



Europass Curriculum Vitae



Personal information

First name(s) / Surname(s) **CĂLIN / VAIDA**

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Nationality Romanian

Date of birth March, 1, 1980

Gender male

Occupational field **EDUCATION AND RESEARCH**

Work experience

Dates	2014-present
Occupation or position held	Associate Professor at the Technical University of Cluj-Napoca, Faculty of Machine Building, Department of Engineering of Mechanical Systems Researcher within Research Center for Industrial Robots Simulation and Testing - CESTER
Main activities and responsibilities	Teaching activities in robotics, computer programming, Research activities in Robotics and mechatronics, Advanced CAD/CAM and simulation techniques, Kinematics and dynamics of parallel robots, Medical robots (oncology), Simulators for medicine
Name and address of employer	Technical University of Cluj-Napoca, Memorandumului, 28, RO-400114 Cluj-Napoca, Romania, www.utcluj.ro CESTER: www.cester.utcluj.ro
Type of business or sector	Education and research
Dates	2009-2014
Occupation or position held	Lecturer at the Technical University of Cluj-Napoca, Faculty of Machine Building, Department of Engineering of Mechanical Systems Researcher within Research Center for Industrial Robots Simulation and Testing - CESTER
Main activities and responsibilities	Teaching activities in computer programming Research activities in Robotics and mechatronics, Advanced CAD/CAM and simulation techniques, Kinematics and dynamics of parallel robots, Medical robots (surgery)
Name and address of employer	Technical University of Cluj-Napoca, Memorandumului, 28, RO-400114 Cluj-Napoca, Romania, www.utcluj.ro CESTER: www.cester.utcluj.ro
Type of business or sector	Education and research
Dates	January – June 2004
Occupation or position held	Scientific researcher at the Friedrich Alexander Erlangen Nuremberg University, within the department of Quality Management and Manufacturing Metrology, prof. Albert Weckenmann.

Computer skills and competences	<p>Programming: Matlab ,C, C++, Visual Basic, CAD/CAM: Siemens package: Solid Edge – Velocity Series , NX, AutoCAD Office tools: MS Office, Corel DRAW, Latex Automation: B&R Automation Studio Engineering tools: Qualica QFD Easily adapts to new technologies/software</p>
Artistic skills and competences	Fishing, swimming, guitar
Other skills, competences and diplomas	<p>2011 - Diploma of graduation of a course in industrial automations (1 month), at B&R Automation, Eggelsberg, Austria</p> <p>2010 – Diploma of graduation in Siemens NX CAD/CAM modules</p>
Driving licence	Driving licence category B since 2000
Additional information	<p>Scientific activity (entire career)</p> <p>Published books: 3 Published papers in ISI journals, SCI journals, national and international conferences and congresses: over 90 Member in national and international research grants: over 20 Research grants coordinator: 5 Co-Editor: 1 Pisla D. Bleuler H., Rodic A., Vaida C., Pisla A.(eds): <i>New Trends in Medical and Service Robots</i>, Springer, 2014, 238 pp.</p>
Publications	<p>Papers published in ISI and BDI journals and at international and national conferences (10 relevant publications)</p> <ol style="list-style-type: none"> Vaida, C., Pisla, D., Schadlbauer, J., Husty, M., Plitea, N.: "Kinematic Analysis of an Innovative Medical Parallel Robot using Study Parameters", 4th Int. Workshop on Medical and Service Robots, MESROB 2015, Nantes, 8-10 July, 2015 Pisla, A., Pisla, D., Cocorean, D., Vaida, C. "A SIMULATED ENVIRONMENT FOR THE ISS DOCKING PROCEDURE", 13th Symposium on Advanced Space Technologies in Robotics and Automation, European Space Agency, ESA/ESTEC Noordwijk, the Netherlands, 11-13 May, 2015 Pisla A., Vaida C., Pisla D., A systematic overview of the IOS – Instructor Operation Station designed for space applications, ICPR -2014 International Conference on Production Research – Africa, Europe and Middle East, 1-5 July 2014, Cluj-Napoca, Romania Vaida, C., Gherman, B., Pisla, D., Plitea, N., A CT-Scan compatible robotic device for needle placement in medical applications, (2013) In <i>Advanced Engineering Forum</i>, Trans Tech Publications, pp. 574-583, DOI 10.4028/www.scientific.net/AEF.8-9.574 Vaida C., Plitea N., Cocorean D., Pisla D.: "Modeling of new spatial parallel structures with constant platform orientation using planar parallel modules", <i>Proceedings of the Romanian Academy - series A: Mathematics, Physics, Technical Sciences, Information Science</i>. Vaida, C., Plitea, N., Pisla, D., Gherman, B.: „Orientation module for surgical instruments—a systematical approach”, <i>Meccanica</i> (IF: 1.558), Vol. 48(1), pp. 145-158, 2013, published online in 13 august 2012, DOI 10.1007/s11012-012-9590-x. Pisla, D., Gherman, B., Vaida, C. (c.a.), Suci, M., Plitea, N.: "An active hybrid parallel robot for minimally invasive surgery", <i>Robotics and Computer-Integrated Manufacturing</i>, 2013, 29 (4), 203-221, 10.1016/j.rcim.2012.12.004 Pisla, D., Gherman, B., Vaida, C., Plitea, N.: „Kinematic modeling of a 5 DOF Parallel Hybrid Robot designed for Laparoscopic Surgery”, <i>Robotica</i>, Cambridge University Press, 2012, 30 (07), 1095-1107, DOI: 10.1017/S0263574711001299 Vaida, C., Pisla, D., Plitea, N., Gherman, B., <i>Development of a Voice Control Surgical robot</i>, <i>New Trends in Mechanism Science. Analysis and Design</i>, pp. 567-574, 2010. Vaida, C., et. al. <i>Development of a Control System for a Parallel Robot used in Minimally Invasive Surgery</i>, <i>Int. Conf. on Advancements of Medicine and Health Care through Technology IFMBE Proceedings</i>, 2009, Volume 26, 171-176, DOI: 10.1007/978-3-642-04292-8_38.

Invited lecturer

1. *Development of New Parallel Robots for Minimally Invasive surgery*, within the international workshop organized within the framework of the Humboldt foundation, by the Technical Universities of Cluj-Napoca (Romania) and Braunschweig (Germany), Cluj-Napoca, Romania
2. *Testing Capacity for Space Technology Suppliers*, within the 2nd International Exploratory Workshop New Trends in Medical and Service Robots, Belgrade, Serbia
3. *Development of new parallel robots for minimally invasive surgery*, Within the International Workshop on Laparoscopic Liver Surgery, 2008, Cluj-Napoca

Awards

Scientific Creativity award, within the seminar "Technological Development in a Sustainable Economy", Iasi, Romania, April 2011 with the paper **Design and Analysis of an Orientation Module for Instruments Used In Minimally Invasive Procedures**

Several Gold Medals within International Invention Workshops: Inventika 2010, ProInvent 2010-2014, EuroInvent 2012, Inventica 2014

The **Special Prize of OSIM** (Romanian State Office for Inventions and Trademarks) for the patent **Surgical Robot**, no. RO 126271, Iasi, 2014
http://www.osim.ro/despre_noi/comunicate_relpres.php

The **Special Prize of the Ministry of National Education** for the patent Parallel robot for brachytherapy with two kinematic chains of CYL-U type for platform (needle) guidance, Inventika 2014

TUCN Excellence Award for scientific research, publishing activity, international visibility and funds raised, 2014

International Research projects (excerpt)

1. Manipulation Systems for Sample Handling in a Sample Receiving Facility, TASUK/16/11305/NBO/1424, ESA European Space Agency, Position: Technical responsible, Duration: 2016-2018
2. Development of innovative kinematic and dynamic models for parallel robots in surgical applications - PROINS, International Grant, 2011-2013, Registration Nr.: 12547/31.05.2012, Position: member
3. Simulation and control techniques for robots used in minimally invasive surgery – SIMCOSURG, International Grant, 2011-2013, Registration Nr.: 12546/31.05.2012, Position: Coordinator
4. Creative Alliance in Research and Education focused on Medical and Service Robotics, IZ74Z0_13736, Scopes International IP Grant, Prof. Univ. Dr.-Ing. Doina, Pîsla 2011-2014, http://www.snf.ch/SiteCollectionDocuments/int_sco_pro_romania0912.pdf Position: Member
5. Mathematische Modellierung und experimentelle Untersuchungen eines modular aufgebauten Parallelroboters in der minimal invasiven Chirurgie – *Mathematical modeling and experimental researches for the development of a modular parallel robot for minimally invasive surgery*. Duration: 2006-2011, Financed by: Alexander von Humboldt Foundation, Position: Member

National Research Grants (excerpt)

1. *A multi-purpose needle insertion device for the diagnosis and treatment of cancer (ACCURATE)*, National grant PN-II, code PN-II-RU-TE- 2014-4-0992, Contract number: 59 /2015, Duration: 2015-2017, Position: Coordinator
2. *Diagnosis and therapy system for spine disorders (SPINE)*, National Grant PCCA, Project No: PN-II-PCCA-2013-4-1596, Director: Conf. dr-ing. Silviu Butnariu (Transilvania University, Braşov) 2014-2016, Position: Partner Responsible
3. *Robotic assisted prostate biopsy, a high accuracy innovative method (ROBOCORE)*, National grant: PCCA, Project No: PN-II-PT-PCCA-2013-4-0467, Director: Prof. Univ. Dr.-Ing. Doina PISLA, 2014-2016, Position: Key member
4. IOS – Instructor Operation Station, STAR 95/2014, financed by Romanian Space Agency, 2014-2015, Director: Prof. Univ. Dr.-Ing Adrian PISLA, Position: Key member
5. *Robotic assisted brachytherapy, an innovative approach of inoperable cancers (CHANCE)*, National grant: PCCA, Project Nr.: PN-II-PT-PCCA-2011-3.2-0414, Director: Prof. Univ. Dr.-Ing.

- Nicolae PLITEA, 2012-2015, Position: Key member
6. *New Trends in Medical and Service Robots*, Exploratory workshop, Project Code PN-II-ID-WE-2012-4-018, 2012, Position: Coordinator
 7. MMKR 2012- International Summer School on Models and Methods in Kinematics and Robotics, Project Code: PN-II-ID-SSA-2012-2-001, 2012, Position: Member
 8. *Excellence doctoral scholarship awarded by the National Council of Scientific Research*, Duration 2006 – 2008, Financed by: National Council of Scientific Research in Higher Education – BD, Position: Director
 9. *Research Projects for Young scientists: Contributions to the Development and Kinematic - Dynamic Modeling of Parallel Robots for Minimally Invasive Surgery*, Duration 2007 – 2008, Financed by: UEFISCDI – TD-437, Position: Director
 10. *Multidisciplinary development of surgical robots based on parallel structures – PARMIS*, Duration: 2007-2010, 11016/2007 Financed by: National Authority for Scientific Research, Position: Member

Patents

1. Plitea, N., Pîslă, D., **Vaida, C.**, Gherman, B.: Surgical Robot. RO 126271, Romania (2012).
2. Plitea, N., Pîslă, D., **Vaida, C.**, Vidrean, M. Lese, D., Scurtu, L., Robot family for positioning with constant orientation of the mobile plate. Patent pending no. A/10021/29.09.2010, Romania (2010).
3. Plitea, N., Pîslă, D., **Vaida, C.**, Vidrean, A., Glogoveanu, M. Lese, D., Parallel Robot family with four degrees of freedom, Patent pending no. A10022/30.09.2010, Romania (2010).
4. Plitea, N., Pîslă, D., **Vaida, C.**, Lese, D., Konya, B., Dadarlat, R., Scurtu, L., Sabou, C., Parallel robots family with six degrees of freedom, Patent pending A/10013/2011, Romania (2011).
5. **Vaida C.**, Plitea, N., Pîslă, D., Gherman, B., Suci, M.: Orientation module with modular structure and multiple bends, Cerere de brevet nr. A10113/2011, Romania (2011)
6. Plitea, N., Pîslă, D., Vaida, C., **Gherman, B.**, Szilághyi, A., Galdău, B., Cocorean D.: Parallel robot for brachytherapy with two kinematic chains of 2CRRU and CRU type for needle guidance. Pending no. A/10004/2013, Romania (2013).
7. Plitea, N., Pîslă, D., Vaida, C., **Gherman, B.**, Szilághyi, A., Galdău, B., Cocorean D.: Parallel robot for brachytherapy with two kinematic chains of 2CRRU and CYL-U type for platform (needle) guidance. Pending no. A/10005/2013, Romania (2013).
8. Plitea, N., Pîslă, D., Vaida, C., **Gherman, B.**, Szilághyi, A., Galdău, B., Cocorean D.: Parallel robot for brachytherapy with two kinematic chains of CYL-U type for platform (needle) guidance. Pending no. A/10006/2013, Romania (2013).
9. Plitea, N., Pîslă, D., Vaida, C., **Gherman, B.**, Szilághyi, A., Galdău, B., Cocorean D.: Parallel robot for brachytherapy with two parallel modules, one for positioning and one for orientation. Pending no. A/10007/2013, Romania (2013).
10. N. Plitea, D. Pîslă, **C. Vaida**, B. Gherman, P. Tucan, C. Govor, F. Covaciu: Parallel robots family for the transperineal prostate biopsy, Patent pending: A/00191/13.03.2015;
11. **C. Vaida**, D. Pîslă, P. Tucan, N. Plitea, B. Gherman: Parallel robot for transperineal prostate biopsy. Patent pending: 00761/26.10.2015

Professional Associations

Member of International Federation for the Promotion of Mechanism and Machine Science - IFToMM

Member of International Association of Applied Mathematics and Mechanics – GAMM

Member of the Romanian Association of Mechanism and Machine Science - ARoTMM

I hereby certify that the above statements are true.

Date 10.05.2016

