



## Europass Curriculum Vitae



### Personal information

First name(s) / Surname(s) **ANDRÁS CSABA / SZILÁGHYI**  
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E-mail sz\_a\_cs@yahoo.com  
Nationality Romanian  
Date of birth January, 4, 1985  
Gender male

### Occupational field **RESEARCH**

#### Work experience

Dates 2012 – present  
Occupation or position held Researcher at the Technical University of Cluj-Napoca, Department of Engineering of Mechanical Systems  
Main activities and responsibilities Research activities in field of robotics, computer programming, simulation techniques, kinematics and dynamics of parallel robots, automation.  
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 Research

#### Education and training

Dates 2009 – 2012  
Title of qualification awarded PhD  
Principal subjects/occupational skills covered Researches in field of robotics.  
PhD thesis title: Researches regarding the modeling, simulation and control of a hybrid parallel surgical robot.  
Name and type of organisation providing education and training Technical University of Cluj-Napoca, Memorandumului, 28, RO-400114, Cluj-Napoca, Romania, www.utcluj.ro  
Dates 2004 – 2009  
Title of qualification awarded Bachelor degree  
Principal subjects/occupational skills covered Graduate the Faculty of Machine Building, Specialization Mechanical Engineering  
Title of work: Calculation, implementation and validation of the kinematic and dynamic models for a parallel robot.

Name and type of organisation providing education and training | Technical University of Cluj-Napoca, Memorandumului, 28, RO-400114, Cluj-Napoca, Romania, www.utcluj.ro

**Personal skills and competences**

Mother tongue(s) | Romanian / Hungarian

Other language(s) | English

Self-assessment

European level (\*)

English

Understanding		Speaking		Writing	
Listening	Reading	Spoken interaction	Spoken production		
B1	B1	B1	B1	B1	

(\*) [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, 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, engineering design, command and control of industrial robots.  
Writing some scientific papers in ISI and BDI journals  
Participation at international conferences.

Computer skills and competences | C, C++, Matlab, MathCAD, AutoCAD, Corel DRAW, MS Office, control programming languages, B&R Automation Studio, etc.  
Easily adapts to new technologies/software

Artistic skills and competences | Skiing, tennis, bike rides

Other skills and competences | 2011 – Diploma of graduation of a course in industrial automations, at B&R Automation, Eggelsberg, Austria  
March – June 2009 Erasmus student at “Institut für Werkzeugmaschinen und Fertigungstechnik”, Technische Universität “Carolo Wilhelmina”, Braunschweig, Germany  
2007 – Certificate of competencies Autodesk, AutoCAD® 2007  
2000 – 2004 National College “Bethlen Gabor” ,Aiud, specialization: Mathematics - Informatics

Driving licence | Driving licence category A, B+E, C+E since 2003

**Additional information**

Scientific activity (entire career)

**Annexes:**

Published papers in ISI journals, SCI journals, national and international conferences and congresses: 11

Papers published in ISI and BDI journals and at international and national conferences

1. F. Graur, M. Frunza, R. Elisei, L. Furcea, L. Scurtu, C. Radu, A. Szilaghyi, H. Neagos, A. Muresan, L. Vlad, Ethics in Robotic Surgery and Telemedicine, 3rd European Conference on Mechanism Science (EUROMES 2010), New Trends in Mechanism Science: Analysis and Design, Mechanism and Machine Science 5, DOI 10.1007/978-90-481-9689-0\_53, Springer Science, 2010
2. F. Graur, L. Scurtu, L. Furcea, N. Plitea, C. Vaida, O. Detesan, A. Szilaghyi, H. Neagos, A. Muresan and L. Vlad, Training Platform for Robotic Assisted Liver Surgery - the Surgeon Point of View 3rd European Conference on Mechanism Science (EUROMES 2010), New Trends in Mechanism Science: Analysis and Design, Mechanism and Machine Science 5, DOI 10.1007/978-90-481-9689-0\_53, Springer Science, 2010

## Annexes:

3. Pisla, D., B. Gherman, N. Plitea, B. Gyurka, C. Vaida, L. Vlad, F. Graur, C. Radu, M. Suciuc, A. Szilaghyi, A. Stoica, PARASURG Hybrid Parallel Robot for Minimally Invasive Surgery Chirurgia (Bucharest), 106, Nr. 5, September – October, pp. 619-625, 2011 (influence factor: 0.56)
4. Furcea, L., Graur, F., Scurtu, L., Gherman, B., Plitea, N., Pîslă, D., Vaida, C., Deteșan, O., Szilaghyi, A., Neagoș, H., Mureșan, A., Vlad, L., Avantajele implementării unei platforme de e-learning pentru chirurgia laparoscopică hepatică asistată robotic, Chirurgia (Bucharest), 106, Nr. 6, November – December, pp. 799 -806, 2011
5. A. Pisla, T. Itul, D. Pisla and A. Szilaghyi, Considerations upon the influence of Manufacturing and Assembly Errors on the Kinematic and Dynamic Behavior in a Flight Simulator Stewart-Gough Platform, The First Workshop on Mechanisms, Transmissions and Applications, October 06 - 08, 2011, Timisoara, Romania, published in Mechanisms and Machine Science, Vol. 3, ISBN 978-94-007-2726-7, 2011
6. Andras Csaba SZILAGHYI, Doina PISLA, MATLAB/SIMULINK SIMULATION AND VALIDATION OF THE KINEMATICS MODEL OF A HYBRID ROBOT FOR MINIMALLY INVASIVE SURGERY, ACTA TECHNICA NAPOCENSIS - Series: APPLIED MATHEMATICS AND MECHANICS, No. 55, Issue II, pp 513 – 518, ISSN 1221 – 5872, 2012
7. A. Szilaghyi, A. Stoica, D. Pisla, C. Vaida and N. Plitea, Kinematics Analysis of a Parallel Surgical Robot, Advances in Robot Kinematics Innsbruck, Austria, June 24–28 2012, published in Latest Advances in Robot Kinematics, pp 333-340, DOI: 10.1007/978-94-007-4620-6\_42, 2012
8. Andras Csaba Szilaghyi, Doina Pîslă, Optimal design of a new parallel module used for the PARAMIS robot, Session of Scientific Communications of SIDOC PhD. Students, SICOM 2012
9. D. Pisla, A. Szilaghyi, C. Vaida, N. Plitea, Kinematics and Workspace Modeling of a New Hybrid Robot Used in Minimally Invasive Surgery, Robotics and Computer Integrated Manufacturing, Volume 29, Issue 2, April 2013, Pages 463-474, Online publication complete: 25-Oct-2012, DOI information: 10.1016/j.rcim.2012.09.016, 2012. (impact factor: 1.173, influence factor: 1.05866)
10. A. Stoica, D. Pisla, A. Szilaghyi, B. Gherman, N. Plitea, Workspace and Singularity Analysis for a Parallel Robot Used in Surgical Applications, New Trends in Mechanism and Machine Science, Mechanisms and Machine Science, Volume 7, pp 149-157, 2013
11. A. Stoica, D. Pisla, A. Szilaghyi, B. Gherman, N. Plitea, Kinematic, Workspace and Singularity Analysis of a New Parallel Robot used in Minimally Invasive Surgery, Accepted for publication in journal „Frontiers of Mechanical Engineering”.

## National and International Research projects

1. Creative Alliance in Research and Education focused on Medical and Service Robotics, IZ74Z0\_13736, Scopes International IP Grant, Director: Prof. Univ. Dr.-Ing. Doina Pisla, 2011-2014, [http://www.snf.ch/SiteCollectionDocuments/int\\_sco\\_pro\\_romania0912.pdf](http://www.snf.ch/SiteCollectionDocuments/int_sco_pro_romania0912.pdf) Position: Member
2. Robotic assisted brachytherapy, an innovative approach of inoperable cancers (CHANCE), National grant: PCCA TIP 2, Project Nr.: PN-II-PT-PCCA-2011-3.2-0414, Director: Prof. Univ. Dr.-Ing. Nicolae PLITEA, 2012-2015, Position: Key member
3. Simulation and control techniques for robots used in minimally invasive surgery – SIMCOSURG, International Grant, Director: Prof. Univ. Dr.-Ing. Doina Pisla, 2011-2013, Registration Nr.: 12546/31.05.2012, Position: Member
4. Development of innovative kinematic and dynamic models for parallel robots in surgical applications - PROINS, International Grant, Director: Prof. Univ. Dr.-Ing. Doina Pisla, 2011-2013, Registration Nr.: 12547/31.05.2012, Position: Member

**Annexes:**

5. New Trends in Medical and Service Robots, Exploratory workshop, Project Code PN-II-ID-WE-2012-4-018, 2012, Position: Member of organizing committee.
6. 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 of organizing committee.

I hereby certify that the above statements are true.

Date 24.04.2013

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