Europass Curriculum Vitae

Personal information

First name(s) / Surname(s)	**DOINA LIANA/ PISLA**
Address(es)	26/7, Hateg Str. ,RO-400697 Cluj-Napoca, ROMANIA
Telephone(s)	(+40)-364-268989 Mobile: (+40)-728-858993
Fax(es)	(+40)-264-401765
E-mail	doina.pisla@mep.utcluj.ro, doinapisla@yahoo.com
Nationality	Romanian
Date of birth	February, 2, 1968
Gender	female

Occupational field

EDUCATION AND RESEARCH

Work experience

Dates	2005-present
Occupation or position held	Full Professor at the Department of Mechanical Systems Engineering, Machine Building Faculty, Technical University of Cluj-Napoca Vice-Dean Faculty of Machine Building Faculty, Technical University of Cluj-Napoca
Main activities and responsibilities	Teaching activities in robotics, computer programming, research activities in Robotics and mechatronics, Computer and simulation techniques, Kinematics and dynamics of serial and parallel robots, Mini- and microrobots, Surgical robots, E-learning platforms and simulators for medicine
Name and address of employer	Technical University of Cluj-Napoca, Memorandumului, 28, RO-400114 Cluj-Napoca, Romania, www.utcluj.ro
Type of business or sector	Education and research

Dates	2001-present
Occupation or position held	Director “Center for Industrial Robots Simulation and Testing”, Technical University of Cluj-Napoca
Main activities and responsibilities	Management and Research activities in Robotics and mechatronics, Computer and simulation techniques, Kinematics and dynamics of serial and parallel robots, Mini- and microrobots, Surgical robots, E-learning platforms and simulators for medicine
Name and address of employer	Technical University of Cluj-Napoca, Memorandumului, 28, RO-400114 Cluj-Napoca, Romania, www.utcluj.ro
Type of business or sector	Education and research

Dates	2001-2005
Occupation or position held	Associate Professor at the Department of Mechanics and Computer Programming, Technical University of Cluj-Napoca

Main activities and responsibilities	Teaching activities in robotics, computer programming, research activities in Robotics and mechatronics, Computer and simulation techniques, Kinematics and dynamics of serial and parallel robots, Mini- and microrobots.
Name and address of employer	Technical University of Cluj-Napoca, Daicoviciu, 15, RO-400020 Cluj-Napoca, Romania, www.utcluj.ro
Type of business or sector	Education and research
Dates	1998-2001
Occupation or position held	Lecturer, Ph.D at the Department of Mechanics and Computer Programming, Technical University of Cluj-Napoca
Main activities and responsibilities	Teaching activities in robotics, computer programming, research activities in Robotics and mechatronics, Computer and simulation techniques, Kinematics and dynamics of serial and parallel robots
Name and address of employer	Technical University of Cluj-Napoca, Daicoviciu, 15, RO-400020 Cluj-Napoca, Romania, www.utcluj.ro
Type of business or sector	Education and research
Dates	1991-1998
Occupation or position held	Teaching Assistant at the Department of Mechanics and Computer Programming, Technical University of Cluj-Napoca
Main activities and responsibilities	Teaching activities in robotics, computer programming, research activities in Robotics and mechatronics
Name and address of employer	Technical University of Cluj-Napoca, Daicoviciu, 15, RO-400020 Cluj-Napoca, Romania, www.utcluj.ro
Type of business or sector	Education and research

Education and training

Dates	1991-1998
Title of qualification awarded	PhD
Principal subjects/occupational skills covered	Research in Robotics and Mechanical Engineering PhD thesis title: Researches regarding the graphical simulation of the behavior of industrial robots based on the cinematic and dynamic study of spatial structures
Name and type of organisation providing education and training	Technical University of Cluj-Napoca, Daicoviciu, 15, RO-400020 Cluj-Napoca, Romania, www.utcluj.ro

Personal skills and competences

Mother tongue(s): Romanian

Other language(s): English, German

Self-assessment

	Understanding				Speaking				Writing	
European level (*)	Listening		Reading		Spoken interaction		Spoken production			
English	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user
German	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user

(*) Common European Framework of Reference for Languages

Social skills and competences	Team spirit, communicative, solidarity, honesty, correctitude, responsibility, dynamism
Organisational skills and competences	Good organiser and manager, education and research abilities, problem-solving-attitude, ability to respect deadlines for project activities

Technical skills and competences	Ability in kinematic and dynamic modelling of robots, programming of robots and mechanical systems, CAD of robots. Writing many scientific papers in ISI and BDI journals Participation at many international conferences in congresses Coordination of international conferences and workshops
Computer skills and competences	C++, Matlab, Fortran, MSC Adams, MathCAD, Solid Edge, NX, AutoCAD, Corel DRAW, MS Office, Latex, control programming languages etc. Easily adapts to new technologies/software
Artistic skills and competences	Tennis, skiing, swimming
Other skills and competences	June – July 1999 Visiting researcher at "Institut für Werkzeugmaschinen und Fertigungstechnik", Technische Universität "Carolo Wilhelmina" zu Braunschweig, Germany (postdoc stage) March – June 1996 Visiting researcher at "Institut für Werkzeugmaschinen und Fertigungstechnik", Technische Universität "Carolo Wilhelmina" zu Braunschweig, Germany Oct. 1993 –Sept. 1994 Visiting researcher at "Institut für Werkzeugmaschinen und Fertigungstechnik", Technische Universität "Carolo Wilhelmina" zu Braunschweig, Germany August 1994 Training seminar "Zielorientierte Projektplanung" (Task oriented Planing design) Lingen, Germany 1993 Specialisation in UNIX, Cluj-Napoca 1992 Specialisation in Computer Networks, Cluj-Napoca Graduate Faculty of Machine Building, Technical University of Cluj-Napoca (ranked first out of 200 graduates)
Driving licence	Driving licence category B since 1991

Additional information

Scientific activity (entire career)
Published books: 8

Annexes

Published papers in ISI journals, SCI journals, national and international conferences and congresses: over 130

National and international research contracts: over 30

Research project coordinator: 12

Reviewer of papers in many journals, national and international conferences

Member in the scientific and steering committees of many international conferences (CK 2009, 2013. EUCOMES 2008, 2010, 2012, 2014, 2016, RAAD 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, IFTOMM 2011, 2015 World Congress, NaCoMM 2011, 2013, RAAD 2013, CK 2013, SYROM 2013, MESROB 2012, 2013, 2014, 2015, 2016 etc)
Topical Editor Journal of Mechanical Sciences (Editor in Chief Just Herder)
Chairman of the 3rd European Conference on Mechanism Science-EUCOMES 2010, Cluj-Napoca, Romania
Co-Chairman of the 1st International Workshop on Medical and Service Robots (MESROB 2013), Cluj-Napoca, Romania

Invited speaker in Timisoara, Tokyo, Cluj-Napoca, Belgrade, Bucharest, Craiova, Lausanne etc.

Relevant publications (most relevant to project proposal)

Published Books (excerpt)

Editor

1. Wenger, P., Chevallereau, C., **Pisla, D.**, Bleuler, H., Rodić, A. (Eds.), *New Trends in Medical and Service Robots, Human Centered Analysis, Control and Design*, Springer, 2016, 310 pp.
2. Bleuler, H., Bouri, M., Mondada, F., **Pisla, D.**, Rodić, A., Helmer, P. (Eds.), *New Trends in Medical and Service Robots, Assistive, Surgical and Educational Robotics,* Springer, 2016, 254 pp.
3. Rodić, A., **Pisla, D.**, Bleuler, H. (Eds.), *New Trends in Medical and Service Robots, Challenges and Solutions,* Springer, 2014, 384 pp.
4. **Pisla, D.**, Bleuler, H., Rodić, A., Vaida, C., Pisla, A. (Eds.), *New Trends in Medical and Service Robots, Theory and Integrated Applications*, Springer, 2014, 238 pp.
5. **Pisla D.,** Ceccarelli, M., Husty, M., Corves, B., (Eds.), *New Trends in Mechanism Science*, *Analysis and Design*, Springer, 2010, 708 pages.

Author

6. Vaida C., Gherman, B,, **Pisla, D.**, *MATLAB programming for engineers*, Vol. 3, under the Series "Computer programming", Coordinator Doina Pisla, Mediamira, 2014, 380 pp.
7. Gherman B., Vaida C., **Pisla D.**, *Programming in C with applications in engineering* Vol 2, under the Series "Computer programming", Coordinator Doina Pîsla, Mediamira, 2013, 308 pp.
8. Vaida C., **Pisla, D.**, *Basic Computer skills. Applications.* Vol. 1, under the Series "Computer programming", Coordinator Doina Pîsla, Mediamira, 2009, 250 pp.
9. **Pisla, D.,** Kinematic and dynamic modeling of parallel robots*,* Dacia, 2005, 207 pp.

Refereed Journal Papers and book chapters (excerpt – 10 relevant papers)

1. Plitea N., Szilaghyi A., Cocorean D., Covaciu F., Vaida C., **Pisla D.**: Inverse dynamics and simulation of a 5-dof modular parallel robot used in brachytherapy, Proceedings of the Romanian Academy, Series A., Vol. 17(1), pp. 67-75, 2016
2. Plitea N., Szilaghyi A., **Pisla D.**: "Kinematic Analysis of a new 5-DOF Modular Parallel Robot for Brachytherapy", Robotics and Computer Integrated Manufacturing, vol. 31, pp: 70-80, 2015
3. Plitea N., Vaida C., Gherman B., Szilaghyi A., Galdau B., Cocorean D., Covaciu F., **Pisla D.**: "Structural Analysis and Synthesis of Parallel Robots for Brachytherapy", New Trends in Medical and Service Robots, Series: Mechanisms and Machine Science, Vol. 16, ISBN 978-3-319-01591-0, 2014.
4. Vaida C., Plitea N., Cocorean D., **Pisla D.**: "Modeling of new spatial parallel structures with constant platform orientation using planar parallel modules", Proceedings of the Romanian Academy - series A: Mathematics, Physics, Technical Sciences, Information Science, vol. 15(1), pp. 43-51, 2014
5. **Pisla, D.**, Gherman, B., Vaida, C., Suciu, M., Plitea, N.: "An active hybrid parallel robot for minimally invasive surgery", Robotics and Computer-Integrated Manufacturing, 2013, 29 (4), 203-221, DOI: 10.1016/j.rcim.2012.12.004
6. **Pisla, D.**; Szilaghyi, A.; Vaida, C.; Plitea, N.: Kinematics and workspace modeling of a new hybrid robot used in minimally invasive surgery, Robotics and Computer-Integrated Manufacturing, 2013, 29 (2),463-474, DOI: 10.1016/j.rcim.2012.09.016
7. Plitea, N. , Lese, D., **Pisla, D.**, Vaida, C.: Structural design and kinematics of a new parallel reconfigurable robot, Robotics and Computer-Integrated Manufacturing, 2013, 29 (1), 219-235, DOI: 10.1016/j.rcim.2012.06.001
8. Vaida, C., Plitea, N., **Pisla, D.**, Gherman, B., Orientation module for surgical instruments - a systematical approach, Meccanica, 48(1), 2013, pp. 145-158, DOI: 10.1007/s11012-012-9590-x
9. **Pîslă, D.**, Gherman, B. (corresponding author), Vaida, C., Plitea, N.: „Kinematic modeling of a 5 DOF Parallel Hybrid Robot designed for Laparoscopic Surgery", Robotica, Cambridge University Press, 2012, 30 (07), 1095-1107, DOI: 10.1017/S0263574711001299
10. Gherman, B., **Pîslă, D.** (corresponding author), Vaida, C., Plitea N., "Development of Inverse Dynamic Model for a Surgical Hybrid Parallel Robot with Equivalent Lumped Masses", Robotics and Computer-Integrated Manufacturing, 2012, 28 (3), 402-415, DOI: 10.1016/j.rcim.2011.11.003

Papers published at international and national conferences (excerpt 5 relevant papers)

1. D. Pisla, B. Gherman, P. Tucan, C. Vaida, C. Govor, N. Plitea: "On the Kinematics of an Innovative Parallel Robotic System for Transperineal Prostate Biopsy", IFToMM Congress, Taipei, Taiwan, 25-30 October 2015

2. D. Pisla, B. Gherman, G. Kacso, N. Plitea: "Kinematic Behaviour of a Novel Medical Parallel Robot for Needle Placement", Advances in Intelligent Systems and Computing, Springer, Vol. 371, pp. 329-338, 2015
3. D. Pisla, D. Cocorean, C. Vaida, B. Gherman, A. Pisla, N. Plitea: "Application Oriented Design and Simulation of an Innovative Parallel Robot for Brachytherapy", Proceedings of the ASME 2014 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference - IDETC/CIE 2014, 17 - 20 August 2014, Buffalo, New York, USA
4. Szilaghyi, **D. Pisla**, C. Vaida, B. Gyurka and N. Plitea: "Kinematics Simulation and Validation of a Medical Robot" - Proceedings of the Second Conference MeTrApp 2013, published in New Advances in Mechanisms, Transmissions and Applications, Mechanisms and Machine Science, Vol. 17, pp. 139-147, ISBN 978-94-007-7484-1, 2014.
5. **D. Pisla,** D. Cocorean, C. Vaida, B. Gyurka, A. Pisla, N. Plitea, Kinematic and dynamic simulation of a reconfigurable parallel robot, Proceedings of the 3rd IFToMM International Symposium on Robotics and Mechatronics (ISRM 2013) ISBN: 978-981-07-5983-4, Singapore, 2013.

Relevant projects

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: Coordinator, Duration: 2015-2018
2. Creative Alliance in Research and Education focused on Medical and Service Robotics, IZ74Z0_13736, Scopes International IP Grant:, http://www.snf.ch/SiteCollectionDocuments/int_sco_pro_romania0912.pdf Position: Coordinator, Romania, Duration : 2011-2014
3. 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
4. *The setup of a laboratory for microrobots and micro grippers using advanced materials within the Center for Industrial Robots Simulation and Testing*. Duration: 2004-2005, Financed by: DAAD, Position: Director

National Research Grants (excerpt – 5 most relevant ones)

1. Robotic assisted prostate biopsy, a high precision innovative method – ROBOCORE, no. 247/2014, code PN-II-PT-PCCA-2013-4-0647 financed by UEFISCDI, 2014-2017, Position: Project coordinator
2. Diagnosis and therapy system for spin disorders– SPINE, no. 227-2014, code PN-II-PT-PCCA-2013-4-1596 financed by UEFISCDI, 2014-2017, Position: Partner scientific responsible
3. Robotic assisted brachytherapy an innovative approach of inoperable cancers – CHANCE, Project no. 173/2012, code PN-II-PTPCCA-2011-3.2-0414, financed by UEFISCDI, 2012-2015, Position: Scientific coordinator
4. *Innovative development of an innovative virtual system for e-learning in hepatic surgery – HEPSIM,* Duration: 2008-2011, Financed by: National Authority for Scientific Research, Position: Partner responsible
5. *Multidisciplinary development of surgical robots based on parallel structures – PARMIS*, Duration: 2007-2010, 11016/2007 Financed by: National Authority for Scientific Research, Position: Project coordinator

Patents

1. Plitea, N., **Pisla, D.,** Vaida, C., Gherman, B.: Surgical Robot, RO126271-A2, Romania.
2. Plitea, N., **Pisla, 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).
3. Vaida C., Plitea, N., **Pisla, D.,** Gherman, B., Suciu, M.: Orientation module with modular structure and multiple bends, Patent pending no. A10113/2001, Romania (2011)
4. Plitea N., **Pisla D.**, Vaida C., Gherman B., Szilaghyi A., Galdau B., Cocorean D.: Parallel robot for brachytherapy with two kinematic guiding chains of the platform (the needle) type 2CRRU and CRU, Patent pending, A/10004/2013

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5. Plitea N., **Pisla D.**, Vaida C., Gherman B., Szilaghyi A., Galdau B., Cocorean D.: Parallel robot for brachytherapy with two kinematic guiding chains of the platform (the needle) type 2CRRU and CYL-U, Patent pending, A/10005/2013
6. Plitea N., **Pisla D.**, Vaida C., Gherman B., Szilaghyi A., Galdau B., Cocorean D.: Parallel robot for brachytherapy with two kinematic guiding chains of the platform (the needle) type 2CRRU and CYL-U, Patent pending, A/10005/2013
7. Plitea N., **Pisla D.**, Vaida C., Gherman B., Szilaghyi A., Galdau B., Cocorean D.: Parallel robot for brachytherapy with two kinematic guiding chains of the platform (the needle) type CYL-U, Patent pending, A/10006/2013
8. Plitea N., **Pisla D.**, Vaida C., Gherman B., Szilaghyi A., Galdau B., Cocorean D.: Parallel robot for brachytherapy with two parallel modules, one for positioning and one for orientation, Patent pending, A/10007/2013
9. N. Plitea, **D. Pisla**, 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
10. C. Vaida, **D. Pisla**, P. Tucan, N. Plitea, B. Gherman: Parallel robot for transperineal prostate biopsy. Patent pending: 00761/26.10.2015

Professional Associations

1994	Member of Gesellschaft für Angewandte Mathematik und Mechanik (GAAM)-Germany
1996	Member of of AGIR (General Society of Romanian Engineers)
1998	Member of IFTOMM
2002	Member of Romanian Society of Robotics
2007	Member of IFTOMM Technical Committee „Computational Kinematics”
2009-present	Chair of IFTOMM Technical Committee „Computational Kinematics”
2012-present	Member of Technical Committee „Biomechanical Engineering”

I hereby certify that the above statements are true.

Date

8.04.2016

Prof. Dr. Ing. Doina PISLA

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