

PERSONAL INFORMATION

Rusu Călin



JOB APPLIED FOR Technical University of Cluj-Napoca, Department of Mechatronics and Machine Dynamics – Associate Professor poz. 11

WORK EXPERIENCE

- 2004-present **Lecturer**
 Technical University of Cluj Napoca, Faculty of Automotive, Mechatronics and Mechanics, Department of Mechatronics and Machine Dynamics, B-dul Muncii, nr. 103 -105, 400641, Cluj – Napoca, Romania
 Didactic and research activities in the field of: Mechanisms, Measurement systems, Technical Optics, CAD. Institutional activities
- 2001-2004 **University assistant**
 Technical University of Cluj Napoca, Faculty of Mechanics, Department of Mechanisms, B-dul Muncii, nr. 103 -105, 400641, Cluj – Napoca, Romania
 Didactic and research activities in the field of: Mechanisms, Measurement systems, Metrology, CAD
- 1998-2001 **Preparator**
 Technical University of Cluj Napoca, Faculty of Mechanics, Department of Mechanisms, B-dul Muncii, nr. 103 -105, 400641, Cluj – Napoca, Romania
 Didactic activities in the field of: Mechanisms.

EDUCATION AND TRAINING

- 1999-2005 **PhD in Mechanical Engineering**
 Technical University of Cluj Napoca
 Title: Contributions regarding the mechanisms for mechatronics
 Scientific advisor: Prof. dr.ing. Vistrian Mătiș
- 1997-1998 **Master - Advanced Methods and Tools in Engineering and Management Quality Assurance**
 Technical University of Cluj Napoca. Faculty of Mechanics
- 1992-1997 **Mechanical Engineer , specialization Precision Mechanics**
 Technical University of Cluj Napoca. Faculty of Mechanics
- 1988-1992 **High school diploma**
 Industrial high School Mihai Viteazu, Turda

SPECIALIZATIONS

- June 2009 **Mechanical design with CATIA v5, Level III**
 Global Interface, Zaragoza, Spain
- July, october 2008 **Mechanical design with CATIA v5, Level I&II**
 Global Interface, Zaragoza, Spain

- December 2007 **Advanced Simulink for System and Algorithm Modelling (Certificate of competency MathWorks)**
MathWorks, Zurich, Switzerland
- 1 - 24.02.2002 **Documentation internship**
Instituto Universitario de Investigación de Ingeniería en Aragón și
Escuela Politécnica Superior, Zaragoza, Spain
- 21.07 - 19.08.2000 **Documentation internship**
Escuela Politécnica Superior, Zaragoza, Spain

RESEARCH ACTIVITIES

- Research projects** Member of 18 research and institutional project teams
- Publications**
 - 5 books (2 single author)
 - 3 book chapters in national and international publishing houses (co-author)
 - first author or co-author of more than 50 scientific papers published in journals or volumes of national or international conferences (18 indexed Web of Science of which 2 with impact factor)
 - H-index: Web of Science: 3; Scopus: 4; Google Scholar: 6
- Patents** RO123627-B1– Portable laboratory for mechatronic education, authors: Maties, V., Bălan, R., Rusu, C., Hancu, O., Lapusan, C., Besoiu, S.
- Visiting professor**
 - October 2015 - *Design of Multifunctional Robotic Arms with Applications for In-Pipe Inspection Robots*, Hochschule Esslingen, University of Applied Sciences, Faculty of Mechanical Engineering.
 - March 2019 - *Introduction in Technical Optics*, Kyrgyz State University of Construction, Transport and Architecture.
- Reviews** Reviewer at MDPI journals: *Applied Sciences, Machines, Actuators, Energies, Sensors and Robotics*

PERSONAL SKILLS

Mother tongue Romanian

Other language	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

- Communication skills** Good communication skills gained through:
 - participation in teaching and research teams
 - participation as a member in doctoral student guidance committees
 - participating in national and international projects as well as attending conferences and workshops
- Computer skills**
 - CATIAv5, Autodesk Inventor, SolidWorks, NX, Creo
 - LabView, Matlab/Simulink
 - programming skills in C#, Pascal
 - Microsoft Office™
- Driving licence** B

ADDITIONAL INFORMATION

 Publications
(selection)

1. **Rusu, C.**, Tatar, M.O - *Adapting Mechanisms for In-pipe Inspection Robots: A review*, Applied Sciences, 12, 2022, ISSN 2076-3417 (**IF 2.838**)
2. S. Noveanu, I.A Ivan, D.C. Noveanu, **C. Rusu**, D. Lates - *SiMFlex Micromanipulation Cell with Modular Structure*, Applied Sciences 10, 2020, ISSN 2076-3417 (**IF 2.637**)
3. **C. Rusu**, S Besoiu, MO Tatar - *Design and closed-loop control of a piezoelectric actuator*, IOP Conference Series: Materials Science and Engineering, vol 1018, 2021, doi.org/10.1088/1757-899X/1018/1/012002.
4. **Rusu, C.**, Besoiu, S. - *Analysis of the displacement amplification ratio for a piezoelectric driven compliant mechanism*, Acta Technica Napocensis, Series: Applied Mathematics, Mechanics and Engineering, Vol 64, nr I, pag 87-92, 2021, ISSN 1221-5872
5. S. Noveanu, **C. Rusu**, C. Rancea, D. Lateş - *Research Concerning the End-effectors for SiMFlex Microgripper*, IOP Conference Series: Materials Science and Engineering, Vol 724, nr 1, 2020, doi:10.1088/1757-899X/724/1/012055
6. S. Noveanu, D.Lates, L.Fusariu, **C. Rusu** - *A New Compliant Microgripper and Study for Flexure Hinges Shapes*, Proceedings of the 13th International Conference INTER-ENG 2019 in Procedia Manufacturing, vol 46, 2019, ISSN 2351-9789
7. **C. Rusu**, S, Besoiu, K Vidrean, C Lapusan - *New approaches in online evaluation of photovoltaic systems efficiency by implementing IoT monitoring solutions*, Acta Technica Napocensis, Series: Applied Mathematics, Mechanics and Engineering, Vol 62 nr IV, pag12-18, 2019, ISSN 1221-5872
8. **C. Rusu**, T.L. Tiuca, S. Noveanu, D. Mândru - *A KBE tool for solving the mechanisms kinematics*, The 7th International Conference on Advanced Concepts on Mechanical Engineering ACME2016, IOP Conference Series: Materials Science and Engineering, Vol 147, pp 652-656, ISSN 1757-8981
9. T.L. Tiuca, **C. Rusu**, S. Noveanu, D. Mândru - *General KBE model with inheritance and multi-CAD support*, The 7th International Conference on Advanced Concepts on Mechanical Engineering ACME2016, IOP Conference Series: Materials Science and Engineering, Vol 147, pp 536-543, ISSN 1757-8981
10. Lapusan C., **Rusu C.**, Brai, L., Mandru, D - *Development of a multifunctional robotic arm for in-pipe robots*, Proceeding of the 7th IEEE International Conference: Electronics, Computers and Artificial Intelligence (ECAI), 2015, ISSN: 2378-7147

 Projects
(selection)

1. Proiect ERASMUS 2022-1-R001-KA220-HED-000088365 – *International Cooperation Framework for Next Generation Engineering Students NextGEng*, coordonator UTCN, Conf.dr.ing. Ciprian Lapusan (in derulare)
2. Proiect GNaC ARUT, cod 168, Nr.3030/05.02.2019 – *Sistem de micromanipulare cu actuatori piezoelectrice și flexibilitate funcțională – SiMFlex*, director proiect Conf.dr.ing. Noveanu Simona, perioada 2019 – 2020, **Results: 1 ISI scientific paper, 4 BDI**
3. Proiect ERASMUS 575660-EPP-1-2016-1-FI-EPPKA2-KA – *Smart HEI-Business collaboration for skills and competitiveness HEI/Bus*, coordonator UTCN, Conf.dr.ing. Ciprian Lapusan, perioada 2017-2019. **Rezultate: 1 BDI scientific paper**
4. Proiect ERASMUS 561894-EPP-1-2015-1-DE-EPPKA2-CBHE-JP - *Advancing University Education in Biomedical Engineering and Health Management in Kyrgyzstan KyrMEDU*, coordonator UTCN Conf.dr.ing. Simona Noveanu, perioada 2018-2019. **Results: lecture given at Kyrgyz State University**
5. Proiect ERASMUS 540425-LLP-1-2013-1-FI-ERASMUS-EKA – *Reshaped Partnerships for Competitiveness and Innovation Potential in Mechanical Engineering RePCI*, Responsabil UTCN: Prof.dr.ing. Dan Mândru, membru colectiv, perioada: perioada: 2014-2015.: **Results: 2 BDI scientific paper, lecture given at Hochschule Esslingen**
6. Proiect - POSDRU/87/1.3/S/64069 - *FlexFORM – Program de formare profesionala flexibilă pe platforme mecatronice*, Manager proiect: Prof.dr.ing. Mătieș Vistrian, expert formare, perioada 2010-2013
7. Proiect Capacități nr.111 / CP / I 14.09.2007 – *Laborator regional multifuncțional de mecatronică*, director de contract: Prof. dr. ing. Mătieș Vistrian, perioada: 2007–2010, **Results: 1 patent**
8. Proiect Parteneriate Nr 21-003/2007 – *Creșterea eficienței conversiei energiei solare în platforme fotovoltaice orientabile, PLATSOL-PV*, Responsabil științific Partener UTCN: Prof. dr. ing. Mătieș Vistrian, perioada: 2007–2010.
9. Proiect IDEI ID_1056, Contract nr. 85/01.10.2007 – *Modelarea, simularea și realizarea unor familii de sisteme robotizate pentru inspecție și explorare*, director de contract: Prof. dr. ing. Olimpiu Tatar, perioada: 2007–2010.
10. Grant A/2005 CNC SIS – *Cercetări privind sinteza axelor cinematice în mecatronică*, director de proiect: Prof.dr.ing. Mătieș Vistrian, perioada 2004-2006.

Memberships

- Romanian Association for the Theory of Machines and Mechanisms ARoTMM
- Romanian Society of Robotics

Cluj Napoca
6.06.2023

Signature

