

PERSONAL INFORMATION

Claudiu SCHONSTEIN

JOB APPLIED FOR
POSITION
PREFERRED JOB
STUDIES APPLIED FOR

Associate Professor, position 16, Department of Mechanical System Engineering, Technical University of Cluj-Napoca

WORK EXPERIENCE

October 2012- Present

Lecturer

Technical University of Cluj-Napoca, Faculty of Industrial Engineering, Robotics, and Production Management (Faculty of Machine Buildings), Department: Mechanical Engineering Systems, Bd. Muncii 103-105, 400641, Cluj-Napoca, Romania (www.utcluj.ro).

Main activities and responsibilities:

- Educational/Teaching activities (lectures, laboratory works, seminars at Mechanics I-II, Robot Mechanics);
- Guiding students in completing their bachelor's theses;
- Research activities in Robotics domain, elaboration of scientific papers, books

Type of activities: Educational and research in Mechanical Engineering.

October 2011 - October 2012

Assistant Professor

Technical University of Cluj-Napoca, Faculty of Industrial Engineering, Robotics, and Production Management (Faculty of Machine Buildings), Department: Mechanical Engineering Systems, Bd. Muncii 103-105, 400641, Cluj-Napoca, Romania (www.utcluj.ro).

Main activities and responsibilities:

- Educational/Teaching activities (laboratory works, seminars at Mechanics I-II);
- Research activities in Robotics domain, elaboration of scientific papers, books

Type of activities: Educational and research in Mechanical Engineering.

EDUCATION AND TRAINING

October 2008 - October 2011

Ph.D. student, in Mechanical Engineering domain

Technical University of Cluj-Napoca, Faculty of Industrial Engineering, Robotics, and Production Management (Faculty of Machine Buildings), Department: Mechanical Engineering Systems, Bd. Muncii 103-105, 400641, Cluj-Napoca, Romania (www.utcluj.ro).

Ph.D. Thesis: "*Contributions in developing of a Hybrid Robot Structure*"

October 2006 - June 2007

Master student in Mechanical Engineering

Technical University of Cluj-Napoca, Faculty of Industrial Engineering, Robotics, and Production Management (Faculty of Machine Buildings), Department: Mechanical Engineering Systems, Bd. Muncii 103-105, 400641, Cluj-Napoca, Romania (www.utcluj.ro).

Specialization : Engineering and Quality Management

October 2001 - June 2006

Diplomat Engineer in the field of Mechatronics, specialization Industrial Robots and Flexible Manufacturing Systems
University degree (Diplomat Engineer) in Mechatronics, specialization: Industrial Robots and Flexible Manufacturing Systems (English)

Technical University of Cluj-Napoca, Faculty of Industrial Engineering, Robotics, and Production Management (Faculty of Machine Buildings), Department: Mechanical Engineering Systems, Bd. Muncii 103-105, 400641, Cluj-Napoca, Romania (www.utcluj.ro).

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)

| | UNDERSTANDING | | SPEAKING | | WRITING |
|---------|---------------|---------|--------------------|-------------------|---------|
| | Listening | Reading | Spoken interaction | Spoken production | |
| English | B2 | B2 | B2 | B2 | B2 |
| French | B1 | B1 | B1 | B1 | B1 |

Computer skills

- CAD: SolidWorks, AutoCAD;
- Microsoft Office™ tools;

Communication/ Organizational Skills

- **communication skills** acquired through:
 - ✓ experience as a member/director within the projects in which I was involved;
 - ✓ accumulated experience during teaching activities;
 - ✓ coordination of undergraduate theses of final year students (over 30);
 - ✓ tutoring activities of student groups;
 - ✓ participation in international conferences;
 - ✓ Courses in: Theoretical Mechanics; News in the Field of Industrial Robotics, held at the Silesian University of Technology, Faculty of Mechanical Engineering (May 2018).
- **organizational skills** acquired through:
 - ✓ involvement in the organization of student competitions (Concursul National de Mecanica pentru Studenti „Andrei G. Ioachimescu”- May 2019);
 - ✓ involvement in the organizing committees of some international conferences (“36th International Conference on Mechanics of Solids, Acoustics and Vibrations, ICMSAV XXXVI”-2012; “41st International Conference on Mechanics of Solids, Acoustics and Vibrations, ICMSAV XLI”- 2017).

Driving licence

B since 2000;

ADDITIONAL INFORMATION

- Publications
- 4 books published in national publishers;
 - 49 published research papers indexed in international data bases (ISI/BDI), of which: 15 first author; 22 indexed ISI in Web of Science; 1 paper is Q2 (Symmetry); 1 paper is Q1 (Mathematics);

List of relevant papers indexed in international data bases ISI/BDI (10 relevant papers):

1. A. PUSCA, G. RUS, I. BIRLESCU, C. VAIDA, A. PISLA, **C. SCHONSTEIN**, B. GHERMAN, P. TUCAN, D. PISLA- *WORKSPACE ANALYSIS OF TWO INNOVATIVE PARALLEL ROBOTS FOR SINGLE INCISION LAPAROSCOPIC SURGERY*. ACTA TECHNICA NAPOCENSIS - Series: APPLIED MATHEMATICS, MECHANICS, and ENGINEERING, [S.I.], v. 65, n. 2S, nov. 2022. ISSN 2393-2988. <https://atna-mam.utcluj.ro/index.php/Acta/article/view/1918>.
2. Mocan, B.; **Schonstein, C.**; Neamtu, C.; Murar, M.; Fulea, M.; Comes, R.; Mocan, M. CardioVR-ReTone—Robotic Exoskeleton for Upper Limb Rehabilitation following Open Heart Surgery: Design, Modelling, and Control. *Symmetry* **2022**, *14*, 81. <https://doi.org/10.3390/sym14010081>
3. **Schonstein, C.**, Cristea, A.F. (2022). Concept of Robotic System for Assistance/Rehabilitation of Persons with Motor Disabilities. In: Vlad, S., Roman, N.M. (eds) 7th International Conference on Advancements of Medicine and Health Care through Technology. MEDITECH 2020. IFMBE Proceedings, vol 88. Springer, Cham. https://doi.org/10.1007/978-3-030-93564-1_35.
4. **Schonstein, C.**, Negrean, I., *DYNAMICS CONTROL FUNCTIONS FOR A BALL SCREW TRANSMISSION AXIS*, Proceedings of the 41st International Conference on Mechanics of Solids, Acoustics and Vibrations "Prof. P.P. Teodorescu", (ICMSAV XLI), Acta Technica Napocensis, Series: Applied Mathematics, Mechanics and Engineering, Vol. 60, Issue IV, dec. 2017. ISSN 1221-5872, Cluj-Napoca, Romania. <http://www.atna-mam.utcluj.ro/index.php/Acta/article/view/941>
5. I., Negrean, **C. Schonstein**, K. Kacso, Study about the dynamics of a translational robot axis based on ball screw transmission, Proceedings of AQTR 2016 IEEE-TTTC THETA 20th edition, International Conference on Automation, Quality and Testing, Robotics, IEEE Catalog Number: CFP16AQT-USB, ISBN: 978-1-4673-8691-3, 19th-21st May, Cluj-Napoca, Romania.
6. I. Negrean, K. Kacso, **C. Schonstein**, Energies of Accelerations in Advanced Robotics Dynamics, Trans Tech Publications Switzerland Ltd, ISSN Print 1660-9336, 762, 67-73, 2015, <https://doi.org/10.4028/www.scientific.net/AMM.762.67>
7. I. Negrean, **C. Schonstein**, Z. Szoke, K. Kacso, AV Duca, *Dynamic Modeling of the Hybrid Robots Structures*, Proceedings of 2012 IEEE International Conference on Automation, Quality and Testing, Robotics, Electronic, ISSN: 1844-7872 CD:978-1-4673-0703-1, 2012 <https://www.webofscience.com/wos/woscc/full-record/WOS:000400227100082>
8. I. Negrean, K. Kacso, **C. Schonstein**, et al., New Formulations on Acceleration Energies in Analytical Dynamics, Trans Tech Publications Ltd, Journal Applied Mechanics and Materials, ISSN print 1660-9336, ISSN cd 2297-8941, ISSN web 1662-7482, 823, 43-48, 2016, <https://doi.org/10.4028/www.scientific.net/AMM.823.43>
9. **C. Schonstein**, I. Negrean, K. Kacso, Using of Polynomial Functions in modeling of the Working Process of Mobile Robot RmITA, Acta Technica Napocensis, Series: Applied Mathematics, Mechanics, and Engineering, ISSN 1221-5872, 57/2, 195-200, 2014
10. I. Negrean, **C. Schonstein**, D.C. Negrean, A.S. Negrean, A Duca, Formulations in Robotics based on Variational Principles, Proceedings of AQTR 2010 IEEE-TTTC (THETA 17), International Conference on Automation, Quality and Testing, Robotics, IEEE Catalog number: CFP10AQT-PRT, ISSN 1844-7872, 1, 281-286, 2010, <https://www.webofscience.com/wos/woscc/full-record/WOS:000419281500016>

Books:

- **C. Schonstein**, Implementarea structurilor mecanice hibride în procese de lucru, Ed. Mega, ISBN 978-606-020-619-4, 2023.
- **C. Schonstein**, G. Fodor, *MECANICĂ TEORETICĂ. Statică și Cinematică*, Editura UT Press, 978-606-737-606-7, Cluj – Napoca, 2022.
- I., Negrean, K. Kacso, C., **Schonstein**, s.a., *Mechanics — Theory and Applications*, Editura UT Press, ISBN 978-606-737-061-4, Cluj – Napoca, 2015.
- I., Negrean, K. Kacso, **C. Schonstein**, A. Duca, *Mecanică. Teorie și aplicații*, Editura UT PRESS, ISBN 978-973-662-523-7, Cluj – Napoca, 2012.

Research Project/Grants

1. Grant POC/1033/1/3 – „Cresterea calitatii vietii pacientilor prin sisteme telerobotice inteligente pentru tratamentul personalizat al deficitului neuromotor- APOLLO” – position: **team member**; (03.2023-11.2023).
2. Research development inovation contract-„Programarea si optimizarea traiectoriilor de sudare in celula robotizata cu robot KR10-R1440-2”– position **Project Manager**, (02.2023-03.2023).
3. Project: 101061755 -H2020-SCIENCE 4 FUTURE-II, nr. 101061755/2022, - „SCIENCE BUILDING THE FUTURE”, Project Manager Conf. Mihai Steopan, position **team member**; (07.2022-01.2024), sum 46.000 Euro.
4. Research development inovation contract - "Toy Dispenser -Dezvoltarea unui concept de echipament semiautomat de livrare de jucarii" – position **Project Manager**, (06.2022-09.2022).
5. Centrul de studii și învățare al Universității Tehnice din Cluj-Napoca (CeSTI)” finanțat din Schema de granturi pentru universități în cadrul Proiectului privind Învățământul Secundar-ROSE, prin Acordul de Grant nr. 99/SGU/CI/II din 17.12.2018, Project Manager: Prof. Diana Ioana Popescu, position: **teaching staff remedial program Mechanics**; (02.2021-06.2022).
6. Proiect: CNFIS-FDI-2020-0568- Project Manager Prof. Diana Ioana Popescu, “Acțiuni suport pentru sporirea accesului la învățământul superior, reducerea abandonului și creșterea nivelului de incluziune socială (Acces-UNIV)” – position: **learning expert**, (09.2020-11.2020).
7. Proiect POSDRU/86/1.2/S/62485 (2011) "*Sistem de formare și evaluare centrat pe student, online, la discipline fundamentale de licență și masterat din învățământul superior tehnic*", Project Manager: Prof. Mihail Abrudan – position: **short term expert**; (2011-2013).

Another information

- Member of of the research center- CESTER (Research Center for Industrial Robots Simulation and Testing), founder and Director Prof. Doina Pisla
- Reviewer for Journals/Publisher:
 - ✓ **MDPI** (Symmetry, Sustainability, Computation);
 - ✓ **Acta Technica Napocensis**;
- Member of Romanian Society of Robotics.

Cluj-Napoca,
28-th of April, 2023

