



**Curriculum vitae
Europass**



Personal information

Family Name / Name **Brad Emilia**

Addresses   

Phones  

Fax - 

E-mails 

Nationality 

Date of birth 

Gender 

Work place / Occupational field **Technical University of Cluj-Napoca
Scientific research and education activities**

Professional experience

Period October 2013 –present

Position or job title held Associate Professor [Department of Design Engineering and Robotics]
Main activities and responsibilities Teaching Activities: Flexible Manufacturing Systems; Design-oriented Manufacturing Systems; Eco/Ergo-Design; Machines, Manufacturing Equipment, and Industrial Logistics
Scientific Research: Reconfigurable Manufacturing Systems and Equipment; Robotics in Manufacturing; Product Design Engineering; Innovation Management
Supervision of Bachelor's Projects: Flexible Manufacturing Systems; Robotics in Manufacturing; Service Robots (over 80 BSc projects)
Supervision of Master's Dissertations: Robotics (over 20 MSc projects)
Employer's name and address Technical University of Cluj-Napoca, Memorandumului 28, 400114, Cluj-Napoca, Romania
Type of activity or sector of industry Higher Education

Period October 2005 –September 2013

Position or job title held Senior Lecturer [Department of Design Engineering and Robotics]
Main activities and responsibilities Teaching Activities: Flexible Manufacturing Systems; Technical Creativity
Scientific Research: Flexible Manufacturing Systems; Reconfigurable Manufacturing Systems and Equipment; Robotics in Manufacturing
Supervision of Bachelor's Projects: Flexible Manufacturing Systems; Robotics in Manufacturing (over 20 BSc projects)
Employer's name and address Technical University of Cluj-Napoca, Memorandumului 28, 400114, Cluj-Napoca, Romania
Type of activity or sector of industry Higher Education



Period	October 2000 – September 2005
Position or job title held	Assistant Professor [Department of Design Engineering and Robotics]
Main activities and responsibilities	Teaching: Flexible Manufacturing Systems Scientific Research: Flexible Manufacturing Systems; Reconfigurable Manufacturing Systems and Equipment
Employer's name and address	Technical University of Cluj-Napoca, Memorandumului 28, 400114, Cluj-Napoca, Romania
Type of activity or sector of industry	Higher Education

Period	June 1997 –September 2000
Position or job title held	Research Engineer [Scientific Research Center for Scientific Research, Technology Transfer, and Innovation]
Main activities and responsibilities	Research Management
Employer's name and address	Technical University of Cluj-Napoca, 15 Ctin Daicoviciu, 400020, Cluj-Napoca, Romania
Type of activity or sector of industry	Higher Education

Studies & Degrees

Period	2020-2022
Qualification / Degree obtained	Dr. habil. (Doctor Habilitatus)
Main subjects studied / Professional competencies acquired	Industrial Engineering & Management [Habilitation Thesis: Reconfigurability as a supporting function in the fourth industrial revolution: from the strategic to the operational approach]
Name and type of educational institution / training provider	Technical University of Cluj-Napoca
Level in national or international classification	Posdoc

Period	2001-2010
Qualification / Degree obtained	PhD in Engineering (Cum Laude)
Main subjects studied / Professional competencies acquired	Industrial Engineering [Thesis: Reconfigurable Manufacturing Systems]
Name and type of educational institution / training provider	Technical University of Cluj-Napoca
Level in national or international classification	Higher Education Studies

Period	1998-1999
Qualification / Degree obtained	Advanced Studies
Main subjects studied / Professional competencies acquired	Quality Engineering; Quality Management
Name and type of educational institution / training provider	Technical University of Cluj-Napoca
Level in national or international classification	Higher Education Studies

Period	1992-1996
Qualification / Degree obtained	Engineer (Machinery and Production Equipment)
Main subjects studied / Professional competencies acquired	Design of Machinery and Production Equipment, Industrial Robot Design
Name and type of educational institution / training provider	Technical University of Cluj-Napoca
Level in national or international classification	Higher Education Studies



Training

Period	October-November 2021 [4 days / 8 hrs/day]
Qualification / Degree obtained	Certificate
Main subjects studied / Professional competencies acquired	Visual Components (Digital Production)
Name and type of educational institution / training provider	Visual Technologies / Visual Components
Level in national or international classification	Advanced Training Course
Period	July 2018 [5 days / 8 hrs/day]
Qualification / Degree obtained	Certificate
Main subjects studied / Professional competencies acquired	Robotic Simulation in Siemens Process Simulate
Name and type of educational institution / training provider	ADA PLM / Siemens
Level in national or international classification	Advanced Training Course
Period	May 2012 (4 days)
Qualification / Degree obtained	Certificate of Attendance
Main subjects studied / Professional competencies acquired	Fanuc Robot Programming and Operation
Name and type of educational institution / training provider	Fanuc Robotics Europe
Level in national or international classification	Advanced Training Course
Period	April 2012 (3 weeks)
Qualification / Degree obtained	Certificate of Completion
Main subjects studied / Professional competencies acquired	Human Machine Interface (HMI) Design with WinCC Flexible
Name and type of educational institution / training provider	Siemens Romania
Level in national or international classification	Advanced Training Course
Period	March 2012 (3 weeks)
Qualification / Degree obtained	Certificate of Completion
Main subjects studied / Professional competencies acquired	STL Programming for PLCs and Industrial Automation
Name and type of educational institution / training provider	Siemens Romania
Level in national or international classification	Advanced Training Course
Period	February 2012 (3 weeks)
Qualification / Degree obtained	Certificate of Completion
Main subjects studied / Professional competencies acquired	LAD/FBD Programming for PLCs and Industrial Automation
Name and type of educational institution / training provider	Siemens Romania
Level in national or international classification	Advanced Training Course
Period	1996



Qualification / Degree obtained
 Main subjects studied / Professional
 competencies acquired
 Name and type of educational
 institution / training provider
 Level in national or international
 classification

Certificate of Completion
 Pedagogical Training
 Technical University of Cluj-Napoca
 Advanced Training Course

Foreign languages

English

European level (*)

Language

Understanding		Speaking		Writing	
Listening		Reading		Participating in conversation	
Oral expression		Written expression			
B2		B2		B2	

(*) Level of the Common European Framework of Reference for Languages

DIDACTIC ACTIVITY

**PROFESSIONAL
 EXPERIENCE**

Laboratory works and project

Flexible Manufacturing Systems (BSc)
 Eco-ergo Design (MSc)
 Design-oriented Manufacturing Systems (MSc)
 Machines, Manufacturing Equipment, and Industrial Logistics (BSc)

Course

Flexible Manufacturing Systems (BSc)
 Eco-ergo Design (MSc)
 Design-oriented Manufacturing Systems (MSc)
 Machines, Manufacturing Equipment, and Industrial Logistics (BSc)

SCIENTIFIC ACTIVITY

RESEARCH THEMES

Innovation engineering and management, flexible manufacturing systems, reconfigurable manufacturing systems:

- 3 books as sole author
- 1 book as first author
- 4 books as co-author
- 62 scientific papers (35 in journals; 27 in international conferences)
- 12 research grants in national competition as a member
- 5 international research projects as a member
- 2 FP7 research grants as module leader
- 10 research projects (national) as a member
- 3 research projects (national) as project director
- 1 COSME innovation project (international) as a member
- 1 COSME innovation project (international) as project director
- 1 COSME innovation project (international) as project director
- 5 institutional development projects as a member

Journals where I have published:

International Journal of Production Research, International Journal of Environmental Technology and Management, Environmental Engineering and Management Journal, Journal of Applied Mechanics and Materials, Procedia-CIRP, International Journal of Sustainable Economy, Economy Informatics, International Journal of Transition and Innovation Systems, Amfiteatru Economic, International Journal of Management, Knowledge and Learning, Sustainability, Applied Sciences

Guest Editor:

World Conference TRIZ Future 2020, ACTA TECHNICA NAPOCENSIS - Series: APPLIED MATHEMATICS, MECHANICS, and ENGINEERING, [S.I.], v. 63, n. 3S, nov. 2020. ISSN 2393-2988.



INTERNATIONAL COOPERATION

2000 (2 weeks exchange program): Universitaet Stuttgart, Germany: IFF Institute, technology transfer and innovation
2004 (1 month exchange program): Fraunhofer IPA Stuttgart, Germany: robotics
2022 (1 month exchange program): Fraunhofer IAO Stuttgart, Germany: industry 4.0

PUBLICATIONS

(5 REPRESENTATIVE WORKS
PUBLISHED FROM 2005-2023)

63 scientific papers, including 36 in specialized journals and 27 in the proceedings of international conferences:

1. Brad, E., Popescu, S., Design Principles of Reconfigurable Manufacturing Equipments, Acta Technica Napocensis, Series: Applied Mathematics and Mechanics, ISSN 1221-5872, 53(3): 19-24, 2010.
2. Brad, E., Brad, S., Design for Reconfiguration of Production Equipments, Proceedings of the 6th International Scientific Conference on Production Engineering (Development and Modernization of Production), RIM2007, Bihac, Bosnia-Herzegovina, ISBN 978-9958-9262-1-1, pg. 59-64, 2007.
3. Brad, E., Performance Evaluation Indicators of Organizational Processes in the Context of Quality Management Systems, Quality Life AS, SCOPUS, ISSN 1582-2559, vol. 12, no. 4, pg. 7-12, 2011. (The original Romanian title: Indicatori de Evaluare a Eficacității Proceselor Organizaționale în Contextul Sistemelor de Management al Calității)
4. Brad, E., Brad, S., Algorithm for Designing Reconfigurable Equipment to Enable Industry 4.0 and Circular Economy-Driven Manufacturing Systems. Applied Sciences. 2021, 11, 4446.
5. Brad, E., Brad, S. Requirements Analysis in Disruptive Engineering Solutions Using the Paradigm of Living Systems. Appl. Sci. 2021, 11, 9854.

GRANTS, RESEARCH CONTRACTS

(TOTAL OF WHICH 5
REPRESENTATIVE CONTRACTS
FROM 2005-2023)

36 grants, research contracts as a member, director or module leader, including:

1. Brad, E. (director), Fulea, M., Mocan, B., et al., Optimization of an automated manufacturing line for construction materials, Contract no. 1735 / 22.10.2012, Beneficiary SC Indemanarea Procom Bistrita, 2012-2013.
2. Brad, E. (director), Chiș. I., Stan, A., et al. COSME Project: BISNet Transylvania, code 831296, Funder: European Commission, 2020.
3. Brad, E. (director), Brad, S., Crăciun, Ș., Innovation management system in accordance with SR CEN TS 16555, no. 72 / 28.12.2018, Beneficiary: PRODIMA, 2018-2019.
4. Brad, S., Brad, E., (module leader), Fulea M., Chioreanu, A., Mocan, B., IT Tool to Support SMEs in Systematic Innovation, Based on Consolidated Methodology and Innovation Knowledge Domain Structured through Specific Ontologies, Acronym: TECH-IT-EASY, FP7 project, Call SME-2008-1, Code: 232410, 2009-2011.
5. Brad, S., Brad, E., (module leader), Fulea M., Mocan, B., Demonstrating the Industrial Validity and Market Feasibility of IT Tool to Support SMEs in Systematic Innovation Processes, Acronym: MARKET-IT, FP7 Project, Call FP7-SME-2011, 2012-2014.

GRANTS, INSTITUTIONAL PROJECTS

(TOTAL OF 3 REPRESENTATIVE
CONTRACTS FROM 2003-2023)

5 institutional development projects as a member, including:

1. Structural Funds Project (ESF, POSDRU): International Master's in robotics adaptable to the labor market, code: 28382, 2010-2012, role: Assistant project manager.
2. Phare Project: "Training Program for Product Managers in 'Engineering and Innovation Management': A Support Tool for Companies in the Region to Address the Challenges Generated by Romania's Accession to the European Union", code: 03PH 010B, implemented at the University of Cluj-Napoca during 2005-2006, role: Member
3. Phare Project: "Virtual Regional Center for Training and Technological Transfer in Modern Design and Manufacturing Methods", code: 00PH1671, carried out during 2003-2004 at the Technical University of Cluj-Napoca, role: Member.

Date and place,

Cluj-Napoca, June 2023

Signature,

Emilia Brad



Appendix with research and innovation projects

1. Brad, E. Chiş. I., Stan, A., et al. COSME Project: BISNet Transylvania, code 831296, Financier: European Commission, Technical University of Cluj-Napoca, 2019 (director) (COSME) (24248 EURO)
2. Brad, E. Chiş. I., Stan, A., et al. COSME Project: BISNet Transylvania, code 880115, Financier: European Commission, 2021 (director) (COSME) (63858 EURO)
3. Brad, S., Brad, E., Fulea M., Chioreanu, A., Mocan, B., IT Tool to Support SMEs in Systematic Innovation, Based on Consolidated Methodology and Innovation Knowledge Domain Structured through Specific Ontologies, Acronym: TECH-IT-EASY, FP7 project, Call SME-2008-1, Code: 232410, 2009-2011 (manager) (FP7) (217798 EURO)
4. Brad, S., Brad, E., Fulea M., Mocan, B., Demonstrating the Industrial Validity and Market Feasibility of IT Tool to Support SMEs in Systematic Innovation Processes, Acronym: MARKET-IT, FP7 Project, Call SME-2011, Code: 311517, 12012-2014 (manager) (FP7) (40049 EURO)
5. Brad, E. Mocan, B., Fulea, M., Brad, S., Redesign the Robotic Fences for Fast Installation, financier: CSi Industries B.V. Holland, Grant Agreement no. 28343/10.11.2015, 2015-2016. (director) (industry) (7290 EURO)
6. Brad, E. Chiş. I., Stan, A., et al. COSME Project: BISNet Transylvania, code 101052723, Financier: European Commission, 2022. (director) (COSME) (230000 EURO)
7. Brad, E. Fulea, M., Mocan, B., et al., Optimization of an automated manufacturing line for building materials, Contract no. 1735 / 22.10.2012, Beneficiary SC Îndemânarea Procom Bistriţa, 2012-2013 (director) (industry) (40000 LEI)
8. Brad, E., et al., Innovation management system in compliance with SR CEN TS 16555, no. 72/ 28.12.2018, Beneficiary: PRODIMA, 2018-2019 (director) (industry) (53550 LEI)
9. Brad, S., Brad, E. et al. Elaboration of the development strategy for Bistriţa-Năsăud county for the period 2014-2020, Contract no. 212/15.11.2012, Beneficiary County Council Bistriţa-Năsăud, 2013 (manager) (industry) (79968 LEI)
10. Brad, S., Brad, E., et al., Concept, design, execution, experimental testing and optimization of a smart and networked equipment for sublimation of benzoic acid from the resins of Styrax plant, no. 2366/28.01.2020, beneficiary: Plantextrakt, Cluj-Napoca, 2020-2021 (manager) (industry) (74440 LEI)
11. Ciupan, C., ..., Brad, E., ..., Design of a water-abrasive jet cutting machine with a pressure amplifier included in the cutting head, Contract No. 33385/2004, Topic 16/877, Beneficiary: CNCSIS, 2004 (member)
12. Brad, S., Brad, E., et al., e_QOST: Innovative information system for monitoring, controlling and planning costs related to quality, Code 5402, PNCDI-CALIST, 2004-2006 (member)
13. Brad, S., Brad, E., et al., Advanced tools for managing the complexity of the concept/synthesis process of radically innovative products, Contract type A, Topic A3, Code 1285, Beneficiary CNCSIS, 2006-2007 (member)
14. Brad, S., Brad, E., et al., Improving Quality Performance within Cooperative Processes in SMEs through Expert Systems in Engineering and Innovation Management, acronym INOVEX, Contract CEEX II No. 140/02.10.2006, ANCS, Code. 628, 2006-2008 (member)
15. Berce, P., Brad, S., Popescu, S., ... Brad, E., et al. Integrated Research and Training Platform for Innovative Production: The Factory of the Future. Research platform, funder: MEC/CNCSIS, 2006-2008 (member)
16. Fulea, M., Brad, S., Mocan, B., Brad, E., et al. Integrated Innovation Management Systems for SMEs, acronym: InnDrive, funder: ANCS, Code: PN-II-PT-PCCA-2013-4-1319, (Integrated Innovation Management System for SMEs - innDrive, PCCA/341/2014), 2014-2017 (member)
17. Brad, S. Brad, E., et al., Development of a sustainable development strategy for Bistrita-Nasaud county on competitive principles, Contract 32/21.05.2002, Beneficiary CCIA Bistrita, 2002 (member)
18. Brad, S. Brad, E., et al., Development of an efficient model for evaluating organizational excellence in the case of SMEs from the region in order to estimate their potential to develop sustainable businesses at the European level, Contract 2/A.E.C.E. / 12.09.2002, Beneficiary CCIA Bistrita, 2002 (member)
19. Brad, S. Brad, E., et al., Competitive design of a personalized software platform for cost management related to the performance of business system processes at SC ChimComplex SA Borzesti, No. 125/02.12.2004, Beneficiary SC ChimComplex SA Borzesti, 2004-2006 (member)
20. Brad, S., Brad, E., et al., Analysis services and technical support in the digitization of the operation monitoring of the Integrated Waste Management Center (No. 44804) as of 29.12.2020, Beneficiary: CJ Cluj, 2021 (member)
21. Brad, S., Brad, E., et al., Increasing Quality Performance within Cooperative Processes in SMEs through Expert Systems in Innovation Engineering and Management, acronym INOVEX, CEEX II Contract no. 140/02.10.2006, ANCS, Code. 628, 2006-2008 (member)
22. Berce, P., Brad, S., Popescu, S., ... Brad, E., et al., Integrated Research and Training Platform for Innovative Production: The Factory of the Future. Research platform, funded by MEC/CNCSIS, 2006-2008 (member)
23. Fulea, M., Brad, S., Mocan, B., Brad, E., et al., Integrated Innovation Management Systems for SMEs, acronym: InnDrive, funded by ANCS, Code: PN-II-PT-PCCA-2013-4-1319, 2014-2017 (member)
24. Brad, S. Brad, E., et al., Competitive Principle-Based Development Strategy for Bistrita-Nasaud County, Contract 32/21.05.2002, Beneficiary CCIA Bistrita, 2002 (member)
25. Brad, S. Brad, E., et al., Development of an Efficient Evaluation Model for Organizational Excellence in the Case of SMEs from the Region to Estimate Their Potential to Develop Sustainable Business at the European Level, Contract 2/A.E.C.E. / 12.09.2002, Beneficiary CCIA Bistrita, 2002 (member)
26. Brad, S. Brad, E., et al., Competitive Design of a Custom Software Platform for Cost Management Related to Business System Performance Processes at SC ChimComplex SA Borzesti, no. 125/02.12.2004, Beneficiary SC ChimComplex SA Borzesti, 2004-2006 (member)
27. Feniser, C., Brad, E., et al., Improving the Performance of Key Production Processes within Nova Grup through "Lean" Management and Production Organization Methods, Beneficiary: Nova Grup, 57/27.01.2016, 2016-2019 (member)



28. Brad, S., Brad, E., et al., Analysis Services and Technical Support in the Digitization of Monitoring the Operation of the Integrated Waste Management Center (no. 44804) as of 29.12.2020, Beneficiary: CJ Cluj, 2021 (member)
29. Brad, S., Brad, E., Crăciun, S., Voluntary Certification of the ROLA 108 V Product, code: 24204/ 13.09.2019. Beneficiary: PRODIMA, Bistrita, 2019 (member)
30. Brad, S., Brad, E., et al., Design and Optimization of Underground Waste Collection Platform, no. 6135/08.03.2019, Sky Park Systems SRL, Cluj-Napoca, 2019 (member)
31. Brad, S., Brad, E., et al., Integrated Strategy for Informatization and Digital Transformation of the Bistrița Municipality Town Hall, 144/L/28.09.2022, Cluj IT, Beneficiary: Bistrita City Hall. 2022-2023. (member)
32. Brad, S., Brad, E., Digital Innovation Diagnosis Associated with the Implementation of an Innovation Management System, DTC/02/VPL-A date 25.01.2022, Beneficiary: DATACOR, 2022. (member)
33. Brad, S., Brad, E., et al., Concept, Design and Implementation of a Semi-Autonomous Robotic System in the Context of Applying Innovative Methods for Harvesting Lavender and Adaptability of Crops, no. 6651/08.03.2022, Beneficiary: GAL Porolisum, 2022-2023. (member)
34. Brad, S., Brad, E., et al., Smart City Strategy for Alba-Iulia Municipality, SMIS code 128599, no. 76160/04.08.2020, Beneficiary: Alba-Iulia City Hall, 2020-2022. (member)
35. Brad, S., Brad, E., Audit and ISO 56002:2019 Certification for Innovation Management System, DTC/01/VPL-ISO56002 date 25.01.2022, Beneficiary: DATACOR, 2022. (member)
36. Paulina, M., Brad, E., et al., "Computational Models Based on Big Data and Predictive Data Analysis for Optimizing and Automating the Distribution of Insurance Products through the 24Broker.ro Platform", Financing Contract no. 378 / 390054, MySMIS code 121104 - POC Project, Priority Axis 1; Research, technological development and innovation (RDI) in support of economic competitiveness and business development, Investment Priority: P11b, Specific Objective: 1.3, Action 1.2.1., Beneficiary: Life-is-Hard., 2022-2023. (member)

