD OF SUSTAINBAILITY AND CIRCULAR ECONOMY N/A

Algorithm for Designing Reconfigurable Equipment to Enable Industry 4.0 and Circular Economy-Driven Manufacturing Systems. Applied Sciences. 2021, 11, 4446; *Lifecycle Design of Disruptive SCADA Systems for Waste-Water Treatment Installations*, Sustainability, 2021, 13, 4950; *The Sustainable University in the New Economic Context*, FAIMA Business and Management Journal, vol. 8, issue 1, March 2020, pp. 5-18, 2020; *Managing Earthwork Construction Business Institutions Applying Industry 4.0 Relating Technologies – The Case of German SMEs*, Sciendo, vol. 3(1), DOI: 10.2478/cplbu-2020-0035, pp. 299-306, ISSN 2391-8160, 2019; *Design of Smart Connected Manufacturing Resources to Enable Changeability, Reconfigurability and Total-Cost-of-Ownership Models in the Factory-of-the-Future,* International Journal of Production Research, 56 (6), 2018, 2269-2291,eISSN 1366-588X; *Safety Management within a Robotic Manufacturing Systems through Layout Design*, ACTA TECHNICA NAPOCENSIS ISSN: 1221-5872, WOS: 000451702200018, pp. 137-146, 2018; *Life-Cycle Building Costs Based on Particle Swarm Optimization*, Acta Technica Napocensis, 59(2), 2016; *Environmentally Sustainable Economic Growth*, Amfiteatru Economic, 18(42), 446-460, 2016; *TRIZ to Support Blue-design of Products,* Procedia CIRP, 39 (2016), 125-131, 2016; *Economic Development of Peripheral/Lagging Zones through Smart Innovation*, International Journal of Transitions and Innovation Systems, 4(3/4), 201-220, 2015; *Managing Innovation in Designing Buildings: From Sustainable and Intelligent Buildings to Inclusive Buildings. A Survey.* Acta Technica Napocensis, Series: Civil Engineering & Architecture, 58(1), 24-41, 2015; *Framework for Eco-innovative Design with Application in Low-voltage Electric Appliance Industry*, International Journal of Environmental Technology and Management, Inderscience Enterprises Ltd (SCOPUS), 14 (5/6), 379-396, ISSN 1466-2132, 2011; *Vectors of Innovation for Balancing Economic Growth and Sustainable Development*, Proceedings, BASIQ Int. Conference, ISSN 2457-483X, Bucharest, 457-464., 2015; *State-of-the-Art and Proposals on Reducing Energy Consumption in the Case of Industrial Robotic Systems,* 3rd Int. Conf. on Quality and Innovation in Engineering and Management, 978-973-662-978-5, Cluj-Napoca, 337-341, 2014; *Managing Emotional Aspects of PSS Functionalities for Sustainability*, 5th CIRP Int. Conf. on Industrial Product Service Systems, Bochum, Germany, March 14-15,, Ed. Springer, Springer Link, ISBN 978-3-642-30819-2, 165-175, 2013; *Concurrent Approach for Multiple Eco-function Design,* 17th CIRP International Conference on Life Cycle Engineering, Hefei, China, ISBN 978-7-5650-0186-4, 236-241, 2010; *Assessing Quality of Regional Development Strategies on Economic Competitiveness: A Case Study in The N-W Region of Romania*, European Association for Comparative Economics Studies (EACES) 9th Bi-Annual Conference: *Development Strategies - A Comparative View, Brighton, UK, 19 pp.*

EXAMPLES OF PROJECTS IN THE FIELD OF SUSTAINABILITY AND CIRCULAR ECONOMY VARIOUS

Study on Circular Economy Principles in SMEs from the Danube Region // sub-contract in: *Mobilizing Institutional Learning for Better Exploitation of Research and Innovation for the Circular Economy*, code: MOVECO, DTP1-1-349-1.1, carried out in the INTERREG program, no. sub-contract 128 / 07.02.2018; *Improving the performance of key production processes within Nova Grup through "lean" production management and organization procedures*, Beneficiary: Nova Grup, 57 / 27.01.2016, 2016-2019; *Design and optimization of the underground waste collection platform*, no. 6135 / 08.03.2019, Sky Park Systems SRL, Cluj-Napoca, 2019; *Studies for the elaboration of a Business Continuity Plan (BCP)*, Contract no. CO 6317 / 24.05.2011, Beneficiary Farmec SA, 2011.

EXPERTISE ON INNOVATION [1/2] VARIOUS

- Experience in the EEN since 2008. Tens of audits on innovation management, completion of personal training on Introduction to the Digital Innovation Quotient; Design Thinking: Implementing the Process; Innovation Life-Cycle Management; Innovation Management Audit; Competitive Strategy; Developing Innovative Ideas for New Companies: Step in Entrepreneurship; Model Thinking; Innovation Audit; Organizing Brokerage Events, Creativity and Lateral Thinking, etc.
- Trainer in decentralized EEN events on Innovative Problem-Solving in SMEs; Patent Valuation; Early Assessment of the Market Value of Innovative Businesses; Methodology to Assess the Innovation Need of SMEs; Project-to-Company Approach to Analyze Innovation Needs in SMEs.
- Ph.D. in economics with a focus on innovation micro-economics.
- The first training program for SMEs in Romania on innovation management (2006-2007), and the first book written in Romania on this topic (2006).
- The first consultancy in Romania to implement and certify an innovation management system based on CEN TS 16555 (2019).
- Courses for university students on "Engineering and Management of Innovation" (MSc degree), and "Innovation Management in Product Design" (BSc degree) since 2009.
- Trainer and director of the training program for executives on "microeconomics of competitiveness" (Harvard Business School MOC program) (2013-2016).
- Scientific research and consultancy in innovation, with many papers published, and projects.
- International recognition, acting as president of the European TRIZ Association for Structured Innovation (ETRIA).
- Reviewer of the following journals on innovation: 1. International Journal of Production Research; 2. The TQM Journal; 3. Quality Access to Success; 4. Journal of Engineering Design; 5. International Journal of Quality and Reliability Management; 6. International Journal of Transition and Innovation Systems; 7. International Journal of Management and Economics.
- Member of the editorial board of the following journals on innovation: The TQM Journal; Quality Access to Success, Review of Management & Economic Engineering.
- Member ASRO / TC 383 to elaborate the standard „Innovation management system" SR 13572:2016.
- Member Steering Committee EEENIMAC (2020).
- Member National Council for Innovation and Entrepreneurship (2016-2017).
- Member Regional Scientific Council for Smart Specialization Strategy (2016+).
- Member Regional Council for Innovation (2017+).
- Expert Thematic Group „Innovation" EEN/EASME since 2016.
- General chair or scientific chair of international conferences on innovation: ETRIA World TRIZ Future Conference 2020, 2021, Quality and Innovation in Engineering and Management 2011, 2012, Int. Conf. Interdisciplinary Research in Engineering: Steps towards Breakthrough Innovation for Sustainable Development, 2013, Cluj Innovation Days 2015-2021, etc.
- Coordinator of the WG for the National Occupational Standard "Product Manager".
- Expert for Ernst & Young (2011, 2012; 2013): entrepreneurship.

EXPERTISE ON INNOVATION [2/2] VARIOUS

- Patents: 1 EPO; 1 OSIM.
- Trainer: „Entrepreneurship in eHealth", University of Medicine and Pharmacy „Iuliu Hațieganu" Cluj-Napoca (2019+) – postdoctoral studies.
- Trainer: Competitive Development, Technical University of Cluj-Napoca (2020+) – postdoctoral studies.

- Mentor for start-ups in various national and international contexts (e.g., Impact Hub Romania, IoT Tribe Spain, Innovation Labs Romania, Cultureproenors Romania).
- Expertise in smart specialization. Certificate from EPFL (prof. D. Foray).
- Trainer on smart specialization in international projects (Interreg) since 2013. Invited professor on this topic at the Techn. Univ. of Novi Sad.
- Member or coordinator in elaborating S3 at national level (with a focus on internationalization) and regional level.
- Member National Council for Smart Specialization Strategy (rapporteur group Innovative Technologies).
- Teaching smart specialization at international level for cluster initiatives, as well as for Romanian companies.
- Training delivered in the period 2012-2020 for executives and technical staff on: Strategic planning; Innovation and technology transfer; Entrepreneurship and entrepreneurial plan; Product management; Microeconomics of competitiveness; Smart specialization; Cluster development; Cluster management; Innovative problem solving for managers; Analysis and planning of the value chain; Business model innovation; Contract negotiation and management; Product manager; Innovation manager; Life-cycle management; Lean agile product development.
- 16 projects on innovation: 1 START (module manager); 7 COSME (local project manager); 3 CIP (project manager); 1 CEEX (manager subcontract), 1 Leonardo da Vinci (partner coordinator); 1 Phare (project manager); 1 POC (innovation manager); 1 PN III (project manager).
- Many presentations and speeches on innovation at national and international events.
- Project management consultancy: 1998-2018: 46 consultancy services
- Quality management consultancy: 2002-2006: 4 consultancy services on ISO 9001 certification (2 in IT; 1 in financial services; 1 in industrial production).
- Innovation management consultancy: 2014-2019: 160 companies trained in innovation management and product management; 1 company – consultancy to implement innovation management system CEN TS 16555; 4 consultancy projects in innovative software product development (innovation audit, HR audit for innovation, early consolidation of specifications, software quality planning, patenting plan and documentation, entrepreneurial plan, SWOT/RS, competitiveness analysis and strategy for competitive advantage, business model, price policy and right price, marketing plan, sales plan, financial plan on real options, LC risk analysis and management, creativity and innovative problem solving); 3 projects on smart technologies for environment and agri-food.

CURRENT N/A, Romania
EXAMPLES OF RESEARCH PAPERS IN THE FIELD OF INNOVATION [1/5] N/A

Evaluation of organizational excellence, UTPress Publishing House, ISBN 978-606-737-065-2, 174 pg., Cluj-Napoca, 2015; Competitive Development Engineering of Innovative Products and Services, UT Press Publishing House, ISBN 978-606-737-066-9, 52 pg., Cluj-Napoca, 2015; *TRIZ-Based Approach for Improving the Adoption of Open Innovation 2.0*. In: Cavallucci D., Brad S., Livotov P. (eds) Systematic Complex Problem Solving in the Age of Digitalization and Open Innovation. TFC 2020. IFIP Advances in Information and Communication Technology, vol 597. Springer, Cham. https://doi.org/10.1007/978-3-030-61295-5_34; *Using Bibliometric Indicators from Patent Portfolio Valuation as Value Factor for Generating Smart Beta Products*. In: Cavallucci D., Brad S., Livotov P. (eds) Systematic Complex Problem Solving in the Age of Digitalization and Open Innovation. TFC 2020. IFIP Advances in Information and Communication Technology, vol 597. Springer, Cham. https://doi.org/10.1007/978-3-030-61295-5_31.; *TRIZ to Support Creation of Innovative Shared Value Business Initiatives,* in: Advances and Impacts of the Theory of Inventive Problem Solving (ed. S. Koziołek, L. Chechurin, M. Collan), 101-112, Springer, ISBN 978-3-319-96531-4, ISBN 978-3-319-96532-1 (eBook), https://doi.org/10.1007/978-3-319-96532-1, 2018; *Quantifying and Leading Innovation with TRIZ within Competitiveness Strategies*, in: Advances and Impacts of the Theory of Inventive Problem Solving (ed. S. Koziołek, L. Chechurin, M. Collan), 65-74, Springer, ISBN 978-3-319-96531-4, ISBN 978-3-319-96532-1 (eBook), https://doi.org/10.1007/978-3-319-96532-1, 2018; *Functional and Strategic Aligned Clusters towards More United Economies and Sustainable Development*, in: Clusters as a Driving Power of the European Economy, Editura Nomos, ISBN 978-3-8487-2429-1, pp. 125-146, 2016; *Principles of Romanian Management at the Base of Increasing Competitiveness*, 178-208, in: Contributions to Outlining a Romanian Management Model (coord. Ion Petrescu), Ed. Expert, Vol. I (ISBN I 978-973-618-402-4), ISBN 978-973-618-401-7 (2 volumes in A4 format), 2400 pg., 2014; *Aggregated Analysis Matrix: An Effective Tool for Defining Improvement Priorities in Complex Business Processes*, 14-31, in: Six Sigma Quality, Academy Publish, SUA, ISBN: 978-0-9835850-4-6, 2014; *Product Innovation in SMEs: A Web-based Supporting Tool and Case Studies*, 109-121, in HAMKin e-julkaisuja no. 8/2011, ISBN 978-951-784-556-4, ISSN 1795-4231, Ed. HAMK UAS and writers, Finland (ed. Virdi, K.; Tenhunen, L.), 2011; *Sigma-TRIZ: Algorithm for Systematic Integration of Innovation within Six Sigma Process Improvement Methodologies,* 89-108, in: Quality Management and Six Sigma, Ed. InTech, ISBN 978-953-307-130-5, 2010.

EXAMPLES OF RESEARCH PAPERS IN THE FIELD OF INNOVATION [2/5] N/A

Complex System Design Technique. A Systematic Approach of Innovation in a Complex World, Ed. Dacia, ISBN 978-973-35-2330-7, 170 pg., 2008; *Basic Manual of the Product Manager in Engineering and Innovation Management*, Ed. Economica, ISBN 978-973-709-265-6 / 973-709-265-1, 700 pg., 2006; *Managing Business Model Innovation: An Innovative Approach towards Designing a Digital Ecosystem and Multi-Sided Platform*, Business Model Management Journal, Vol. 27 (2), ISSN: 1463-7154, pp. 415-438, 2021; *Value Chain Planning in Cross-Industry Meta-Cluster Initiatives*, Balkan Region Conference on Engineering and Business Education, Sciendo, vol. 1(1), DOI: 10.2478/cplbu-2020-0030, pages 256-264, ISSN 2391-8160, 2019; *Framework for Building a Service Vision Statement*, ACTA TECHNICA NAPOCENSIS SERIES-APPLIED MATHEMATICS MECHANICS AND ENGINEERING, 75-84, 2018, WOS: 000451702200011, ISSN: 1221-5872; *Structured Activation of Vertex Entropy (SAVE): Another Way around Creative Problem Solving for Non-technical Applications*, INNOVATOR Journal of the European TRIZ Association, ISSN 1866-4180, 01/2017(03), 76-81, 2017; *Directed Innovation of Business Models*, International Journal of Management, Knowledge and Learning, 5(1), 97-119, 2016; *Methodology for Lean Design of Disruptive Innovations*, Procedia CIRP, Elsevier, 50(2016), 153-159, 2016; *Lean Agile Technology Transfer Approach*, International Journal of Sustainable Economy, 8(3), 224-236, 2016; *A Preliminary Investigation of Female Entrepreneurs' Behavior in Romania*, The Romanian Economic Journal, 19(60), 3-14, 2016; *The Structure and the Resources of Entrepreneurial Network – Essential Factors to Survival and Performance. The Case Study of Romania*, International Journal of Managerial Studies and Research, 3(7), 31-40, 2015; *A New Entrepreneurial Decision-Making Support Framework for Assessing Business Line Correlations*, Amfiteatru Economic, 17 (Special No. 9), pp. 841-855, 2015; *How Does Corruption Influence the Entrepreneurial Environment in Romania*? Revista Tinerilor Economiști, 12(25), 29-38, 2015; *Leading Innovation to Improve Complex Process Performances by Systematic Problem Analysis with TRIZ*, Procedia Engineering, 131(2015), 1121-1129, Elsevier, 2015; *Enhancing SWOT Analysis with TRIZ-based Tools to Integrate Systematic Innovation in Early Task Design*, Procedia Engineering, 131(2015), 616-625, Elsevier, 2015; *Smart Deployment of Demonstrators into Commercial Successful* Solutions, Procedia CIRP, Elsevier, vol. 21, 503-508, 2014; *Innovation by Developing Human Resources, Ensuring the Competitiveness and Success of the Organization*, Procedia Social and Behavioural Sciences, Elsevier, 109 (2014), 645-648, DOI: 10.1016/ j.sbspro.2013.12.521

EXAMPLES OF RESEARCH PAPERS IN THE FIELD OF INNOVATION [3/5] N/A

Study on Perceived Quality and Perceived Fair Price, Procedia Economics and Finance, Elsevier, Vol. 15, 1304–1309, 2014; *Effects of the Research Projects on the Public Budget,* Review of General Management, SAMRO, B+, Cabell's, 18 (2), 69-77, ISSN 1841-818X, 2013; *Business Success through Innovation Management: a Literature Review on Innovation Process Models,* World Academy of Science, Engineering and Technology, 74, ISSN: 2010-3778, 738-742, EBSCO, 2013; *A proposed innovation management system framework - A solution for organizations aimed for obtaining performance,* International Journal of Social and Human Sciences, ISSN 2010- 376X/ ISSN 2010- 3778, SCOPUS, WorldCat, EBSCO, 1581- 1585, 2012; *Equating Business Value of New High-tech Products*, CIRP Journal of Manufacturing Science and Technology, Elsevier, 2 (4), 272-278, ISSN 1755-5817, DOI: 10.1016/j.cirpj. 2010.05.00, 2010; *Concurrent Multi-Function Deployment (CMFD),* International Journal of Production Research, Taylor & Francis, ISSN: 0020-7543, 47 (19), 5343-5376, DOI 10.080/0020 7540701564599, 2009; *Vectors of Innovation to Support Quality Initiatives in the Framework of ISO 9001:2000*, International Journal of Quality & Reliability Management, Emerald, ISSN: 0265-671X, 25 (7), 674-693, DOI: 10.1108/02656710810890872, 2008; *Systematic Integration of Innovation in Process Improvement Projects Using the Enhanced Sigma-TRIZ Algorithm and Its Effective Use by Means of a Knowledge Management Software Platform*, Informatică Economică (EBSCO), 13 (4), ISSN 1453-1305, 75-89, 2009.; *Multilayer Innovation – A Key Driver towards a Rapid Growth of Economic Competitiveness: Challenges for Romania*, Special Issue Calitatea AS (SCOPUS), year 9, no. 93, vol. I, ISSN 1582-2559, 73-90, 2008**;** *Nature of Innovation and Its Implications on Organizational Performance,* Special Issue Calitatea AS (SCOPUS), year 9, no. 93, vol. II, ISSN 1582-2559, 34-39, 2008; *Influence factor method (FAIN): An innovative tool for approaching sensitivity analysis*, Acta Technica Napocensis, Series: Applied Mathematics and Mechanics, No. 51, vol. I/2008, 13-18, ISSN 1221-5872, 2008; *Quantifying the market potential of an innovative product idea in the context of university spin-offs*, Acta Technica Napocensis, Series: Applied Mathematics and Mechanics, No. 51, vol. I/2008, 7-12, ISSN 1221-5872, 2008; *Comprehensive Innovation and Its Implications on New High-Tech Product Development*, Informatica Economica Review (EBSCO), No. 2(42)/2007, ISSN 1453-1305, 18-25, 2007.

EXAMPLES OF RESEARCH PAPERS IN THE FIELD OF INNOVATION [4/5] N/A

Eliminating the Limits in Decision Making Using the Advantages of Mediation as an Alternative Way to Resolve Conflicts, 6th Review of Management and Economic Engineering International Management Conference,

20-22 Sept., Cluj-Napoca, ISSN 2246-8639, 275-282, WOS:000471723700040, 2018; *Importing Smart Specialization Principles to Design Entrepreneurial Initiatives for Economic Growth of Traditional Rural Settlements in Lagging-Behind Regions,* Regional Studies Association Central and Eastern Europe Conference 2017, 10-13 Sept., Cluj-Napoca, 2017; *Integrated Planning of the Value Chain for Developing Innovative Product-Service Systems in the Framework of Cross-Industry Meta-Cluster Initiatives,* 11th World Economy Research Institute's Annual Conference, Warsaw, June 13, *The Pressure of Economic Crises upon the Necessity of Redefining the Labor Productivity Indicator*, Review of Management and Economic Engineering International Management Conference, RIMEE 2016, 339-346, 2016.; *The Influence of Age on Entrepreneurial Behavior. An Empirical Study in Romania*, International Academic Conference on Management, Economics and Marketing, Budapest, ISBN 978-80-906231-2-5, 8-9 July, 147-154, 2016; *Framework for Planning Polycentric Innovation in High-tech Dynamic Industries*, the 23rd International Conference on Production Research (ICPR23), Manila, 2-6, August 2015; *Country Benchmarking for Setting-up a New Business*, Development, Growth and Finance of Organizations from an Eastern European Context: The 2015 Griffiths School of Management Annual Conference on Business, Entrepreneurship and Ethics (GSMAC), Springer, 2015; *The Lean-Agile Technology Transfer Model: Revisiting University-Industry Collaboration through the Gate of Innovation Process*, Proceedings MakeLearn, and TIIM: Managing Intellectual Capital and Innovation for Sustainable and Inclusive Society, ToKnowPress, ISSN 2232-3309, 27-29 May, Bari, Italy, 2015

CURRENT N/A, Romania
EXAMPLES OF RESEARCH PAPERS IN THE FIELD OF INNOVATION [5/5] N/A

Empirical Study of the Importance of Bibliometric Indicators for Patent Portfolio Valuation and Proposed New Indicator Model, 3rd Int. Conf. on Quality and Innovation in Engineering and Management, 978-973-662-978-5, Cluj-Napoca, 536-540, 2014; *Structured Approach for Evaluating the Opportunity, Selecting and Applying Business Process Innovation*, Proceedings of the 2nd International Conference Quality and Innovation in Engineering and Management ISSN 1582-2559, Special Issue: Quality-Access to Success Journal, vol. 13 (5), SCOPUS, 399-402, 2012; *Supporting Technology Innovation Processes in Manufacturing Small and Medium Enterprises*, Proceedings of the 2nd International Conference Quality and Innovation in Engineering and Management (Ed. S. Popescu, S. Brad, D. Popescu), Cluj-Napoca, November 22-24, ISSN 1582-2559, Special Issue: Quality-Access to Success Journal, vol. 13 (5), SCOPUS, 421-426, 2012; *Improvements in Patent Portfolio Valuation with Bibliometric Indicators*, Proceedings of the 2nd International Conference Quality and Innovation in Engineering and Management (Ed. S. Popescu, S. Brad, D. Popescu), Cluj-Napoca, November 22-24, ISSN 1582-2559, Special Issue: Quality-Access to Success Journal, vol. 13 (5), SCOPUS, 451-456, 2012; *Ontology-Based Approach for Supporting Creativity in a PSS Design Methodology*, 3rd CIRP International Conference on Industrial Product-Service Systems, Braunschweig, Germany, May 5-6, in: Functional Thinking for Value Creation (ed. J. Hesselbach, C. Herrmann), Ed. Springer, Springer Link, ISBN 978-3-642-19688-1, 75-80, 2011; *Quality Cost-Based Adaptive Control Approach for Conducting Process Innovation*, Proceedings of the 1st International Conference Quality and Innovation in Engineering and Management (Ed. S. Popescu, S. Brad, D. Popescu), Cluj-Napoca, March 17-19, Ed. UT Press, ISBN 978-973-662-614-2, 237-242, 2011; *Perspectives on High-Tech Product Design for Better Supporting Product-Service Systems*, Proceedings of the 2009 Winter Simulation Conference, Austin, USA, ISBN: 978-1-4244-5771-7/09/IEEE Catalogue no.: CFP09WSC-CDR, Library of Congress: 87-654182, 3036-3046; *Assessing the Innovation Capability of Enterprises: A Case Study on 56 SMEs from Romania*, Proceedings of the 8th International Conference MTeM 2007, ISBN 973-9087-83-3, 295-298, 2007.

CURRENT Cluj-Napoca, Romania
EXAMPLES OF PROJECTS IN THE FIELD OF INNOVATION VARIOUS EMPLOYERS

InnoCAP Transylvania, Services to Enhance the Innovation Management Capacity of SMEs in the Macro-Region 1 in Romania, H2020, 2015-2021; *Demonstrating the Industrial Validity and Market Feasibility of IT Tool to Support SMEs in Systematic Innovation Processes*, MARKET-IT, FP7, 311517, Call FP7-SME-2011, 2012-2014; *IT Tool to Support SMEs in Systematic Innovation, Based on Consolidated Methodology and Innovation Knowledge Domain Structured through Specific Ontologies*, TECH-IT-EASY, FP7, Call SME-2008-1, 232410, 2009- 2011; *Increasing Quality Performance in Cooperative Processes in SMEs through Expert Systems in Engineering and Innovation Management*, INOVEX, CEEX II 140/02.10.2006, ANCS, 628, 2006-2008; *Innovation management system according to SR CEN TS 16555*, 72/ 28.12.2018, Beneficiary: PRODIMA, 2018-2019; *Mini-program for SME innovation and the promotion of research and technological development (SMART +)*, 118/21.07.2011, Beneficiary: Cluj County Council, 2011-2013; *Integrated Innovation Management Systems for SMEs*, InnDrive, ANCS, Cod: PNIIPTPCCA201341319, PCCA/341/2014), 2014-2017; *Increasing the competitiveness of Romanian SMEs by implementing a model for evaluating and improving their performance in accordance with the European quality management model*, code: ID_856, IDEI program, 2007-2010; *Increasing the Technological and*

Knowledge Transfer Capacity of INCDTIM Cluj in the Field of Bioeconomics TTC-ITIM, SMIS Code: 105533, no. 18 / 01.09.2016, 2016-2019; *BISNet Transylvania: Support for Business and Innovation,* COSME, *2008-2021.*

CURRENT Various, Romania
EXPERTISE ON SCALING-UP AND INTERNATIONALIZATION VARIOUS

- 10 years acting as CEO in IT companies with customers in 15 countries.
- Mentor for international start-ups in IT sector.
- Consultant for international business plans for start-ups (e.g., entering the Indian, Northern Africa, Chinese markets).
- Contributor and facilitator of international networks (3B ICT Network, European Digital SME Alliance, DIH partnerships at the European level, international partnerships in Africa, South America, Central America, South-East Asia, Middle East, via Cluj IT cluster)
- Projects on internationalization financed from COSME (e.g., GIVE, Scaling-up Transylvania).
- Contributor to the development of models for auditing readiness for scaling-up and internationalization.
- Training for SMEs on international contract negotiation, M&A, international value chains, business model innovation for internationalization, JV, polycentric and open innovation.
- Project to setup international spin-offs from R&D activities (e.g., GEIGER, in the area of cybersecurity), acting and innovation and exploitation manager.
- Mentor for Romanian companies on scaling-up and internationalization (e.g., H2020 InnoCAP Transylvania project, or consultancy for start-ups in robotics, IT, cosmetics since 2007).
- Business plans and feasibility studies: 2000-2018: 43 consultancy services; evaluator 50+ business plans; 10+ business plans assisted.
- Business internationalization consultancy: 2017-2020 - 6 projects.

CURRENT Various, Romania
EXAMPLES OF PROJECTS IN THE FIELD OF SCALING-UP AND INTERNATIONALIZATION VARIOUS

Consolidation of the innovation ecosystem of Cluj IT through smart specialization for structural transformation and internationalization based on the intellectual property of the IT sector in Romania, CRONOS], PN-III-P2-2.1-CLS-2017-0041, 2018-2020; *Ready2Go International*, PROMOS, Italy, Grant Agreement no. 760 / 21.03.2018, 2018; *Danube ICT Clusters' Sustainable Cooperation for Smart and Inclusive Growth,* Danube Region Strategy START, DANUBE ICT - 17_PA08-C2, 2015-2016; *GREEN ICT DEVELOPMENT* - GIVE, cod 783398**,** 2017-2019, EASME, COSME; *Scale-Up Transylvania*: 764354, 2017-2018, EASME, COSME

Cluj-Napoca, Romania
SPECIFIC ACTIVITIES AS MEMBER OF THE ACADEMIC STAFF IN UNIVERSITY TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

30/09/2008 – CURRENT Cluj-Napoca, Romania
FULL PROFESSOR [CHAIR IN: ROBOT PROGRAMMING & INTELLIGENT ROBOTICS; ENGINEERING AND MANAGEMENT OF INNOVATION] TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

Teaching activities:
MSc courses
[Engineering] Robot programming languages, Robotic applications; Social robotics
[Management] Engineering and management of innovation; Contract Negotiation
BSc courses
[Engineering] Artificial Intelligence; Python Programming
[Engineering & Management] Innovation Management in Product Design
Supervision of BSc final degree projects: Robotics
Supervision of MSc final degree projects: Robotics, Innovation Management
Research activities:
[Engineering] Engineering of innovation [methods, tools], Social robotics; Collaborative intelligent robotic systems, Engineering 4.0, Smart technologies for X (Industry 4.0, City 4.0), Software systems for technical innovation, Reconfigurability in product-service systems
[Management] Management of innovation [methods, tools], Software systems for knowledge and innovation management, Optimisation of innovative economic clusters and polycentric innovation, Valuation of patents and patentable technologies, Understanding of entrepreneurial behavior and

entrepreneurship optimization, Technology transfer, Smart specialization, and regional development, Resilient economy and social economy.

30/09/2004 – 29/09/2008 Cluj-Napoca, Romania
ASSOCIATE PROFESSOR (READER) TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

Teaching activities:
BSc courses [Engineering] Manufacturing Robotization, Competitive Development of Robotic Systems, Design for Competitiveness
Research activities:
[Engineering] Engineering of Innovation, Competitive Design in Robotics
[Management] Management of Innovation, Software Expert Systems for Business Excellence, Software Expert Systems for Quality Costs, Technology Transfer, Quality Management, Software Project Management

30/09/2000 – 29/09/2004 Cluj-Napoca, Romania
SENIOR LECTURER TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

Teaching activities:
BSc courses [Engineering] Manufacturing Robotization, Robot Design, Competitive Development of Robotic Systems
Research activities:
[Engineering] Robot Design, Manufacturing Robotization
[Management] Quality Management, Technology Transfer

28/02/1998 – 29/09/2000 Cluj-Napoca, Romania
ASSISTANT PROFESSOR TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

Teaching activities:
BSc courses [Engineering] Manufacturing Robotization, Robot Design
BSc labs [Engineering] Programming in C/C++
Research activities:
[Engineering] Service Robots
[Management] Quality Management

29/02/1996 – 27/02/1998 Cluj-Napoca, Romania
JUNIOR ASSISTANT TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

Teaching activities:
BSc courses [Engineering] Robot design
BSc labs [Engineering] Programming in C/C++; Electric drives
Research activities:
[Engineering] Robotic engineering, Design optimization, Robot modeling and simulation

Cluj-Napoca, Romania
COORDINATION AND MANAGEMENT OF RESEARCH AND INNOVATION IN UNIVERSITY TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

30/07/2009 – CURRENT Cluj-Napoca, Romania
PHD COORDINATOR/SCIENTIFIC SUPERVISOR: "ENGINEERING AND MANAGEMENT" TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

13 PhD graduates; 3 post-doc graduates; 12 PhD students
Areas: Innovation Management; Intelligent Robotics

29/01/2006 – CURRENT Cluj-Napoca, Romania

DIRECTOR: RESEARCH CENTRE FOR "ENGINEERING AND MANAGEMENT OF INNOVATION" (RESIN) TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

Vectors of interest:
INNOVATION ENGINEERING: 1. Science and engineering of intelligence in robotic systems; 2. Science of interdisciplinary design;
3. Innovation for X.
INNOVATION MANAGEMENT: 1. Science of smart innovation; 2. Science of collaborative innovation; 3. Innovation by structural transformation; 4. Micro, mezzo, and macro innovation systems

30/09/2008 – 29/05/2012 Cluj-Napoca, Romania

DIRECTOR: DEPARTMENT FOR RESEARCH, DEVELOPMENT AND INNOVATION MANAGEMENT TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

Institutional management of the research projects in the university
Institutional management of the IP in the university
Institutional management of structural projects in the university
The operational interface between the university Board and project managers
Guiding research and innovation strategy in the university
Contacts supervision

31/03/2008 – 29/09/2008 Cluj-Napoca, Romania

DIRECTOR: OFFICE FOR ASSISTANCE AND CONSULTANCY IN PROJECT MANAGEMENT OF STRUCTURAL FUNDS TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

Strategy to access structural funds (Romania became EU member in 2007)

30/09/2004 – 29/03/2008 Cluj-Napoca, Romania

DIRECTOR: TECHNOLOGY TRANSFER OFFICE TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

Development of technology transfer in the university

31/05/2002 – 29/09/2004 Cluj-Napoca, Romania

DEPUTY DIRECTOR: DEPARTMENT OF RESEARCH MANAGEMENT AND TECHNOLOGY TRANSFER TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

Research management in the university

09/01/1997 – 29/05/2002 Cluj-Napoca, Romania

TECHNOLOGY TRANSFER COUNSELLOR: DEPARTMENT OF RESEARCH MANAGEMENT AND TECHNOLOGY TRANSFER TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

Setting up the framework for TT in the university

Cluj-Napoca, Romania

ACADEMIC MANAGEMENT TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

29/02/2008 – CURRENT Cluj-Napoca, Romania

PROGRAM DIRECTOR: ROBOTICS SPECIALIZATION (BSC, MSC) [ENGLISH | ROMANIAN] TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

Strategic management of the study program
Curricula development
Partnership development with industry
Operational management of the study program

30/04/2012 – 30/12/2013 Cluj-Napoca, Romania
DEPUTY RECTOR (VICE-RECTOR) TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

University Management, Master and Doctoral Studies

Cluj-Napoca, Romania
EXPERIENCE AS A CEO IN SOFTWARE INDUSTRY ARTSOFT

Business strategy development
Prospecting new markets and new clients
Customer interactions [in this position I interacted with tends of customers in over 15 countries worldwide, from Asia, Europe, and America]
Quality management system design and supervision
Training employees on software project management
Dealing with HR assessment and management
Risk management
Representation in fairs, workshops
B2B meetings
Optimizing the project management process, adoption of new tools
Contract negotiation, contract management, escalation management with customers
Introducing innovation in the company [knowledge management; process innovation]
Leading product innovation [new ideas, new prototypes]

Cluj-Napoca, Romania
EXPERIENCE IN THE LEADERSHIP POSITION OF A CLUSTER ORGANIZATION CLUJ IT

Network development
Representation of the organization in meetings, workshops, seminars, events
Development of the collaboration framework between members
Introduction of various organizational innovations
Involvement in working groups
Preparing and managing projects
Institutional development
Support for developing new management tools of collaborative work
Development of the project management framework
International development and networking

EDUCATION AND TRAINING

09/2003 – 07/2011 Bucharest, Romania
PHD IN ECONOMICS Academy of Economic Sciences Bucharest

Economics (topic :: micro-economics of quality, competitiveness and innovation)

Address Bucharest, Romania

09/1995 – 01/2000
PHD IN ENGINEERING (MAGNA CUM LAUDE) Technical University of Cluj-Napoca (in co-tutelage Stuttgart Universität, Germany)

Robotics (topic :: competitive design of robotic systems)

09/1994 – 03/1996
MSC DIPLOMA (HONORARY DEGREE) International Technological University Paris

Energy management

Address Division of Engineering and Technology of the Secretariat of UNESCO

09/1988 – 07/1994
BSC DIPLOMA (HONORARY DEGREE) Technical University of Cluj-Napoca

Engineering Design
Production Equipment
Industrial Robotics

08/1987 – 07/1988
SERGEANT Academy of Terrestrial Forces "Nicolae Bălcescu" Sibiu, Romania

Military service in infantry

BACCALAUREATE DIPLOMA (HONORARY DEGREE) Huedin, "Octavian Goga" High School, Romania

Mathematics-physics

TRAINING (CONTINUOUS EDUCATION)

30/09/2021 – 14/12/2021
PRODUCT STRATEGY: DISCOVERING, DEVELOPING, MANAGING AND MARKETING PRODUCTS AS A BUSINESS Northwestern University, Kellogg School of Management, USA

18/10/2021 – 08/11/2021 Romania
VISUAL COMPONENTS ESSENTIALS 4.3 TRAINING COURSE [VT011/11.11.2021] Visual Components | Visual Technologies

Address Romania

11/2019
AUDITOR FOR DIGITAL INNOVATION European Improve Academy

Certificate
Introduction to Digital Innovation Quotient [2 days training]

05/2019
DATA SCIENTIST University of Michigan, USA

Introduction to Data Science in Python [4 weeks]
Online course

09/2018
SKILLS DIVERSIFICATION IN PYTHON LinkedIn online

Certificates
A series of dedicated courses in Python [5 days]
Python Programming Efficiently; Python GUI Development with Tkinter; Python – Data Analysis; OpenCV for Python Developers; Machine Learning & AI Foundation; Design Thinking - Implementing the Process

07/2018
SKILLS DEVELOPMENT IN COMPUTER AIDED ROBOTICS ADA PLM / Siemens

Robotic Simulation in Siemens Process Simulate [40 hrs]

12/2018
SKILLS DIVERSIFICATION IN INDUSTRIAL ROBOT PROGRAMMING COMAU Romania

Programming COMAU robots [2 days]

12/2017 – 02/2018
QUALIFICATION ON SMART SPECIALIZATION STRATEGY École Polytechnique Fédérale de Lausanne (EPFL), Switzerland (prof. D. Foray)

Certificate (with distinction) [5 weeks // 10 hrs/week]
Designing a Smart Specialisation Strategy

08/2016
SKILLS DIVERSIFICATION IN INNOVATION LIFE-CYCLE MANAGEMENT European Innovation Management Academy, Germany

Certificate Consultant innovation audit [2 days]
Innovation Life-cycle Management

11/2014
CONSULTANT INNOVATION AUDIT European Innovation Management Academy, Germany

Certificate [4 days]
Action Plan Development
IMP³rove Innovation Management Audit

2014
PROGRAMMER IN PYTHON University of Michigan, USA, prof. Charles Severance

Certificate (with distinction) [10 weeks]
Python programming

2014
IMPROVEMENT OF SKILLS IN COMPETITIVE STRATEGY On-line course authorized by Ludwig-Maximilians-Universität München, Germany, prof. Tobias Kretschm

Competitive strategy development [6 weeks]

2014
SKILLS DEVELOPMENT IN HUMAN-COMPUTER INTERACTION University of California at San Diego, USA, prof. Scott Klemmer

Certificate (with distinction) [9 weeks]
Human-Computer Interaction
On-line course authorized

2013
SKILLS ON DEVELOPING INNOVATIVE IDEAS FOR NEW COMPANIES University of Maryland – College Park, USA, Dr. James V. Green

Certificate (with distinction) [6 weeks]
Developing innovative ideas for new companies: the first step in entrepreneurship
On-line course authorized

02/2012 – 03/2013
PROFESSIONAL DEVELOPMENT ON BLENDED LEARNING Technical University of Cluj-Napoca, Romania

Blended-learning and modern educational technologies for higher education
Post-graduate training

08/2012
PROFESSIONAL COMPETENCIES ON ADVANCED ROBOT PROGRAMMING Kuka College Hungary

Certificate
Kuka Robot Programming

12/2011 – 05/2012
SKILLS ON MODEL THINKING University of Michigan – Ann Arbor, USA, prof. Scott E. Page

Certificate (with distinction) [10 weeks]
On-line course authorized

01/2012 – 05/2012
ADVANCED ENGLISH LANGUAGE London Chamber of Commerce and Industry International Qualifications EDI (ICCL)

International certificate JETSET Level 6 – CEF C1 (with distinction)

05/2012
PROFESSIONAL COMPETENCIES ON PROGRAMMING AND OPERATION OF FANUC ROBOTS Fanuc Robotics Europe

Fanuc certificate
Programming and operation of Fanuc robots

04/2012
PROFESSIONAL COMPETENCE ON HUMAN MACHINE INTERFACE (HMI) WITH WINCC FLEXIBLE Siemens Romania

Certificate of professional competence on Human Machine Interface (HMI) with WinCC flexible
According to Siemens curricula

03/2012
PROFESSIONAL COMPETENCIES ON SIEMENS PLC PROGRAMMING AND INDUSTRIAL AUTOMATION / STL PROGRAMMING Siemens Romania

Certificate of professional competencies on Siemens PLC programming and industrial automation / STL programming
According to Siemens curricula

02/2012
PROFESSIONAL COMPETENCIES ON SIEMENS PLC PROGRAMMING AND INDUSTRIAL AUTOMATION / LAD/FBD PROGRAMMING Siemens Romania

Certificate of professional competencies on Siemens PLC programming and industrial automation / LAD/FBD programming
According to Siemens curricula

03/2011
PROFESSIONAL COMPETENCIES ON KUKA ROBOT PROGRAMMING Kuka College Hungary

Certificate of professional competencies on Kuka robot programming
According to the Kuka College curricula

08/2010
PROFESSIONAL COMPETENCIES FOR EVALUATOR OF PROFESSIONAL COMPETENCIES IRCETT Cluj-Napoca

Certificate of professional competencies for the evaluator of professional competencies (CNFPA)
According to the occupational standard

06/2010
SKILLS ON INNOVATION AUDIT Enterprise Europe Network, Amsterdam, Holland

Certificate [2 days]
Innovation audit

05/2010
SKILLS ON ORGANIZING A BROKERAGE EVENT Chamber of Commerce Arkadia, Tripolis, Greece

Certificate [2 days]
Organizing a brokerage event

03/2010
SKILLS ON RESEARCH MANAGEMENT Ministry of Education, Research, Youth and Sport, Executive Unit for Financing Higher Education

Certificate
Research management

01/2010
PROFESSIONAL COMPETENCIES FOR PROJECT MANAGER Romarketing Oradea

Certificate of professional competencies for project manager (CNFPA)
According to the occupational standard

09/2009
PROFESSIONAL COMPETENCIES FOR TRAINER IRCETT Cluj-Napoca

Certificate of professional competencies for trainer (CNFPA)
According to the occupational standard

06/2009
SKILLS ON CREATIVITY AND LATERAL THINKING Enterprise Europe Network, St. Julian, Malta

Certificate [4 days]
Creativity and lateral thinking

03/2009
SKILLS ON SERVICES IN ICT APRE Italy

Certificate [2 days]
Services in ICT

07/2007
SKILLS IN WRITING RESEARCH PROJECTS IN THE EUROPEAN FRAMEWORK Hyperion Ltd., Ireland

Certificate

04/2005
ECONOMIC AND FINANCIAL ANALYSIS AND RISK ASSESSMENT Ministry of European Integration

Certificate [5 days]
Feasibility Study
Financial Plan
Economic Analysis
Risk Assessment

2001 – 2004
PROFESSIONAL DEVELOPMENT ON TECHNOLOGY TRANSFER British Council

Certificate [10 months]
Technology transfer

05/1999
SKILLS ON DESIGN FOR QUALITY University of Bologna, Italy

Certificate [5 days]
Design of Experiments (ANOVA, Taguchi)
Quality Function Deployment

INFORMAL EDUCATION

2002 – CURRENT
PROFESSIONAL DEVELOPMENT IN INDUSTRIAL ROBOT PROGRAMMING Self-training

Because of my professional career, since 2003 I prepared courses, labs for university students and for industry personnel in programming industrial robots. I also have been involved in industrial projects.
Personal development and study is about 5 hours/week.
Delivery is about 6 hours/week.
Since 2003: RAPID (programming language).
Since 2005: RobotStart (programming language).
Since 2010: KRL, INFORM, Karel, RPL. (programming languages).
Since 2003: Workspace (offline programming).
Since 2008: RobotStudio (offline programming).
Since 2016: RoboDK (offline programming).
Since 2018: UR Script / ACTIN (programming language).
Since 2016: ROS (robot operating system - framework).
Complementary: C, C#, Python (programming languages).

2011 – CURRENT
PROFESSIONAL DEVELOPMENT IN ARTIFICIAL INTELLIGENCE Self-training

Because of my professional career, since 2012 I prepared courses, labs for university students. Since 2014 I have started to apply AI in social robotics, and in research projects, too.
Personal development and study are about 6 hours/week.
Delivery is about 6 hours/week.
The supporting programming language is Python. The dedicated libraries I mostly use are TensorFlow, Keras, Numpy, Pandas, Open CV, SKLearn.

2016 – CURRENT
PROFESSIONAL DEVELOPMENT IN SOCIAL ROBOTICS Self-training

Personal study and development: 8 hours/week.
Robotic platforms: NAO, Pepper.
The main technologies involved are Python, Java, qi framework, QiChat.
Complementary technologies: ROS, C++.
Other technology: Choregraphe.
Focus: human-robot dialogue (expert systems), robot interaction with the external environment (ML models), smart navigation (SLAM).

1999 – CURRENT
PROFESSIONAL DEVELOPMENT IN INNOVATION MANAGEMENT AND ENGINEERING Self-training

Due to my professional career, I spend about 6 hours/week for study and documentation in this field. I also deliver courses for students and industry since 2006, about 4 hours/week, on average.

2008 – CURRENT
SPECIALIZATION IN PYTHON PROGRAMMING Self-training

Due to my professional career, I spent about 4 hours/week specializing in various libraries associated with Python. They are related to AR/VR environments, robot control, image processing, cybersecurity, blockchain and cryptography, offline robot programming, digital twins, graphic design, music, simulation.

OTHER SPECIALIZATIONS IN ROBOTICS AND AUTOMATION

2 weeks, 2005: Ajou University, Korea (cooperation project: Koica) :: robot programming
2 months, 2001: Research grant „Alexander von Humboldt" foundation; Fraunhofer IPA, Stuttgart, Germany :: service robotics
1998-2000: Research grant „Alexander von Humboldt" foundation; Fraunhofer IPA, Stuttgart, Germany :: service robotics
3 months, 1994: Univ. of Central Lancashire, UK (study grant) :: software development for 3D graphic modeling and simulation of robots

OTHER SPECIALIZATIONS IN QUALITY MANAGEMENT

4 weeks, 1997: Universität Stuttgart, Germany (cooperation project: Tempus) :: QFD method

OTHER SPECIALIZATIONS IN TECHNOLOGY TRANSFER

2 weeks, 2006: University Brighton, UK (cooperation project: Leonardo da Vinci) :: IP management
4 weeks, 2004: University Bournemouth, UK (cooperation project: World Bank) :: IP management

OTHER SPECIALIZATIONS IN PROJECT MANAGEMENT

4 weeks, 2004: Universität Stuttgart, Germany (cooperation project: Phare) :: project planning
4 weeks, 1999: University Bournemouth, UK (cooperation project: World Bank) :: project monitoring

LANGUAGE SKILLS

Mother tongue(s): **ROMANIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH [INTERNA-TIONAL CERTIFICATE JETSET LEVEL 6 – CEF C1 (WITH DISTINCTION)]	C1	C1	C1	C1	C1
GERMAN	A2	A2	A2	A2	A1
FRENCH	B1	B2	A2	B1	A2

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

DIGITAL SKILLS

Social networking

WhatsApp | Outlook | LinkedIn | MS Teams | Zoom | Facebook | Skype | Youtube | Gmail | Google Meeting | Twitter | Google Forms | Internet navigation

Soft skills

Good listener and communicator | Conflict resolution | Decision-making | Creativity | Strategic Planning | Analytical skills | Critical thinking | Reliability | Organizational and planning skills | Responsibility | Research and analytical skills | Good time management | Flexibility | Team-work oriented | Detail-Oriented | Problem-solving | Efficient multi-tasking | Cross cultural skills

Writing reports and multimedia clips

Microsoft Excel | Google Docs | Microsoft Powerpoint | Microsoft Word | Google Drive | Camtasia | Power Point

Project management

Priority matrix | MIRO | Confluence | MURAL | Joomla | JIRA | MS Project | GiHub | DEIP | Slack | Moodle

Operating systems

Windows | Linux (Ubuntu)

ADDITIONAL INFORMATION

COMMUNICATION AND INTERPERSONAL SKILLS

Communication skills Negotiation, Critical thinking, Mentoring, Presentations

HOBBIES AND INTERESTS

Karate: black belt 1 Dan (Certificate 255/20/06/07 World Union of Karate-do Federations) Shoto-Kan style

Digital Painting Performance: Generative painting, figurative painting, kinetic art
Study: Art movements in painting

History and culture of nations Books and internet documentation

COMPETENCES

Engineering of competitive design and technical innovation

- Methods for advanced planning, analysis, creativity, and innovation
- Engineering of competitive design and development
- Product and process innovation
- Artificial intelligence (NLP) for inventive design

Context: business consultancy, academic activities, specializations through research grants, and national & international training programs during 1993-2022.

Management

- Innovation management | Smart specialization | Product management | Design Thinking
- Strategic development | Business excellence | Open innovation | M&A | JV | Business innovation | Technology transfer
- Regional development | Economic competitiveness
- Cluster management | Cluster development | Network development | DIH development
- Quality management | Lean production
- Project management | Software project management | Agile/SCRUM
- Contract negotiation | Coaching | Mentoring
- Artificial Intelligence for business | Digital transformation

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Context: business consultancy, academic activities, specializations through research grants, and national & international training programs during 1993-2022.

Robotics

- Robot design
- Production robotization
- Programming languages of industrial robots
- Middleware software for robotics (ROS)
- Artificial Intelligence for robotics (ML/DL/evolutionary algorithms/vision/navigation)

Context: business consultancy, academic activities, specializations through research grants, and national & international training programs during 1993-2022.

APTITUDES

Programming languages for industrial robots

- RAPID // KRL // KAREL // PDL // RobotStar // INFORM // UR Script

Software for industrial automation

- STEP 7 Siemens (STL, LAD, FBD, WinCC flexible)

Programming languages

- C // C++ // C#
- Java // Processing // Android Studio
- Python [also with libraries for blockchain, cyber, web, image processing, graphics, GUI, simulation, evolutionary optimization, machine learning, music, robotics, mobile apps, etc.]
- NetLogo
- ROS for robotics
- Specialized modules for Artificial Neural Networks [TensorFlow, Keras, Pandas, Open CV, Numpy, SKLearn, etc.]

Specialized software tools for competitive design and innovation

- Qualica QFD // Rektron FMEA // Innovation Workbench //
- Ideation Failure Analysis // Knowledge Wizard // AIDA // TRISolve
- IQ Ideas // PatentInspiration

Specialized software tools for off-line robot programming and simulation

- Visual Components
- Process Simulate
- RobotStudio
- RoboDK

Web design and development

- Wordpress
- CSS // CSS3 // Java Script // HTML
- Joomla

HONOURS AND AWARDS

Honours
- Community Leader of The Year: Romanian Outsourcing Awards for Excellence 2016
- Special mention from Europe Direct for multiplier of European information, May, 2009
- Excellence prize „I.D. Lăzărescu" in scientific research of the Senate of the Technical University of Cluj-Napoca, Jan., 2008
- Honorary member of the N-W Regional Development Agency (awarded by the Regional Council) for special contributions to the strategic development of the region, May, 2005
- Diplomas and medals at salons of inventions in Romania: Gold medal (ProInvent 2009; ProInvent 2013; ProInvent 2014); Diploma of excellence (EuroInvent 2009; EuroInvent 2013); Silver medal (Inventika 2014)
- Merit award from the Senate of the Technical University of Cluj-Napoca for institutional development, Jan., 2007

Awards Romanian Academy Award „Traian Vuia" in technical sciences for the work „Fundamentals of Competitive Design in Robotics", Dec., 2006

SCIENTIFIC JOURNALS

Reviewer scientific journals

1. International Journal of Production Research; 2. The TQM Journal; 3. Quality Access to Success; 4. Journal of Engineering Design; 5. International Journal of Quality and Reliability Management; 6. Journal of Mechanical Science and Technology; 7. Romanian Journal of Technical Sciences of the Romanian Academy; 8. International Journal of Transition and Innovation Systems; 9. International Journal of Management and Economics; 10. IEEE Transactions on Industrial Electronics; 11. Journal of Mechanical Science and

Technology; 12. Machines 13. Sensors 14. Applied Sciences 15. Sustainability 16. International Journal of Architecture and Planning 17. Computation 18. Electronics 19. Metals 20. Future Internet

Member editorial board

1. „The TQM Journal"
2. „Quality Access to Success"
3. „Review of Management & Economic Engineering"
4. „Robotics and Mechanical Engineering"

CONFERENCES AND SEMINARS

Editor proceedings scientific conferences
   • Co-editor "Systematic Innovation Partnerships with Artificial Intelligence and Information Technology", Robert Nowak, Jerzy Chrząszcz, Stelian Brad (Eds.), IFIP Advances in Information and Communication Technology (IFIPAICT, volume 655), Springer ISBN 9783031172878, 3031172876, 2022
   • Co-editor "Creative Solutions for a Sustainable Development", Yuri Borgianni, Stelian Brad, Denis Cavallucci, Pavel Livotov (Eds.), IFIP Advances in Information and Communication Technology (IFIPAICT, volume 635), Springer, ISBN 9783030866136, 3030866130, 2021
   • Co-editor "Systematic Problem-Solving in the Age of Digitalization and Open Innovation", Denis Cavallucci, Stelian Brad, Pavel Livotov (Eds.), IFIP AITC 597, Springer, ISBN 978-3-030-61294-8, 2020
   • Co-editor Int. Conf. Interdisciplinary Research in Engineering: Steps towards Breakthrough Innovation for Sustainable Development, 2013, Cluj-Napoca
   • Co-editor Int. Conf. Quality and Innovation in Engineering and Management, 2011 ed., 2012 ed., Cluj-Napoca
   • Co-editor Int. Conf. Robotics, 2010, Cluj-Napoca

Organization of conferences
   • Scientific Chair - 21st edition of ETRIA „World Conference TRIZ Future 2021"
   • General Chair – 20th edition of ETRIA „World Conference TRIZ Future 2020" (Systematic Complex Problem-Solving in the Age of Digitalization and Open Innovation) (conference European TRIZ Association and International Federation for Information Processing)
   • Co-organizer international event „Cluj Innovation Days 2021" (Green Digital:: 800+ participants - online)
   • Co-organizer international event „Cluj Innovation Days 2017" (Digital Economy:: 400+ participants)
   • Co-organizer international event „Cluj Innovation Days 2016" (Towards the Digital Age in Medicine and Government:: 500+ participants)

Plenary Speaker
   • *Lean Robotics: from technology readiness to business readiness,* 3rd World Conference on Artificial Intelligence and Robotics, Saint Petersburg, Russia, 24-26 https://www.scientificfederation.com/robotics-artificial-intelligence/, June, 2021.
   • *Is Smart Specialization Reliable for Sustainable Growth in Peripheral Areas or How to Turn Lemon into Lemonade?*, at: The 6th Edition of the International Conference „Rural Space and Local Development: Peripheral Rural Areas between Certain Existence and Uncertain Development", Cluj-Napoca, July 2014.
   • *Functional and Strategic Aligned Clusters towards More United Economies and Sustainable Development*, European Cluster Days, European Parliament, Strasbourg, March 2015.
   • *Multilayer Innovation – A Key Driver towards a Rapid Growth of Economic Competitiveness: Challenges for Romania*, the Int. Conf. Quality, Innovation, and European Integration, QIEI, Sibiu, September 2008.
   • *Conflict-Driven Innovation for Smart Transformation of Public Universities,* 8th BRCEBE Int. Conference, Oct. 19-22, Sibiu, http://conferences.ulbsibiu.ro/brcebe/keynotes.php, 2017.

NETWORKS AND MEMBERSHIPS

Member of professional associations
   • Association of Science and Application of Artificial Intelligence (ASAIA) (president 2020+)
   • Romanian Society of Robotics (SRR) (member 1998-2018; president of the Cluj branch 2018+)
   • European TRIZ Association (ETRIA) (systematic innovation) (member 2012-2020; president 2020+)

Member of regional bodies
   • Regional Council for Innovation (2017+)
   • Regional Scientific Council for Smart Specialization Strategy (2016+)
   • Scientific Council (2012, 2013): regional development strategy 2014-2020 in the N-W region of Romania (smart specialization and business environment)
   • Regional Committee for Planning (N-W Region of Romania) 2021-2027
   • Coordination Council (2006): regional innovation strategy 2007-2013 in the N-W region of Romania

Member of national bodies
- Member Board National Council for Digital Transformation (2022+)
- Member RDI Strategy Romania 2021-2027 (rapporteur group Digitalization, Industry and Space (2021))
- Member National Council for Smart Specialization Strategy (rapporteur group Innovative Technologies) (2020+)
- Member WG AI of the Romanian Authority for Digitalization (2020+)
- Member National Council for Attestation of University Titles, Diplomas and Certificates / Industrial Engineering and Management Commission / Contestations (2017-2020)
- Member National Committee for Monitoring Regional Operational Plan 2014-2020, Romania (2015+)
- Member National Council for Innovation and Entrepreneurship (2016-2017)
- Member Romanian Association for Standardization / TC 383 for the elaboration of national standard „Innovation management systems"
- Member Romanian Association for Standardization / TC 397 for the elaboration of national standard „Infrastructures for smart communities"

Member of international bodies
- Member WG "Cybersecurity and Data" "JRC-European DIGITAL SME Alliance" (2021+)
- Member WG Artificial Intelligence „JRC-DIGITAL SME Alliance" (2020+)
- Member Advisory Council EEENIMAC (2020)
- Member Thematic Group Innovation (EASME, EC, Brussels) (2016+) EEN
- Member Thematic Group Scale-Up (EASME, EC, Brussels) (2018+) EEN
- Member Action Group 7 - Innovation (EASME, EC, Brussels) (2019-2020)
- Expert in the WG "Innovation and TT" EU Strategy of the Danube Region (2012)

VOLUNTEERING

Assistance for start-ups
- Mentor :: IoT Tribe - Spain (2020)
- Mentor :: Innovation Labs (2019)
- Mentor :: Cultureprenors (2019)
- Mentor :: Impact Hub Romania (2017)
- Mentor entrepreneurship (project Impact Factory) (2016) (Impact Hub Romania)
- Mentor :: project „Makeathon – re)imagine play" (Oct. 2016) (Impact Hub Romania)
- Trainer :: „Entrepreneurship in eHealth", University of Medicine and Pharmacy „Iuliu Hațieganu" Cluj-Napoca (2019+)
- Mentor :: business internationalization (2018)
- Jury :: CyberSec4Europe (2022)

Expert in various initiatives (selections)
- Expert 2021: Digitalization, Industry and Space in the context of elaboration of the National Strategy for Research, Innovation and Smart Specialization 2021-2027 Romania (Ministry of Research, Innovation and Digitalization)
- Coordinator (2020-2021): smart city strategy Alba-Iulia
- Coordinator 2019+: assistance for digitalization Cluj County Council
- Coordinator (2018-2019): digital transformation strategy Cluj County
- Coordinator (2016-2017): integrated informatization strategy for Oradea city 2016-2025
- Jury First Tech Challenge, Romania (2019, 2020, 2021)
- Expert foundation of the National Strategy for Smart Specialization 2021-2027 (Min. of Research and Education, Romania)
- Expert foundation Thematic Objective Digitalization 2021-2027 (Min. European Funds, Romania)
- Expert foundation Thematic Objective Broadband Connectivity 2021-2027(Min. European Funds, Romania)
- Expert / Scientific Committee (2015+): Smart specialization in the NW Region of Romania
- Consultant/expert (2013, 2014): project Cluj Innovation City
- Coordinator/consultant (2013, 2014): multi-sectoral development strategy of the Bistriţa-Năsăud county for 2014-2020; strategy implementation
- Expert Cluj-Napoca Municipality (2013): Cluj-Napoca development strategy 2014-2020 (IT sector)
- Expert for Ernst & Young (2011, 2012; 2013): entrepreneurship
- Consultant for Cluj County Council (2011, 2012, 2013): innovation strategies
- Panel coordinator and short-term expert (2009, 2010): the national strategic project „Quality & Leadership" for higher education
- Coordinator/consultant (2006): regional strategy on economic competitiveness 2007-2013 in the N-W region of Romania
- High-level expert (2006): national RDI strategy 2007-2013
- Coordinator/consultant (2003): multi-sectoral development strategy of the Bistriţa-Năsăud county for 2004-2010

• High-level expert (2001): regional strategy on human resource valorization N-W region of Romania
• 2011: Coordinator of the WG for the National Occupational Standard "Product Manager"

PUBLICATIONS

Scientific papers (synthesis)

254 scientific papers in journals and international conferences (including papers indexed in ISI Web of Science, ISI Web of Knowledge, Elsevier, Emerald, Scopus, Springer: e.g. International Journal of Production Research, International Journal of Environmental Technology and Management, CIRP Journal of Manufacturing Science and Technology, Journal of Solid State Phenomena, Journal of Applied Mechanics and Materials, International Journal of Quality & Reliability Management, Romanian Journal of Technical Sciences of the Romanian Academy, Journal of Advanced Engineering Forum, International Journal of Quality Assurance in Engineering and Technology Education, Procedia-CIRP, International Journal of Computer Integrated Manufacturing, Procedia - Social and Behavioral Sciences, Procedia – Economics and Finance, Advances in Environmental Sciences, Review of General Management, Gesundheits Kompass, International Journal of Social and Human Sciences, Robotica & Management, Automation Control and Computer Science, International Journal of Sustainable Economy, Economy Informatics, Amfiteatru Economic, International Journal of Management & Knowledge and Learning, International Journal of Transition and Innovation Systems, Amfiteatru Economic, International Journal of Management, Knowledge and Learning, Innovator, Business Model Management Journal, Sensors, Applied Sciences, Sustainability, Electronics, etc.).

Topics of papers: service robotics, autonomous mobile robots, industrial robotics, artificial intelligence, quality management, innovation engineering, the science of complexity, software project management, product design, smart technologies, economic cluster development, product-service systems, economic competitiveness, innovation management, technology transfer.

Books and book chapters (synthesis)

13 didactic books and book chapters, from which: 12 in national publishing houses (3 in English).

15 scientific books and book chapters, from which: 3 in national publishing houses (2 in English); 11 book chapters in international publishing houses (English); 1 book chapter in a national publishing house.

Topics of books: robotics, competitive engineering, innovation management, quality management, economic competitiveness.

Other publications
• Newsletter Academic Society of Management from Romania: 5 serials on economic competitiveness; 12 serials on economic clusters; 6 serials on smart specialization
• Today Software Magazine: 1 paper smart city; 1 paper agile software development
• Other materials in newspapers about smart city, eInvoicing, conflict resolution in organizations, etc.

PROJECTS

Research projects (synthesis) 94 research projects, from which: 7 in international competition as project director (including 2 FP7 projects and 4 H2020 projects); 7 in national competition as project director; 7 international projects as module coordinator; 5 international projects with industry as project director; 32 projects with companies from Romania as project director; 5 in national competition as scientific coordinator; 3 in national competition as senior researcher; 1 in international competition as senior researcher; 11 in national competition as researcher; 15 with companies from Romania as senior researcher.

Research projects include topics from: complexity management, robotics, design and optimization of technical systems, innovation management, innovation engineering, quality management, economic clusters, regional competitiveness, smart specialization, business excellence, management of complex processes, lean production.

Innovation projects (synthesis) 16 projects on innovation: 1 START (module manager); 7 COSME (project manager); 3 CIP (project manager); 1 CEEX (manager subcontract), 1 Leonardo da Vinci (partner coordinator); 1 Phare (project manager); 1 POC (innovation manager); 1 PN III (project manager)

Institutional development projects (synthesis) 21 projects on institutional development: 7 Structural Funds (project or module manager), 3 Phare (project manager or executive manager), 1 World Bank (project manager), 1 KOIKA Korea (executive manager), 5 Structural Funds (expert), 3 World Bank (expert); 1 project Urban Initiative Action.

Technology developed in university (software tools; smart technologies; patents) Software:
   • Software system "InnDrive eXXplorer" [innovation audit] (2016)
   • Software tool "ACV" [patent valuation] beta version (2014)
   • Software system "Market-IT" [product and process innovation] (2013)
   • Software tool "MaPE" [value assessment of new business ideas] (2012)
   • Software system „Tech-it-Easy" [product innovation] (2011)
   • Software tool „proCODE" [design management of complex products] (2008)
   • Software tool „INOVEX" [expert system for process innovation] (2007)
   • Software tool „SIMAC_1" [platform for research management] (2007)
   • Software tool „eQOST" [expert system for quality cost management] (2006)
   • Software tool „businesseXXplorer" [diagnosis of business excellence] (2005)
   • Software tool „CERT" [portal for technology transfer] (2003)

Patents:
   • 1 EPO patent; robotics (2005); 1 OSIM patent: smart technologies (2012)

Smart technologies:
   • Plug-and-play fast reconfigurable smart control system & smart devices [intelligent buildings; IoT; smart factory] (2013)

CREATIVE WORKS

Creative focus in scientific research In the present:
   • Reconfigurability, transformability, changeability, agility, lean, resilience, and disruption of systems
   • AI in industrial robotics, social robotics, and service robotics
   • Structured innovation of smart technical systems
   • Polycentric and open innovation
   • Complex systems and multi-dimensional dynamic optimization
   • Interdisciplinary design

In the past:
   • Competitive product design
   • Industrial robotics
   • Quality management
   • Innovation management
   • Product-service systems
   • Economic competitiveness
   • Innovative economic clusters
   • Intelligent production and I-IoT
   • Intellectual property
   • Software project management

Creative focus in innovation In the present:
   • Digital transformation
   • Smart specialization of lagging zones
   • AI-driven smart connected systems
   • AI-driven management
   • Integrated management of innovation-circularity-resilience-digitalization
   • Smart robotic platforms
   • Blockchain for open innovation

In the past:
   • Software innovation

OTHER INFORMATION

Current teaching courses: university courses for PhD students

Engineering: Competitive Engineering
Management: Entrepreneurship & Lean Start-Ups || Technology Transfer

Current teaching courses: university courses for MSc students

Engineering: Robot Programming Languages || Robotic Applications || Cognitive and Social Robotics || Machine Learning
Management: Engineering and Management of Innovation || Contract Negotiation

Current teaching courses: university courses for BSc students

Engineering: Python Programming in Robotics || Artificial Intelligence || Innovation Management in Product Design

Training portfolio: training for executives and technical staff

Engineering: Industrial Robot programming || Competitive Design of Complex Products || Problem-solving for engineers || Innovation engineering || Design thinking || Social robot programming and AI || Design for circular economy

Management: Strategic planning for public administration || Innovation and technology transfer || Entrepreneurship and entrepreneurial plan || Product management || Microeconomics of competitiveness || Smart specialization || Cluster development || Cluster management || Innovative problem solving for managers || Analysis and planning of the value chain || Business model innovation || Contract negotiation and management || Product manager || Innovation manager || Life-cycle management

Invited lecturer for academic courses

- February 2021: Universität Leipzig, Germany (topic: future of software innovation, in Interdisciplinary Discussion "Evolution of Technical and General Systems")
- June 2013: University of Novi Sad, Serbia (topic: smart specialization in high-tech)
- December 2012: HAMK University of Applied Sciences, Finland (topic: innovation techniques in engineering)
- October 2007: Academy of Economic Studies from Bucharest (topic: innovation and technology transfer)
- November 2005: Academy of Economic Studies from Bucharest (topic: advanced methods in process improvement)
- June 1999: University Bologna (topic: quality planning methods – QFD)

Erasmus programme

- Ben Gurion University of Beer Sheva, Israel: robotics
- Peter the Great St. Petersburg Polytechnic University, Russia Federation: robotics

Invited speaker or trainer in seminars, workshops, TV [non-academic]

Over 50 interventions between 2012-2021 (national and international)
- Artificial intelligence, cybersecurity, digital transformation, digital skills, future in software development, advanced digital technologies, smart cities, smart mobility
- Industry 4.0, IoT, lean robotics
- Innovation management, open innovation, social innovation, design thinking, business model innovation, technology transfer, patent valuation, agile development, technological start-ups in the medical sector, interregional cooperation, joint ventures, polycentric innovations, life-cycle management, shared value creation, cluster management
- Economic development, smart specialization, economic competitiveness

Results in institutional development

2020: Co-founder Association for Science and Application of Artificial Intelligence (ASAIA)
2020: Design of the „Machine Learning & Automation" Lab (industry 4.0, collaborative robotics, social robotics, smart systems, AR/VR, ML) within the Center for Creative Industries from Cluj-Napoca [with the financial support of Cluj Municipality and UIA]
2018: Co-founder Digital Innovation Hub (Centre for Digital Innovation) in Cluj IT
2012: Co-founder Cluj IT cluster
2006: Co-founder of the MetNet network: 20 universities and 30 companies from Europe [currently no more functional]
Contributions to the development of research and training labs, centers, and platforms at the Technical University of Cluj-Napoca:
- 2021: Laboratory for Automation in Industry
- 2010-2011: Laboratory for Intelligent Industrial Robotic Systems
- 2006-2008: Research and Training Platform on Innovative Production
- 2005: Centre for Innovative Manufacturing
- 2004-2007: Laboratory for Industrial Robotic Systems
- 2003: Laboratory for Engineering and Management of Innovation
- 2003: Regional Network of Technology Transfer in Modern Methods of Design and Manufacturing
- 2001: Research and Consultancy Centre in Competitive Development
- 1999: Laboratory for Industrial Design

Development of study programs

- 2019-2020: Coordinator study programs „Technologies for Industry 4.0" and „Technologies for Creative Engineering" within Cluj IT cluster
- 2013-2016: Director of the study program for executives "Competitiveness and Innovation: Firms, Clusters, and Economic Development" at the Technical University of Cluj-Napoca [in affiliation with the Harvard Business School, Micro-economics of Competitiveness program (prof. M. Porter)]
- 2012: Director of the international training program „Innovative Problem Solving for SMEs"
- 2008+: Program director Robotics (BSc/MSc) at the Tech. University of Cluj-Napoca
- 2006-2009: Director of the post-graduate study program on "Product Manager" at the Technical University of Cluj-Napoca
- 2001-2009: Director of the post-graduate study program on „Software Project Management" at the Technical University of Cluj-Napoca
- 2014: Co-founder of the program „Youth in the Digital Age" (TERALOGIC) to train high school students in smart technologies and IoT

Consultant for industry

Digitalization, digital transformation and smart cities: 2015, 2016, 2017, 2018, 2019, 2020: smart city and smart territory projects for public administration; digitalization audits for companies

Industrial robotics: 2016, 2017, 2018, 2019, 2020: training on robot programming

Industrial robotics: 2007-2018: 13 trainings and consultancy on robot programming and robot application development

Innovation management: 2014-2019: 160 companies trained in innovation management and product management; 1 company – consultancy to implement innovation management system CEN TS 16555; 4 consultancy projects in innovative software product development (innovation audit, HR audit for innovation, early consolidation of specifications, software quality planning, patenting plan and documentation, entrepreneurial plan, SWOT/RS, competitiveness analysis and strategy for competitive advantage, business model, price policy and right price, marketing plan, sales plan, financial plan on real options, LC risk analysis and management, creativity and innovative problem solving); 3 projects on smart technologies for environment and agri-food

Project management: 1998-2018: 46 consultancy services

Quality management: 2002-2006: 4 consultancy services on ISO 9001 certification (2 in IT; 1 in financial services; 1 in industrial production)

Business plans and feasibility studies: 2000-2018: 43 consultancy services; evaluator 50+ business plans; 10+ business plans assisted

Circular economy: 2018: 1 extended consultancy [blue economy, principles of circular economy, biomimicry, regenerative design]

Business internationalization: 2017-2020 - 6 projects

Miscellaneous

- Member of the Senate of the Technical University of Cluj-Napoca (2015-current)
- Supporter and promoter of some initiatives for „Smart Cities" and "Smart Territory"
- Facilitating the award of the title of Doctor Honoris Causa by the Technical University of Cluj-Napoca to Professor Nachum Finger, from Ben Gurion University in Israel - and the pole of start-ups in cybersecurity worldwide (rector of this higher education institution in its period of accelerated development)
- Facilitating the award of the title of Doctor Honoris Causa by the Technical University of Cluj-Napoca to Professor Dominique Foray, from EPFL in Switzerland (creator of the concept of smart specialization, widely used in the EU for innovation policies)
- Facilitating the award of the title of Doctor Honoris Causa by the Technical University of Cluj-Napoca to Professor Daniela Rus, from MIT, SUA (director AI and Computer Science Lab, MIT)
- Consultant for local elections (2004, 2016, 2020) – strategy, program, negotiation, and communication