

PERSONAL INFORMATION



Stefan Ungureanu

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Sex Male | Date of birth 08/03/1986 | Nationality Romanian

POSITION

Lecturer

WORK EXPERIENCE

Oct. 2023-present

Lecturer

Technical University of Cluj-Napoca, Electrical Engineering Faculty, Power Systems and Management Department, 28th Memorandumului Street, 400114, Cluj-Napoca, Romania, www.utcluj.ro

- Teaching
 - End uses of electricity
 - Energy Management
 - Energy Audit
 - SCADA Systems
 - Technologies for Increasing Energy Efficiency
- Research
 - Emulation of power grids
 - AI
- Member of research contract : DOITSMARTER Project Number:RO-ENERGY-0067
<https://entrec.utcluj.ro/doitsmarter/>
<https://eeagrants.org/archive/2014-2021/projects/RO-ENERGY-0067>
 Business or sector Education and research

Oct. 2019-Oct. 2023

Assistant Professor

Technical University of Cluj-Napoca, Electrical Engineering Faculty, Power Systems and Management Department, 28th Memorandumului Street, 400114, Cluj-Napoca, Romania, www.utcluj.ro

- Teaching
 - End uses of electricity
 - Energy Management
 - Energy Audit
- Research
 - AI
- Member of research contract : Holistica impactului surselor regenerabile de energie asupra mediului și climei – horesec **PCCDI nr. 31/2018**
 Business or sector Education and research

Nov. 2016 - Present

Electrical Engineer – Auditor (license 267 / 16.10.2024)

Voltamper SRL, Street Burebista, Nr. 31, Chinteni, Cluj

Energy audit, energy cost reduction, tariff optimization, renewable energy integration for industrial consumers and consulting.

Business or sector Energy

Feb. 2013 – Oct. 2016

Electrical Engineer

Esro Energy Services, Cluj-Napoca, Romania

Design and development of photovoltaic power plants, in the design stage of the low voltage installation. Modeling of photovoltaic systems for the impact study on the grid; Analysis of the quality of electrical energy of photovoltaic systems connected to the grid in distribution networks.

Business or sector Energy

- Aug. 2012 – Jun. 2014 **Electrical Engineer**
ECG Power Trading, Cluj Napoca (Romania)
Development of projects for the construction of four photovoltaic plants totaling 59 MW, in the stage of full technical design and financial studies. In addition to these activities, I was also involved in commercial and technical activities related to the electricity and natural gas market, with a wide range of market analyses, forecasts (energy price, consumption).
Business or sector Energy
- Nov. 2008– Oct. 2010 **Electrical Engineer**
Sept. 2011– Aug. 2012 Ten Transilvania Energy, Cluj Napoca (Romania)
The main tasks were related to the electricity market (derivatives, day-ahead market and balancing market). Electricity consumption forecasting and price forecasting.
Business or sector Energy
- Nov. 2008– Oct. 2010 **Electrical Engineer**
Sept. 2011– Aug. 2012 Tengaz, Cluj Napoca (Romania)
The main activities were related to the natural gas market (natural gas balancing platform, gas nominations and allocations). I was also responsible for database management.
Business or sector Energy
- May 2008 – Oct. 2008 Assistant software engineer
Konrad, str. Roşiori, 3, 400139 Cluj Napoca (Romania)
Development of industrial software for testing devices.
Practical implementation of data acquisition and processing systems
Business or sector Software

EDUCATION AND TRAINING

- Oct.2018 – Mar. 2022 **PhD - SHORT-TERM FORECAST OF NON-RESIDENTIAL ELECTRICITY CONSUMPTION IN THE CONTEXT OF THE SMART GRID CONCEPT** **ISCED 8**
Technical University of Cluj-Napoca, Electrical Engineering Faculty, Power Systems and Management Department, 28th Memorandumului Street, 400114, Cluj-Napoca, Romania, www.utcluj.ro
Smart Grid, Expert systems, Energy audit, Artificial intelligence applied in electrical engineering, Power quality, Simulation of electrical networks, Project management, Modern techniques in energy transport.
- Oct.2009 – Jun. 2011 **Master Degree** **ISCED 7**
Technical University of Cluj-Napoca, Electrical Engineering Faculty, Power Systems and Management Department, 28th Memorandumului Street, 400114, Cluj-Napoca, Romania, www.utcluj.ro
Expert systems, Energy audit, Artificial intelligence applied in electrical engineering, Power quality, Simulation of electrical networks, Project management, Modern techniques in energy transport.
- Oct.2005 – Jun. 2009 **Bachelor Degree** **ISCED 6**
Technical University of Cluj-Napoca, Electrical Engineering Faculty, Power Systems and Management Department, 28th Memorandumului Street, 400114, Cluj-Napoca, Romania, www.utcluj.ro
Electrical Installations, Electrical Machines, Power Electronics, Use of Electrical Energy, Electrical Energy Management, Electrical Engineering, Electronics, Electricity Generation, Electrical Networks
- Oct.2001 – Jun. 2005 **High school diploma**
Technical College „Victor Ungureanu”, Street. Laminoriştilor, 145, 405100 Câmpia Turzii (Romania)
Mathematics, Computer Science, Physics

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	C1	C1	B2

Language proficiency certificate

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

Communication skills

Communication skills developed through teaching, learning, and assessment activities, including courses, seminars, projects, and laboratory work. Strong communication abilities further enhanced through the preparation, presentation, and dissemination of scientific papers at national and international conferences. Experienced in supervising diploma and dissertation projects, conducting and collaborating in research internships both nationally and internationally, and coordinating activities within national and international research projects and contracts. Demonstrated proficiency in the preparation, technical editing, and review of scientific publications, books, research reports, project proposals, and contractual documentation. Additional communication and mentoring skills acquired through serving as a year tutor for students specializing in Energy Engineering.

Organisational / managerial skills

Strong organizational skills developed through the planning and coordination of teaching, learning, and assessment activities. Proven organizational and managerial abilities gained from arranging study visits and leading research internships both nationally and internationally. Extensive management experience acquired through coordinating and overseeing activities within research projects and contractual collaborations. Additional organizational and leadership competencies strengthened through active participation in academic, research, and professional initiatives.

Computer skills and competencies

Enthusiastic user with extensive software skills covering a wide variety of applications, constantly focused on new ways of optimization.
Engineering-specific software: Labview, EDSA, ETAP, Matlab, Mathcad, Autocad, Orcad, Pspice, TestStand, Minitab
Development software: Visual Basic, HTML, Java, PHP, CSS, HTML, Macromedia Flash
Advanced Microsoft Office skills (Excel with Visual Basic, Word with Visual Basic, Power Point, Microsoft Access, Microsoft Project)

Driving licence Driving licence category B

ADDITIONAL INFORMATION

Publications

1. Ungureanu, Stefan, Vasile Topa, and Andrei Cristinel Czikier. 2021. "Deep Learning for Short-Term Load Forecasting—Industrial Consumer Case Study" *Applied Sciences* 11, no. 21: 10126. <https://doi.org/10.3390/app112110126>
2. Ungureanu, Stefan, Vasile Topa, and Andrei Cristinel Czikier. 2021. "Analysis for Non-Residential Short-Term Load Forecasting Using Machine Learning and Statistical Methods with Financial Impact on the Power Market" *Energies* 14, no. 21: 6966. <https://doi.org/10.3390/en14216966>
3. Darab, Cosmin, Turcu Antoniu, Horia Gheorghe Beleiu, Sorin Pavel, Iulian Birou, Dan Doru Micu, Stefan Ungureanu, and Stefan Dragos Cirstea. 2020. "Hybrid Load Forecasting Using Gaussian Process Regression and Novel Residual Prediction" *Applied Sciences* 10, no. 13: 4588. <https://doi.org/10.3390/app10134588>
4. Anca Miron, Andrei Cristinel Czikier, Stefan Ungureanu, H. G. Beleiu and C. P. Dărab, "Reactive Power Compensation at Industrial Consumers: Romanian Study Case," 2022

- International Conference and Exposition on Electrical And Power Engineering (EPE)*, Iasi, Romania, 2022, pp. 101-106, doi: 10.1109/EPE56121.2022.9959800. [IEEE]
5. Tudor Pavel, Dan Doru Micu, Sorin Pavel, Horea Beleiu and Stefan Ungureanu, "Contributions to the optimization of the Electrical Power Distribution in the Station Centru From Cluj, in the Context of Updating Its Medium Voltage Network," *2022 International Conference and Exposition on Electrical And Power Engineering (EPE)*, Iasi, Romania, 2022, pp. 545-549, doi: 10.1109/EPE56121.2022.9959802. [IEEE]
6. Anca Miron, Andrei Cristinel Cziker and Stefan Ungureanu, "Fuzzy logic controller for regulating the indoor temperature," *2021 9th International Conference on Modern Power Systems (MPS)*, Cluj-Napoca, Romania, 2021, pp. 1-6, doi: 10.1109/MPS52805.2021.9492595. [IEEE]
7. Oltean Andrei, Stefan Ungureanu, Anca Miron and Andrei Cristinel Cziker, "IoT power monitoring device using Wi-fi and Arduino," *2021 9th International Conference on Modern Power Systems (MPS)*, Cluj-Napoca, Romania, 2021, pp. 1-6, doi: 10.1109/MPS52805.2021.9492651. [IEEE]
8. Stefan Ungureanu, Vasile Topa, Andrei Cristinel Cziker, Anca Miron and Cosmin Darab, "Application of Electricity Management Strategies for Lower Balancing Costs," *2020 International Conference and Exposition on Electrical And Power Engineering (EPE)*, Iasi, Romania, 2020, pp. 345-349, doi: 10.1109/EPE50722.2020.9305524. [IEEE]
9. Anca Miron, Andrei Cristinel Cziker, Ștefan Ungureanu and H. G. Beleiu, "The Impact of Multiple Small PV Units on Distribution Networks. Romanian Case-study," *2020 International Conference and Exposition on Electrical And Power Engineering (EPE)*, Iasi, Romania, 2020, pp. 339-344, doi: 10.1109/EPE50722.2020.9305552. [IEEE]
10. Stefan Ungureanu, Vasile Țopa and Andrei Cristinel Cziker, "Industrial load forecasting using machine learning in the context of smart grid," *2019 54th International Universities Power Engineering Conference (UPEC)*, Bucharest, Romania, 2019, pp. 1-6, doi: 10.1109/UPEC.2019.8893540. [IEEE]
11. Stefan Ungureanu, Vasile Țopa and Andrei Cristinel Cziker, "Integrating the industrial consumer into smart grid by load curve forecasting using machine learning," *2019 8th International Conference on Modern Power Systems (MPS)*, Cluj-Napoca, Cluj, Romania, 2019, pp. 1-9, doi: 10.1109/MPS.2019.8759707. [IEEE]
12. Stefan Ungureanu, Andrei Cziker, Adaptarea consumatorului industrial pentru rețele electrice inteligente, Conferința Internațională privind Sistemele Energetice Moderne, Cluj Napoca, MPS 2013, *5th International Conference on Modern Power Systems (MPS)*, Cluj-Napoca, Cluj, Romania, 2013, Acta Electrotehnica, ISSN 1841-3323, Special Issue, Volume 54, Number 5, 2013, pg. 508-513
13. Andrei Cziker, Anca Miron, Mircea Chindris, Stefan Ungureanu, Identificarea și clasificarea curbelor de sarcină, Conferința internațională privind sistemele moderne de energie electrică, Cluj Napoca, România, MPS 2010, *3rd International Conference on Modern Power Systems (MPS)*, Acta Electrotehnica, ISSN 1841-3323, Special Issue, Volume 51, Number 5, 2010, pg. 104-108
14. Andrei Cziker, Mircea Chindris, Anca Miron, Ștefan Ungureanu, Implementarea logicii fuzzy în energetică utilizând instrumentația virtuală, *2nd International Conference on Modern Power Systems (MPS)*, Acta Electrotehnica, ISSN 1841-3323, Special Issue, Volume 54, Number 5, 2008, pg. 133-136

References

Google Scholar <https://scholar.google.com/citations?user=OIAE6eUAAAAJ&hl=en>
 Wos Web of Science ResearcherIDABB-7455-2020
 Scopus <https://www.scopus.com/authid/detail.uri?authorId=55200161100>
 ORCID <https://orcid.org/0000-0002-0837-9639>