

PERSONAL INFORMATION

Pătărau Toma Mihai



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Sex M | Date of birth 06/05/1985 | Nationality Romanian

PROFESSIONAL EXPERIENCE

2016 - ongoing **Lecturer in the Applied Electronics Department**

2011 – 2016 **Assistant in the Applied Electronics Department**

Technical University of Cluj-Napoca, Cluj-Napoca, www.utcluj.ro

Teaching activities

1. Course responsible: Power Electronics
2. Application classes for: Power supplies, Microcontrollers; Power electronics

Research activities

Member in research contracts

1. **Electronic heating catalyst controller - eHCC**, subsequent contract no.4 285751/11.10.2019 at 7705/11.06.2014. director of subsequent contract Prof. dr. ing. Dorin Petreus, 2020.
2. **Generic 3.6KW on board charger for electrical vehicles**, subsequent contract no.3 31313/29.11.2018 at 7705/11.06.2014. director of subsequent contract Prof. dr. ing. Dorin Petreus, 2019.
3. **Techniques and technologies for increasing the power density of electronic converters**, subsidiary contract no. 5 of POC 16/01.02.2016 with the title Micro-inverters with high power density and high efficiency for renewable energies – MICROINV, responsible of the subsidiary contract Prof. dr. ing. Dorin Petreus, 2018-2020.
4. **Bidirectional Charger** subsequent contract no.2 4132/22.02.2018 at 7705/11.06.2014. director of subsequently contract Prof. dr. ing. Dorin Petreus, 2018.
5. **Bidirectional Charger** subsequent contract no.1 22528/25.09.2017 at 7705/11.06.2014. director of subsequent contract Prof. dr. ing. Dorin Petreus, 2017-2018.
6. **Complex integrated system for technological optimization and superior valorification of the wine by-products – VINIVITIS** contract PCCDI4/2018, director Serban Meza, coordinating institution UTCN Cluj-Napoca.
7. **Renewable energy management system used for small isolated communities – REMSIS**, director Prof. dr. ing. Dorin Petreus, coordinating institution UTCN Cluj Napoca, project PN-II-PT-PCCA-2013-4, contract No. 53/2013.
8. **Miniaturized Equipment with Capacitively Coupled Plasma Microtorch and Analytical Technologies for Simultaneous Elemental Determination used in Environment and Foods control - MICROCCP** – Contract PN-II-PT-PCCA-2011-3.2-0219, Responsible UTCN Prof. Dr. ing. D. Petreus, coordinating institution UBB Cluj Napoca, 2012-2016.
9. **Innovative wind energy conversion micro-system with direct-driven electric generator for residential uses – INNOWECS**, Contract PN-II-PT-PCCA-2011-3.2-1696, director Prof. Dr. Ing. Mircea Radulescu, coordinating institution UTCN Cluj Napoca.
10. **Four cells galvanic bath**, Innovation Circles contract no. 215CI / 05.12.2013 contract director Prof. dr. ing. Dorin Petreus, coordinating institution UTCN Cluj Napoca, 2013-2014.
11. **Medical equipment for magnetic therapy with low frequency pulsed magnetic field, (ATM 41)**, contract no. 20CI/07.06.2012, PN-II-IN-CI-2012-1-0042 director Prof. dr. ing. Dorin Petreus, coordinating institution UTCN Cluj Napoca, 2012-2013.

Type or sector of activity Higher Education

EDUCATION

2013 – 2009 **Ph.D. in Electronics and Telecommunications Engineering**

Technical University of Cluj-Napoca, Cluj-Napoca

Thesis title: Contributions to the analysis and design of renewable energy microgrids

2004 – 2009 Electronics Engineer Degree

Faculty of Electronics, Telecommunications and Information Technology, Technical University of Cluj-Napoca, specialization Medical Electronics

2000 – 2004 Electronics Technician Degree

Industrial Energetic School Group, Sibiu

PERSONAL ABILITIES

Native language Romanian

Other known foreign languages

	COMPREHENSION		SPEAKING		WRITING
	Listening	Reading	Conversation	Oral speech	
English	A2	B1	B2	B2	B2
Certificate of language proficiency - English for technical science					

Levels: A1/A2: Elementary user - B1/B2: Independent user - C1/C2: Experienced user
[European Language Levels](#)

Communication abilities
 Communication and organizational/managerial abilities

- Good communication skills acquired as Assistant at the Technical University of Cluj-Napoca
- Leadership skills (acquired as advisor for diploma projects and dissertations)

Abilities acquired at the workplace

- Power supplies, Microcontrollers, Power Electronics, Control systems (acquired through teaching activities).
- Good knowledge of electronics systems with photovoltaic panels
- Good knowledge of electronics systems with wind turbines
- Good knowledge of spectrometry systems
- Good knowledge of medical electronic systems
- Writing, editing and evaluating scientific papers (acquired as a reviewer for various national and international conferences and journals)

Digital abilities

- Good knowledge of Microsoft Windows tools
- Good knowledge of Microsoft Office™: Word, Excel, Power Point, Publisher.
- Good knowledge of CAD tools:
 - Simulation: PSIM, LTSpice, Proteus, Orcad,, Simulink, COMSOL, PVSol, Homer
 - Mathematical: Mathcad, Matlab
 - Layout: Orcad, Eagle, Pulsonix
 - Embedded: Keil uVision, Code composer, Code Vision AVR, LabView.
- Programming: C++, C#

Other abilities

- Automatic testing systems for power supplies

Driver's license

- B

ADDITIONAL INFORMATION

- Published work**
- 56 papers at national and international conferences
 - 6 papers in ISI journals
 - 3 patents
 - 3 gold medals and diplomas of excellence at inventing exhibitions.
- Projects**
- Member in 12 national research contracts
- Conferences**
- AQTR, ISSE, SIITME, EPE, OPTIM, CPE-POWERENG
- Seminars**
- Nanotechnology for Electronics, Cluj-Napoca, 9-10 October 2013
 - Digital control in power electronics: A power supply perspective, EPE-PEMC 2012 ECCE Europa, Novi Sad, Serbia, 3 Sept. 2012
 - Predictive control – A simple and powerful method to control power converters and drives, EPE-PEMC 2012 ECCE Europa, Novi Sad, Serbia, 3 Sept. 2012.
 - TI Power Supply Design Seminar, Bucharest Romania, 22 March 2011
 - TI Power Supply Design Seminar, Bucharest Romania, Nov. 2010
- Affiliations**
- from 2010 to 2012: participation in 2 meetings for COST MP1004 Hybrid Energy Storage Devices and Systems for Mobile and Stationary Applications. Member of COST MP 1004;
 - in March 2011: Cost 804 Training School on Energy Efficiency in Large Scale Distributed Systems, Brasov Romania

APPENDIX