

# Curriculum Vitae



Curriculum vitae  
Europass



## Personal information

Name **Stelian BRAD**

**Workplace / Occupational area** **Technical University of Cluj-Napoca**  
*Full professor: Teaching, Scientific Research, Training, Consultancy and Management Tasks*  
**Cluj IT Cluster**  
*President of the Board of Directors: Leadership, Internationalization, Strategic Development, Networking*

## Professional experience

### **Specific activities as member of the academic staff in university**

Period	October 2008-current
Position	Full professor [Chair in: Robot Programming & Intelligent Robotics; Engineering and Management of Innovation]
Main tasks and responsibilities	<u>Teaching activities:</u> MSc courses [Engineering] Robot programming languages, Robotic applications, Advanced tools for planning and innovation [Management] Engineering and management of innovation BSc courses [Engineering] Introduction to robotics Supervision of BSc final degree projects: Robotics Supervision of MSc final degree projects: Robotics, Innovation management, Lean six sigma <u>Research activities:</u> [Engineering] Engineering of innovation [methods, tools], Collaborative intelligent robotic systems, Smart technologies for Industry 4.0, Agriculture 4.0 and 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 behaviour and entrepreneurship optimization, Technology transfer, Smart specialization and regional development, Resilient economy and social economy
Name and address of the employer	Technical University of Cluj-Napoca, Memorandumului 28, 400114 Cluj-Napoca, Romania
Type of activity or sector	Higher education and research
Period	October 2004-September 2008
Position	Associate professor (reader)
Main tasks and responsibilities	<u>Teaching activities:</u> BSc courses [Engineering] Manufacturing robotization, Competitive development of robotic systems, Design for competitiveness <u>Research activities:</u> [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
Name and address of the employer	Technical University of Cluj-Napoca, Memorandumului 28, 400114 Cluj-Napoca, Romania
Type of activity or sector	Higher education and research

Period: October 2000 –September 2004  
 Position: Senior lecturer  
 Main tasks and responsibilities: 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  
 Name and address of the employer: Technical University of Cluj-Napoca, Memorandumului 28, 400114 Cluj-Napoca, Romania  
 Type of activity or sector: Higher education and research

Period: March 1998-September 2000  
 Position: Assistant professor  
 Main tasks and responsibilities: Teaching activities: BSc courses [Engineering] Manufacturing robotization, Robot design  
Research activities: [Engineering] Service robots [Management] Quality management  
 Name and address of the employer: Technical University of Cluj-Napoca, Memorandumului 28, 400114 Cluj-Napoca, Romania  
 Type of activity or sector: Higher education and research

Period: March 2006-February 1998  
 Position: Junior assistant  
 Main tasks and responsibilities: Teaching activities: BSc courses [Engineering] Robot design  
Research activities: [Engineering] Robotic engineering, Design optimization, Robot modelling and simulation  
 Name and address of the employer: Technical University of Cluj-Napoca, Memorandumului 28, 400114 Cluj-Napoca, Romania  
 Type of activity or sector: Higher education and research

#### **Coordination and management of research and innovation**

Period: June 2009 - current  
 PhD coordinator/scientific supervisor: "Engineering and Management"  
 10 PhD graduates; 13 PhD students; 3 post-doc graduates  
 Areas: Innovation Management; Intelligent Robotics

Period: February 2001 - current  
 Director: Research Centre for "Engineering and Management of Innovation" (RESIN)  
 Vectors of interest: Smart Environments and IoT; Competitiveness & Innovation Design; Competitiveness & Innovation Management

Period: October 2008 – May 2012  
 Director: Department for Research, Development and Innovation Management of the Technical University of Cluj-Napoca

Period: April 2008 – September 2008  
 Director: Office for Assistance and Consultancy in Project Management of Structural Funds of the Technical University of Cluj-Napoca

Period: October 2004 – March 2008  
 Director: Technology Transfer Office of the Technical University of Cluj-Napoca

Period: June 2002 – September 2004  
 Deputy director: Department of Research Management and Technology Transfer of the Technical University of Cluj-Napoca

Period: January 1997 – May 2002  
 Technology transfer counsellor: Department of Research Management and Technology Transfer of the Technical University of Cluj-Napoca

#### **Academic management**

Period: March 2008 - current  
 Coordinator: Robotics specialization (BSc, MSc)

Period: May 2012 – December 2013  
 Deputy Rector (Vice-Rector): Technical University of Cluj-Napoca (responsibility :: University Management, Master and Doctoral Studies)

**Entrepreneurship and management in the private sector**

Period	January 2016 – current Member Administration Council: Bihor Industrial Parks
Period	January 2016 – December 2016 President: Balkan and Black Sea ICT Clusters Network (20+ ICT clusters from 8 countries)
Period	July 2015 – current President: Cluj IT Cluster (40+ IT companies; 5 universities; 1 research institute; 9 catalyst organizations)
Period	November 2012 – July 2015 Member Board of Directors: Cluj IT economic cluster Coordinator: Innovation Work Group Cluj IT economic cluster
Period	June 2009 – current Member of the Advisory Board: Sport Club "Politehnica" Cluj-Napoca
Period	April 2014 – current Vice-president: Romanian Association for Knowledge Transfer (address: Romanian-American University, Bdul Expozitiei, Bucharest)
Period	December 2003 – January 2009 Co-founder and CEO: ArtSoft Consult (IT company – software development :: customers in 15 countries); 100+ projects [2003-2009]
Period	July 2001-November 2003 Founder and Administrator: Vplus (research and consultancy company in business innovation)
Period	June 2000- June 2001 Executive & Research Director: abaXX Technology Romania (branch of abaXX Technology Germany; IT company – software development)

**Education and training****Studies**

Period	October 2003-July 2011
Qualification / Certificate	PhD diploma
Main disciplines / professional competencies	Economics (topic :: micro-economics of competitiveness and innovation)
Name and title of the institution / training provider	Academy of Economic Sciences Bucharest, Romania
National and international classification	PhD studies
Period	October 1995-January 2000
Qualification / Certificate	PhD diploma (Magna Cum Laude)
Main disciplines / professional competencies	Robotics (topic :: competitive design of robotic systems)
Name and title of the institution / training provider	Technical University of Cluj-Napoca (in co-tutelage Stuttgart Universität, Germany)
National and international classification	PhD studies
Period	September 1994-March 1996
Qualification / Certificate	MSc diploma (honorary degree)
Main disciplines / professional competencies	Energy management
Name and title of the institution / training provider	International Technological University Paris, Division of Engineering and Technology of the Secretariat of UNESCO
National and international classification	MSc studies
Period	September 1988-June 1994
Qualification / Certificate	BSc diploma (honorary degree)
Main disciplines / professional competencies	Engineering design of production systems
Name and title of the institution / training provider	Technical University of Cluj-Napoca, Romania
National and international classification	BSc studies
Period	September 1987-July 1988
Qualification / Certificate	Sergeant
Main disciplines / professional competencies	Military service in infantry
Name and title of the institution / training provider	Academy of Terrestrial Forces "Nicolae Bălcescu" Sibiu, Romania
National and international classification	Infantry

Period September 1984-June 1987  
 Qualification / Certificate Baccalaureate diploma (honorary degree)  
 Main disciplines / professional competencies Mathematics-physics  
 Name and title of the institution / training provider Huedin, "Octavian Goga" High School, Romania  
 National and international classification Secondary studies

**Training (continuous education)**

Period November 2014 (2 days)  
 Qualification / Certificate Consultant innovation audit  
 Main disciplines / professional competencies IMP<sup>3</sup>rove Innovation Management Audit  
 Name and title of the institution / training provider European Innovation Management Academy, Germany  
 National and international classification Continuous education

Period October 2014 – December 2014  
 Qualification / Certificate Certificate (with distinction)  
 Main disciplines / professional competencies Programming for Everybody:: Python  
 Name and title of the institution / training provider Curs on-line autorizat University of Michigan, SUA, prof. Charles Severance, Coursera platform // 10 weeks // 6 h/week  
 National and international classification Continuous education

Period August 2014 – September 2014  
 Qualification / Certificate No certificate  
 Main disciplines / professional competencies Competitive Strategy  
 Name and title of the institution / training provider On-line course authorized by Ludwig-Maximilians-Universität München, Germany, prof. Tobias Kretschmer, Coursera platform // 6 weeks // 3 h/week  
 National and international classification Continuous education

Period July 2014 – August 2014  
 Qualification / Certificate Certificate (with distinction)  
 Main disciplines / professional competencies Human-Computer Interaction  
 Name and title of the institution / training provider On-line course authorized by University of California at San Diego, USA, prof. Scott Klemmer, Coursera platform // 9 weeks // 12 h/week  
 National and international classification Continuous education

Period September 2013 - November 2013  
 Qualification / Certificate Certificate (with distinction)  
 Main disciplines / professional competencies Developing innovative ideas for new companies: the first step in entrepreneurship  
 Name and title of the institution / training provider On-line course authorized by University of Maryland – College Park, USA, Dr. James V. Green, Coursera platform // 6 weeks // 7 h/week  
 National and international classification Continuous education

Period March 2012 - March 2013  
 Qualification / Certificate Certificate  
 Main disciplines / professional competencies Blended-learning and modern educational technologies for higher education  
 Name and title of the institution / training provider Technical University of Cluj-Napoca, Romania  
 National and international classification Post-graduate training and continuous education program

Period August 2012  
 Qualification / Certificate Certificate of professional competencies on advanced robot programming  
 Main disciplines / professional competencies According to the Kuka College curricula  
 Name and title of the institution / training provider Kuka College Hungary, Branch Timișoara  
 National and international classification Continuous education

Period January 2012 - May 2012  
 Qualification / Certificate Certificate (with distinction)  
 Main disciplines / professional competencies Model Thinking  
 Name and title of the institution / training provider On-line course authorized by University of Michigan – Ann Arbor, USA, prof. Scott E. Page; Coursera platform // 10 weeks // 8 h/week  
 National and international classification Continuous education

Period February - May 2012  
 Qualification / Certificate International certificate JETSET Level 6 – CEF C1 (with distinction)  
 Main disciplines / professional competencies Advanced English language  
 Name and title of the institution / training provider London Chamber of Commerce and Industry International Qualifications EDI (ICCL)  
 National and international classification Continuous education

Period May 2012  
 Qualification / Certificate Fanuc certificate  
 Main disciplines / professional competencies Programming and operation of Fanuc robots

Name and title of the institution / training provider	Fanuc Robotics Europe
National and international classification	Continuous education
Period	April 2012
Qualification / Certificate	Certificate of professional competence on Human Machine Interface (HMI) with WinCC flexible
Main disciplines / professional competencies	According to Siemens curricula
Name and title of the institution / training provider	Siemens Romania
National and international classification	Continuous education
Period	March 2012
Qualification / Certificate	Certificate of professional competencies on Siemens PLC programming and industrial automation / STL programming
Main disciplines / professional competencies	According to Siemens curricula
Name and title of the institution / training provider	Siemens Romania
National and international classification	Continuous education
Period	February 2012
Qualification / Certificate	Certificate of professional competencies on Siemens PLC programming and industrial automation / LAD/FBD programming
Main disciplines / professional competencies	According to Siemens curricula
Name and title of the institution / training provider	Siemens Romania
National and international classification	Continuous education
Period	March 2011
Qualification / Certificate	Certificate of professional competencies on Kuka robot programming
Main disciplines / professional competencies	According to the Kuka College curricula
Name and title of the institution / training provider	Kuka College Hungary, Branch Timișoara
National and international classification	Continuous education
Period	August 2010
Qualification / Certificate	Certificate of professional competencies for evaluator of professional competencies (CNFPA)
Main disciplines / professional competencies	According to the occupational standard
Name and title of the institution / training provider	IRCETT Cluj-Napoca
National and international classification	Continuous education
Period	June 2010
Qualification / Certificate	Certificate
Main disciplines / professional competencies	Innovation audit
Name and title of the institution / training provider	Enterprise Europe Network, Amsterdam, Holland
National and international classification	Continuous education
Period	May 2010
Qualification / Certificate	Certificate
Main disciplines / professional competencies	Organizing a brokerage event
Name and title of the institution / training provider	Chamber of Commerce Arkadia, Tripolis, Greece
National and international classification	Continuous education
Period	March 2010
Qualification / Certificate	Certificate
Main disciplines / professional competencies	Research management
Name and title of the institution / training provider	Ministry of Education, Research, Youth and Sport, Executive Unit for Financing Higher Education and University Scientific Research
National and international classification	Continuous education
Period	January 2010
Qualification / Certificate	Certificate of professional competencies for project manager (CNFPA)
Main disciplines / professional competencies	According to the occupational standard
Name and title of the institution / training provider	Romarketing Oradea
National and international classification	Continuous education
Period	September 2009
Qualification / Certificate	Certificate of professional competencies for trainer (CNFPA)
Main disciplines / professional competencies	According to the occupational standard
Name and title of the institution / training provider	IRCETT Cluj-Napoca
National and international classification	Continuous education

Period: June 2009 (4 days)  
 Qualification / Certificate: Certificate  
 Main disciplines / professional competencies: Creativity and lateral thinking  
 Name and title of the institution / training provider: Enterprise Europe Network, St. Julian, Malta  
 National and international classification: Continuous education

Period: April 2009 (2 days)  
 Qualification / Certificate: Certificate  
 Main disciplines / professional competencies: Services in ICT  
 Name and title of the institution / training provider: APRE Italy  
 National and international classification: Continuous education

Period: July 2007 (1 day)  
 Qualification / Certificate: Certificate  
 Main disciplines / professional competencies: Project management in FP7  
 Name and title of the institution / training provider: Hyperion Ltd., Ireland  
 National and international classification: Continuous education

Period: April 2005 (5 days)  
 Qualification / Certificate: Certificate  
 Main disciplines / professional competencies: Economic and financial analysis and risk assessment  
 Name and title of the institution / training provider: Ministry of European Integration  
 National and international classification: Continuous education

Period: 2002-2004 (10 mths cumulated)  
 Qualification / Certificate: Certificate  
 Main disciplines / professional competencies: Technology transfer  
 Name and title of the institution / training provider: British Council  
 National and international classification: Continuous education

Period: May 1999  
 Qualification / Certificate: Certificate  
 Main disciplines / professional competencies: Design for quality  
 Name and title of the institution / training provider: University of Bologna, Italy  
 National and international classification: Continuous education

**Other specializations in robotics and automation (no certificate)**

2 weeks in 2005 Ajou University, Korea (cooperation project: Koica) :: robot programming  
 2 months in 2001 Research grant „Alexander von Humboldt“ foundation;  
 Fraunhofer IPA, Stuttgart, Germany :: service robotics  
 10 months during 1998-2000 Research grant „Alexander von Humboldt“ foundation;  
 Fraunhofer IPA, Stuttgart, Germany :: service robotics  
 3 months in 1994 Univ. of Central Lancashire, Anglia (study grant) :: software development for robots

**Other specializations in quality management (no certificate)**

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

**Other specializations in technology transfer (no certificate)**

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

**Other specializations in project management (no certificate)**

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

**Personal aptitudes and competencies**

Mother language: Romanian

**Foreign languages**

Self-assessment European level (*)	Understanding		Speaking		Writing
	Listening	Reading	Conversation	Oral discourse	Written expression
Language: English	C1	C1	C1	C1	C1
Language: German	A2	A2	A2	A2	A2

(\*) Common European Framework of Reference for Foreign Languages

## Competences and aptitudes

### Competences

#### Engineering of competitive design and Innovation

- Advanced planning, analysis, creativity and innovation methods
- Engineering of competitive design and development
- Product and process innovation

#### Management

- Quality management // Lean six sigma // Business excellence
- Project management and software project management
- Business innovation // Technology transfer // Innovation management
- Strategic development
- Regional development // Economic competitiveness
- Product management
- Cluster development // Smart specialization

#### Robotics

- Robot design
- Production robotization
- Programming languages of industrial robots
- Programming languages applicable in robotics (ROS)

**Context:** academic activities, specializations through research grants and national/international training programs during 1993-2016.

### Aptitudes

#### Industrial robot programming

- ABB // Kuka // Fanuc // Motoman // RobotStar

#### Software for industrial automation

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

#### Programming languages

- C // C++ // C# // Processing 2 // Python // NetLogo // ROS

#### Specialized software tools in competitive design and innovation

- Qualica QFD // Rekrtron FMEA // Innovation Workbench //
- Ideation Failure Analysis // Knowledge Wizard

#### Specialized software tools in management

- MS Project // SPSS

#### Specialized software tools in computer aided robotics

- Workspace // RobotStudio // SimPro // RobotGuide

**Context:** research projects, institutional development projects, consultancy projects during 1996-2016.

## Other competencies and aptitudes

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

## Supplementary information

### Current teaching tasks: university courses for MSc students

Engineering and management of innovation  
Advanced techniques for planning and innovation  
Robot programming languages  
Robotic applications

### Current training tasks: training for executives

#### Engineering

Industrial robot programming  
Competitive design of complex products  
Innovative problem solving for engineers  
Innovation engineering

## Management

Innovation and technology transfer  
Entrepreneurship and entrepreneurial plan  
Product management  
Microeconomics of competitiveness  
Smart specialization and cluster development  
Innovative problem solving for managers

## Invited lecturer for academic courses

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)

## Invited speaker or trainer in seminars, workshops

### Selections from the recent years

Romanian Outsourcing Summit 2016 :: March 2016, Bucharest, Romania (Outsourcing-ul in IT between the captive business model and entrepreneurial business model) [speaker]  
Seminar Management of operational processes within public institutions in Romania :: March 2016, Cluj-Napoca, Romania (Innovation in the public sector) [speaker]  
Conference TYPO3 East Europe :: November 2015, Cluj-Napoca, Romania (Directed evolution of software systems in the turbulent IT world) [speaker]  
Seminar EC JRC :: October 2015, Vilnius, Lithuania (Effective implementation of regional innovation strategies for smart specialization) [speaker]  
Seminar National Chamber of Experts in Intellectual Property :: September 2015, Cluj-Napoca, Romania (Market value valuation of patents) [speaker]  
Seminar LTCOR :: June 2015, Dej, Romania (Social economy and circular economy) [speaker]  
Cluster National Conference :: June 2015, Cluj-Napoca, Romania (Brained City) [speaker]  
IT Congress 2015 :: May 2015, Timisoara, Romania (Smart City – an integrated approach in the context of public sector-university-IT companies collaboration) [speaker]  
European Parliament, European Cluster Days :: March 2015, Strasbourg, France (functional and strategic aligned economic clusters) [speaker]  
EASME, European Commission :: March 2015, Brussels, Belgium (methodologies to assess innovation needs of SMEs) [speaker/trainer]  
EEN training program :: June 18-19 2014, Cluj-Napoca, Romania (early assessment of market value for innovative business; patent and patentable technology valuation) [trainer]  
Cluj Innovation Days :: March 2014, Cluj-Napoca, Romania (innovation challenges for IT businesses in the forthcoming business environment) [speaker]  
European Development Platform :: November 2013, Brussels, Belgium (strategic aligned clusters) [speaker]  
TEDx Cluj :: October 2013, Cluj-Napoca, Romania (humanity construction in a complex world) [speaker]  
Biz-Tech :: October 2013, Oradea, Romania (smart innovation) [speaker]  
Health and Tourism :: September 2013, Sângeorz Băi, Romania (management of economic clusters) [speaker]  
eSTART :: July 2013, Cluj-Napoca, Romania (ICT to increase course quality) [speaker]  
Appostila :: June 2013, Novi Sad, Serbia (smart specialization) [trainer]  
Cluster PoliSEE :: April 2013, Ancona, Italy (smart specialization) [trainer]  
Cluj IT Days :: March 2013, Cluj-Napoca, Romania (approaching business angels) [speaker]  
INTERIN :: February 2013, Cluj-Napoca, Romania (spin-off development, assessing innovative businesses, license negotiation) [trainer]  
Club of Entrepreneurs :: April 2012, Tg.-Mureș, Romania (entrepreneurial plan) [trainer]  
Club of Entrepreneurs :: January 2012, Cluj-Napoca, Romania (entrepreneurial plan) [trainer]  
EEN decentralized training program :: May 2012, Cluj-Napoca, Romania (innovative problem solving in SMEs) [trainer]



Smart+ :: February 2012, Cluj-Napoca, Romania (cooperation university-industry on innovation and technology transfer:: keys to success) [s p e a k e r]

#### **Major research interests**

##### **2016 PRIORITIES IN SCIENTIFIC RESEARCH**

###### **Economics / Management**

- Competitiveness, resilience and smart specialization in peripheral zones
- Resilient development, polycentric innovation and optimization of innovative economic clusters in emerging economies
- Understanding entrepreneurial behaviour, lean entrepreneurship and resilient business networks in emerging economies

###### **Engineering / Robotics**

- Disruptive and reverse innovation in smart technologies for industrial robotics and Internet of Things

##### **FIELDS OF INTEREST IN RESEARCH**

###### **Fundamental research**

###### General applicability in engineering and management

- Tools for complex system planning, design and innovation
- Understanding of complex system behaviour and evolution
- Optimal design with evolutionary algorithms
- AI algorithms

###### Micro-economics and business management

- Understanding and management of complex business processes
- Understanding of entrepreneurial behaviour and entrepreneurship optimization

###### Meso/Macro-economics

- New economic models (resilient economy)
- Competitiveness, prosperity, allocation, distribution and stabilization

###### Engineering design

- Sustainable product-service systems

###### **Applied research**

###### Business intelligence

- Web-based software tools for knowledge and innovation management
- Web-based software tools for technical innovation
- Valuation of patents, intangible assets, business ideas and patentable technologies

###### Smart production

- Intelligent industrial robotics and production robotization
- Reconfigurable, plug-and-play units and control systems for industrial applications
- Smart technologies for industrial applications and Internet of Things (IoT)

###### Smart growth

- Smart specialization strategies and regional development (with a special focus on competitiveness and innovation)
- Economic cluster development and optimization

###### Software engineering

- Intuitiveness and usability in software product design

#### **Results in scientific research**

**160+ 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, International Journal of Transition and Innovation Systems, etc.).

**23 books**, from which: 10 books in national publishing houses (5 in English); 6 contributions to books with research content in international publishing houses; 7 contributions to books with teaching content as co-author.

**85+ research projects**, from which: 6 in national competition as project director; 15 in international competition as project director or module coordinator (including 2 FP7 projects); 33 with companies from Romania as project director; 15 with companies from

Romania as senior researcher; 2 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 senior researcher.

**Other contributions:** Newsletter Romanian Management Academic Society: 5 episodes about economic competitiveness; 12 episodes about economic clusters; 12 episodes about smart specialization.

**Scientific papers include topics** from: service robotics, industrial robotics, quality management, innovation engineering, innovation management, complexity science, software project management, product design, smart technologies, cluster development, product-service systems, and economic competitiveness.

**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.

#### **Technology developed in university (software tools; smart technologies; patents)**

##### **Software:**

- Software system "InnDrive" [Innovation management system] in progress (2015)
- 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:**

- 2 EPO patents: robotics (2005); smart technologies (2012)

##### **Smart technologies:**

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

#### **Results in institutional development**

2014-2015: Innovation manager in the project "Innovative Development through Informatization of the Urban Eco-system of Cluj-Napoca: Next Generation Brained City", Cluj IT Cluster

2013+: 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+: Expert in the WG "Innovation and TT" EU Strategy of the Danube Region

2012: Co-founder Cluj IT cluster

2012: Director of the international training program „Innovative Problem Solving for SMEs"

2011: Coordinator of the WG for the National Occupational Standard "Product Manager"

2008+: Program director Robotics (BSc/MSc) at the Tech. University of Cluj-Napoca

2006: Co-founder of the MetNet network: currently it includes 20 universities and 30 companies from Europe.

2006+: Director of the post-graduate study program on "Product Manager" at the Technical University of Cluj-Napoca.

2001+: Director of the post-graduate study program on „Software Project Management" at the Technical University of Cluj-Napoca.

Contributions at the development of research and training labs, centres and platforms at the Technical University of Cluj-Napoca:

1. 2010-2011: Laboratory for Intelligent Industrial Robotic Systems;
2. 2006-2008: Research and Training Platform on Innovative Production;
3. 2005: Centre for Innovative Manufacturing;
4. 2004-2007: Laboratory for Industrial Robotic Systems;
5. 2003: Laboratory for Engineering and Management of Innovation;
6. 2003: Regional Network of Technology Transfer in Modern Methods of Design and

- Manufacturing;
7. 2001: Research and Consultancy Centre in Competitive Development;
  8. 1999: Laboratory for Industrial Design.

**26 projects of institutional development**, from which:

- 1998-2014: 16 as project manager, executive coordinator or module coordinator (Phare, World Bank, KOICA, CIP, SF HRD, SF EC, etc.);
- 1999-2013: 9 as member, short term or long term expert (World Bank, SF HRD, LdV).

**Experience as consultant**

**Industrial robotics:** 2007-2014: 11 trainings and consultancy on robot programming and robot application development

**Innovation management:** 2014+: 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)

**Project management:** 1998-2005: 45 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:** 2000-2014: 42 consultancy services

**Regional development:** 2001-2014+ selections:

- Member National Council for Monitoring of Regional Operational Plan 2014-2020, Romania
- Expert (2015+): Smart specialization in the NW Region of Romania
- Coordinator (2016): integrated informatization strategy for Oradea city
- Coordinator/consultant (2013, 2014): multi-sectoral development strategy of the Bistrița-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;
- Member of the Scientific Council (2012, 2013): regional development strategy 2014-2020 in the N-W region of Romania (smart specialization and business environment);
- 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;
- Member of the Coordination Council (2006): regional innovation strategy 2007-2013 in the N-W region of Romania;
- Coordinator/consultant (2003): multi-sectoral development strategy of the Bistrița-Năsăud county for 2004-2010;
- High level expert (2001): regional strategy on human resource valorisation N-W region of Romania.

**Prizes, distinctions**

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

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;

Merit award from the Senate of the Technical University of Cluj-Napoca for institutional development, Jan., 2007;

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 Invention in Romania: Gold medal (ProInvent 2009; ProInvent 2013; ProInvent 2014); Diploma of excellence (EuroInvent 2009; EuroInvent 2013); Silver medal (Inventika 2014)

**Reviewer scientific journals**

International Journal of Production Research; The TQM Journal; Quality Access to Success; Journal of Engineering Design; International Journal of Quality and Reliability

Management; Journal of Mechanical Science and Technology; Romanian Journal of Technical Sciences of the Romanian Academy; International Journal of Transition and Innovation Systems

**Editor proceedings scientific conferences**

- 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

**Other aspects**

- Member Romanian Association for Standardization / TC 383 for the elaboration of national standard „Innovation management systems, Requirements”
- Organizer of the international event „Cluj Innovation Days 2016” (Towards the Digital Age in Medicine and Government :: 500+ participants)
- Member of the Senate of the Technical University of Cluj-Napoca
- Co-founder of the program „Youth in the Digital Age” (TERALOGIC) to train high school students in smart technologies and IoT
- Supporter and promoter of some initiatives for „Smart Cities”
- Coordinator of the Romanian Occupational standard “Product Manager”

**Member of professional associations**

Romanian Society of Robotics (SRR)  
European TRIZ Association (ETRIA)

30.04.16

Stelian Brad