



Alexandru Codrean

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● WORK EXPERIENCE

UNIVERSITATEA TEHNICA DIN CLUJ-NAPOCA

ASSOCIATE PROFESSOR – 02/2025 – CURRENT

Teaching undergraduate laboratories : Robot control systems, Systems theory, Hydraulic and pneumatic automation equipment.

Teaching lectures on : Hydraulic and pneumatic automation equipment, Systems theory.

UNIVERSITATEA TEHNICA DIN CLUJ-NAPOCA – CLUJ-NAPOCA, ROMANIA

UNIVERSITY LECTURER – 02/2017 – 02/2025

Teaching undergraduate laboratories : Process modelling, Robot control systems, Systems theory, Hydraulic and pneumatic automation equipment.

Teaching lectures on : Hydraulic and pneumatic automation equipment.

UNIVERSITATEA TEHNICA DIN CLUJ-NAPOCA

ASISTENT PROFESSOR – 02/2016 – 02/2017

Teaching undergraduate laboratories : Process modelling, Robot control systems, Systems theory, Hydraulic and pneumatic automation equipment.

UNIVERSITATEA POLITEHNICA TIMISOARA

RESEARCH ASSISTANT – 2012 – 2014

Teaching undergraduate laboratories on Systems theory.

UNIVERSITATEA TEHNICA DIN CLUJ-NAPOCA

TEACHING ASSISTANT – 02/2015 – 02/2016

Teaching undergraduate laboratories : Process modelling, Systems theory.

UNIVERSITATEA POLITEHNICA TIMISOARA

SHORT-TERM EXPERT IN POSDRU COMHIGHTECH PROJECT – 01/2013 – 06/2013

UNIVERSITATEA POLITEHNICA TIMISOARA

RESEARCHER – 2008 – 2014

Research Projects – Control of a wheeled mobile robot (coordinator s.l. Adrian Korodi.), Modeling and simulation of time delay systems (coordinator prof.Toma-Leonida Dragomir), Networked control systems (coordinator prof. Toma-Leonida Dragomir), Modelling and analysis of the nervous control of the cardiovascular system (coordinator prof. Toma-Leonida Dragomir).

Publication of scientific articles in international conferences and journals.

SOLECTRON ROMANIA

● **INTERNSHIP** – 07/2007 – 10/2007

Wave soldering process, test equipment

● **EDUCATION AND TRAINING**

2012 – 2015
PHD Universitatea Politehnica Timisoara

Systems Engineering

2010 – 2012
PSIHOPEDAGOGIC MODULE – LEVEL I AND II Universitatea Politehnica Timisoara

2010 – 2012
MASTER Universitatea Politehnica Timisoara

Control Engineering

2006 – 2010
BACHELOR Universitatea Politehnica Timisoara

Automation and Applied Informatics

● **LANGUAGE SKILLS**

Mother tongue(s): **ROMANIAN**
Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **SKILLS**

Microsoft Office | CorelDRAW | Latex

● **PUBLICATIONS**

Publications

30 scientific papers in international scientific conferences and journals, 2 books, 1 book chapter

Top 5 representative papers:

1. Stefan O., **Codrean A.**, Dragomir T.-L., "A Nonlinear State Space Model of Network Transmissions in a Network Control System", Journal of Control Engineering and Applied Informatics (CEAI), Vol. 13, no. 4, 2011, pp. 58-63. (ISI)
2. **Codrean A.**, Dragomir T.-L., "Averaged modeling of the cardiovascular system", IEEE 52nd Annual Conference on Decision and Control (CDC), 2013, (ISI).
3. Buşoniuc L., Varma V.S., Lohéac J., **Codrean A.**, Ştefan O., Morărescu I.-C., Lasaulce S., " Learning control for transmission and navigation with a mobile robot under unknown communication rates", Control Engineering Practice, vol. 100, 2020. (ISI)
4. Ulici I., **Codrean A.**, Natsakis T., "Human-Robot Interaction with Sliding Mode Control for Rehabilitation", IFAC World Congress, 2023. (ISI)
5. Stefan O., **Codrean A.**, "Networked Control of a Small Drone Resilient to Cyber Attacks", Drones, 8(10), 552; 2024 (ISI).

● **PROJECTS**

07/2024 – 07/2025

Robust, resilient and safe networked control of small drones

Project Director, GNaC ARUT 2023 grant, 49917 lei.

● **COMMUNICATION AND INTERPERSONAL SKILLS**

Public speaking, good written communication skills (articles, reports, essays)
