

## Curriculum Vitae

### Personal information

Name / SURNAME **Călin MUNTEANU**  
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 E-mail [Calin.Munteanu@ethm.utcluj.ro](mailto:Calin.Munteanu@ethm.utcluj.ro)  
 Nationality Romanian  
 Birth date 30<sup>th</sup> of August 1965



### Work experience

Period Starting with 1990  
 Name and address of the employer Technical University of Cluj-Napoca, Romania, [www.utcluj.ro](http://www.utcluj.ro)  
 Faculty of Electrical Engineering, <http://ie.utcluj.ro/>  
 Position held Professor (starting with 2003)  
 Main activities and responsibilities

- ✚ Higher education and research in the field of Electrical Engineering (starting with 1990)
- ✚ Erasmus Programme Coordinator of Electrical Engineering Faculty (2000 – 2012)
- ✚ Head of Electromagnetic Compatibility Laboratory (starting with 2004)
- ✚ PhD Theses supervisor (starting with 2004)
- ✚ Member of the Electrical Engineering Faculty Council (starting with 2004)
- ✚ Member of the University Council for Research (2008 – 2012)
- ✚ Head of the Electromagnetic Field Numerical Modelling Laboratory belonging to the Applied Electromagnetics Research Centre – ELMA (starting with 2010)
- ✚ Member of the University Doctorate Studies Council (2011 – 2014)
- ✚ Member of the Commission for Electrical Engineering from the National Council for Attesting Titles, Diplomas and University Certificates – CNATDCU (starting with 2011)
- ✚ Head of Electrotechnics and Measurements Department (starting with 2012)
- ✚ Member of the Doctoral School Council Board from Electrical Engineering Faculty (starting 2014)
- ✚ Member of the Energy Commission of the Romanian Academy (starting with 2015)

### Education and Training

Period March 2014  
 Title / qualification obtained Project Manager  
 Educational / Training organization's name Smart Projects Association, Bucharest

Period 1992 – 1999  
 Title / qualification obtained PhD in Electrical Engineering  
 Main topic Thesis title: '*Contributions to the Boundary Elements Method implementation for the numerical modelling of the electromagnetic and thermal problems*'  
 Educational / Training organization's name Technical University of Cluj-Napoca, Romania






Period 1984 – 1989  
 Title / qualification obtained Engineer, Electric profile, Electric Drives specialization  
 Educational / Training organization's name Technical University of Cluj-Napoca, Romania

Period 1979 – 1983  
 Title / qualification obtained Baccalaureate, Mathematics – Physics profile  
 Educational / Training organization's name „Gheorghe Sincai” High School, Baia-Mare, Romania

## Didactic activity

Courses given	Electric Circuits Theory (Bachelor's degree) Electromagnetic Field Theory (Bachelor's degree) Fundamentals of Electrotechnics (Bachelor's degree) Optimal Design of Electromagnetic Devices (Bachelor's degree) Electromagnetic Compatibility, Standardization and Testing (Master degree) Optimization Techniques for Advanced Electrical Systems and Structures (Master degree) Applied Electromagnetics (Doctoral School course from Technical University Cluj-Napoca )
Cooperation with European Union	1994-1997 – Member of the TEMPUS S_JEP 8001/94 Programme 1997-2000 – Member of the TEMPUS S_JEP 12080/97 Programme 1998-2001 – Member of the TEMPUS AC_JEP 13449-98 Programme

## Research activity

Grants obtained by national competition	2014-2017 – Manager, contract PN-II-PT-PCCA-2013-4-1019 with title: <i>Coupled Electromagnetic Interferences and Vibration Analysis for Safe Automotive Electrical Actuators – CEMIVA</i> 2008-2011 – Manager, contract CNCSIS cod PN-II-ID-PCE-2008-2-2539 with title: <i>Integrated Software Package for the Analysis and Prediction of the Electromagnetic Pollution Generated by HV Lines and Substations on the Neighbour Metallic Structures and their Cathodic Protection</i> 2005-2008 – Manager, contract CNCSIS Topic A18, Code CNCSIS 986 with title: <i>Structural Optimal Design Algorithms for the Parasitic Inductivities Suppression in Nanometre Electronic Circuits</i> 1996-2011 – Member in the research team of 7 grants financed by CNCSU, ANSTI, CNCSIS, CEEX
Research / Consulting projects with industrial partners (value more than 2000 EUR)	2006-2014 – Manager of 10 research projects with industrial partners: FDEE Electrica Distributie Transilvania Nord SA, Electrogrup SA, Electromontaj Cluj SA, Siemens Energy Bucharest, Rom Project Electro Cluj, Electro Dalex Cluj, Automatic Systems Craiova. 2010-2011 – Member of the team in 2 research projects with the industrial partner SNTGN Transgaz SA Medias.
Grants obtained by international competition	2005-2007 – Co-Promoter of NATO Collaborative Linkage Grants– CLG. PST.CLG. 982075.  2004-2007 – Co-Promoter of the bilateral research project between Flanders (Belgium) – Romania BIL BWS04/03, partners VUB Brussels, Technical University of Cluj-Napoca. 2002-2004 – Co-Promoter of the bilateral research project between Flanders (Belgium) – Romania BIL BWS05/02, partners VUB Brussels, Technical University of Cluj-Napoca. 2001-2004 – Member of the research team, NATO Collaborative Linkage Grants – CLG. PST.CLG. 978487. 2000-2003 – Member of the research team, bilateral research project between Flanders (Belgium) – Romania BIL 37 / 2000, partners VUB Brussels, Technical University of Cluj-Napoca. 1997-2000 – Member of the research team, bilateral research project between Flanders (Belgium) – Romania BIL 96/174B0697, partners University of Gent, VUB Brussels and Technical University of Cluj-Napoca. 1996-1999 – Romanian partner team leader in the EU INCO-COPERNICUS 960113 Grant, partners University of Gent (B) – contractor, INSERM Lille (F), Technical University of Lods Lodz (PL), Technical University of Cluj-Napoca (RO).
Publications	 7 books as single author, first author or co-author, meaning 1 book in international printing house and 6 books in national printing houses;  More than 280 scientific articles published in national and international journals / conferences from which: <ul style="list-style-type: none"><li>❖ 66 ISI indexed articles</li><li>❖ 72 SCOPUS indexed articles</li><li>❖ 121 Google Scholar indexed articles</li></ul>  70 citations in ISI database indexed articles  119 citations in SCOPUS database indexed articles  271 citations in Google Scholar database indexed articles

- Institutional projects**
- 2014-2015 – Manager, EU funding project POSDRU/159/1.5/S/137516 with title: *Interuniversity Partnership for Excellence in Engineering – PARTING*.
  - 2010-2012 – Member in the EU funding project POSDRU/89/1.5/S/52603 with title: *Development and Sustainability of the Interdisciplinary Postdoctoral Programmes in Priority Technical Domains of the National Innovation – Development – Research Strategy – 4D - POSTDOC*.

## Additional information

- Awards / Patens**
- 2008: „Liviu Mânduc” Award for excellence in scientific research and promotion of the University prestige, granted by the University Senate on 31.01.2008.
  - 2007: Patent no. 120998 with title: *Power Supply and Protection Electric System for the Radio Communication Devices*.
  - 2000: "Gheorghe Cărtianu" Romanian Academy Award for the book *Optimal Design of the Electromagnetic Devices using Numerical Techniques*, VUBPRESS Brussels, Belgium, ISBN 90-5487-288-8.
- Member of professional societies**
- IEEE Electromagnetic Compatibility
  - IEEE Power Engineering
  - IEEE Power Electronics
  - IEEE Microwave Theory and Techniques
  - CIGRE Paris
  - Romanian Association for Electromagnetic Compatibility – ACER
  - Romanian National Committee of CIGRE
  - Romanian National Committee of World Energy Council – WEC
- Other relevant activities**
- Supervisor of 7 PhD Theses defended in Electrical Engineering profile
  - Chairman of the following editions of the *International Conference on Modern Power Systems – MPS*, Cluj-Napoca, Romania: 2006, 2008, 2010, 2011, 2013 and 2015, [www.et.utcluj.ro/mps](http://www.et.utcluj.ro/mps)
  - Member of the organizing Committee of the 2003 and 2005 editions of the *International Workshop on Advances in Numerical Computation Methods in Electromagnetism - ANCME*, Gent (2003), Brussels (2005), Belgium.
  - Reviewer for the following ISI journals:
    - ❖ IEEE Transactions on Magnetics
    - ❖ IEEE Transactions on Power Delivery
    - ❖ IEEE Transactions on Dielectrics and Electrical Insulation
    - ❖ IET Science, Measurement & Technology
    - ❖ IET Generation, Transmission & Distribution
    - ❖ Journal of Circuits, Systems and Computers
    - ❖ Journal of Numerical Modelling: Electronic Networks, Devices and Fields
  - Reviewer for the following ISI indexed Conferences: EPE 2012, OPTIM 2014, ICHQP 2014
  - Member of the scientific Committee of the following Conferences EPE 2012, EPE 2014, ICATE 2012, ICATE 2014, UPEC 2014, CIEM 2015
  - Member of 2 international public defence PhD Theses (VUB Brussels, Belgium)
  - Member of 49 national public defence PhD Theses
  - Member in Councils / Organizations in the field of international research: CIGRE Paris: C4 Study Committee, WG C4.28, AG C4.2, AG C4.3
  - Head of the C4 Study Committee from the CIGRE Romanian National Committee

#### Articles in ISI rated journals, in the past 5 years:

- [1]. C. Munteanu, E. Merdan, V. Topa, I. T. Pop, S. Deleanu, Power Frequency Magnetic Field Mitigation Nearby Power Lines using Rectangular Frames, *Environmental Engineering and Management Journal*, Vol. 12, No. 6, pp. 1137 – 1143 (2013).
- [2]. C. Pacurar, V. Topa, C. Munteanu, A. Racasan, C. Hebedean, Studies of Inductance Variation for Square Spiral Inductors using CIBSOC Software, *Environmental Engineering and Management Journal*, Vol. 12, No. 6, pp. 1161 – 1169 (2013).
- [3]. C. Hebedean, C. Munteanu, C. Pacurar, A. Racasan, Application of Windings Shifting for the Optimization of Planar Structures, *Environmental Engineering and Management Journal*, Vol. 12, No. 6, pp. 1153 - 1159 (2013).
- [4]. M. Purcar, C. Munteanu, V. Topa, 3D Electrode Shape Change Simulation in Electroplating, *Revue Roumaine des Sciences Techniques – Électrotechnique et Énergetique*, 58, 3, p. 252–262, (2013).
- [5]. C. Munteanu, G. Mates, M. Purcar, V. Topa, I.T. Pop, L. Grindei, A. Racasan, Electromagnetic field model for the numerical computation of voltages induced on buried pipelines by high voltage overhead power lines , *The European Physical Journal, Applied Physics*, DOI: 10.1051/epjap/2012110462, Vol. 58(3), ID30902, 2012.
- [6]. M. Purcar, V. Topa, C. Munteanu, R. Chereches, A. Avram, L. Grindei, Optimization of the current density distribution in electrochemical cells based on the level set method and genetic algorithm, *European Physical Journal-Applied Physics*, Vol . 58(1), 2011.
- [7]. V. Topa, M. Purcar, A. Avram, C. Munteanu, R. Chereches, L. Grindei, Simulation of the electrode shape change in electrochemical machining based on the LSM, *European Physical Journal-Applied Physics*, Volume: 56, Issue: 1, 2012, pp. 11302-p1 -11302-p8, DOI: 10.1051/epjap:2007098.
- [8]. M. Purcar, V. Topa, C. Munteanu, R. Chereches, A. Avram, L. Grindei, Optimization of the Layer Thickness Distribution in Electrochemical Processes Using the Level Set Method, *IET Science, Measurement & Technology*, Vol. 6, issue5, 2012, pp. 376 – 385.
- [9]. V. Topa, M. Purcar, C. Munteanu, L. Grindei, C. Pacurar, O. Garvasiuc, Shape optimization approach based on the extended finite element method, *Compel-The International Journal For Computation And Mathematics In Electrical And Electronic Engineering* Vol. 31 Issue: 2, 2012, pp. 477-497, DOI: 10.1108/03321641211200545.
- [10]. Pacurar Claudia, Topa V., Munteanu C., Racasan Adina, Hebedean Claudia, Studies of Inductance Variation for Square Spiral Inductors using CIBSOC Software, *Environmental Engineering and Management Journal*, vol. 12, pp. 1161-1169, ISSN 1582-9596, June 2013
- [11]. Hebedean Claudia, Munteanu C., Racasan Adina, Pacurar Claudia, Application of Windings Shifting for the Optimization of Planar Structures, *Environmental Engineering and Management Journal*, vol. 12, pp. 1153-1159, ISSN 1582-9596 June 2013
- [12]. M. Purcar, A. Dorochenk, L. Bortels, J. Deconinck, B. Van den Bossche , Advanced CAD integrated approach for 3D electrochemical machining simulations, *Journal Of Materials Processing Technology*, Vol. 203, Issue: 1-3, 2008, pp. 58-71.
- [13]. T. Pop, C. Munteanu, V. Topa, A. Racasan, E. Merdan, Human Exposure to Power Frequency Electric Field Inside Very High Voltage Substations , *Environmental Engineering and Management Journal*, Vol. 10, No. 4, 2011, pp. 499-504.
- [14]. A. Racasan, C. Munteanu, V. Topa, M. Purcar, L. Grindei , Computation of the Potential Induced on the Fluid Transport Pipelines by Overhead High Voltage Lines, *Environmental Engineering and Management Journal*, Vol. 10, No. 4, 2011, pp. 505-510.

## Articles in ISI proceedings, in the past 5 years:

- [1]. Racasan Adina, Munteanu C., Topa V., Pacurar Claudia, Hebedean Claudia, Marcu C., Home Appliances Conducted Electromagnetic Emissions Analysis and Mitigation Methods, *The 9<sup>th</sup> International Symposium on Advanced Topics in Electrical Engineering – ATEE 2015*, Bucuresti, Romania, 7-9 May 2015, pp. 356 – 361, ISBN 978-1-4799-7514-3,
- [2]. Hebedean Claudia, Munteanu C., Racasan Adina, Pacurar Claudia, Augustin D., The Influence of Parameters on the Parasitic Capacitance Values in a Planar Transformer, *The 9<sup>th</sup> International Symposium on Advanced Topics in Electrical Engineering – ATEE 2015*, Bucuresti, Romania, 7-9 May 2015, pp. 838 – 343, ISBN 978-1-4799-7514-3
- [3]. Hebedean Claudia, Munteanu C., Racasan Adina, Pacurar Claudia, Analysis of the Influence of Parasitic Parameters on Planar Transformers, *14<sup>th</sup> International Conference on Optimization of Electrical and Electronic Equipment – OPTIM 2014*, Brasov, Romania, 22-24 May 2014, pp. 40 – 45, ISBN: 978-1-4799-5183-3
- [4]. Racasan Adina, Munteanu C., Topa V., Pacurar Claudia, Hebedean Claudia, Filter Geometry Optimisation for the Conduction Electromagnetic Interferences Suppression, *14<sup>th</sup> International Conference on Optimization of Electrical and Electronic Equipment – OPTIM 2014*, Brasov, Romania, 22-24 May 2014, pp. 46 – 51, ISBN 978-1-4799-5183-3
- [5]. Pacurar Claudia, Topa V., Racasan Adina, Munteanu C., Hebedean Claudia, Spiral Inductors Analysis and Modelling, *14<sup>th</sup> International Conference on Optimization of Electrical and Electronic Equipment – OPTIM 2014*, Brasov, Romania, 22-24 May 2014, pp. 210 – 215, ISBN 978-1-4799-5183-3
- [6]. Racasan Adina, Munteanu C., Topa V., Pacurar Claudia, Hebedean Claudia, Adam Ema, Numerical Analysis and Modelling of the Electromagnetic Interferences in Integrated Planar Structures, *16<sup>th</sup> International Conference on Harmonics and Quality of Power, ICHQP 2014*, Bucharest, Romania, 25-28 May 2014, pp.122-126, ISBN 978-146736487-4, ISSN 2164-0610
- [7]. Hebedean Claudia, Munteanu C., Racasan Adina, Pacurar Claudia, HF Losses Improvement for a Planar Integrated EMI Filter, *2014 International Conference on Production Research – Regional Conference Africa, Europe and the Middle East 3<sup>rd</sup> International Conference on Quality and Innovation in Engineering and Management*, Cluj Napoca, Romania, 1-5 July 2014, pp. 235-240, ISBN 978-973-662-978-5
- [8]. Pacurar Claudia, Topa V., Racasan Adina, Munteanu C., Rafiroiu D., Hebedean Claudia, High Frequency 3D Modeling of Spiral Inductors, *2014 International Conference on Production Research–Regional Conference Africa, Europe and the Middle East 3<sup>rd</sup> International Conference on Quality and Innovation in Engineering and Management*, Cluj Napoca, Romania, 1-5 July 2014, pp. 379-383, ISBN 978-973662978-5
- [9]. Racasan Adina, Munteanu C., Topa V., Pacurar Claudia, Hebedean Claudia, Electromagnetic Interferences Suppression in Planar Integrated Devices, *Proc. of the 2014 International Symposium on Electromagnetic Compatibility*, Gothenburg, Sweden, 1-4 September 2014, pp. 940-945, ISBN 978-1-4799-3225-2, ISSN 10774076
- [10]. Racasan Adina, Munteanu C., Topa V., Pacurar Claudia, Hebedean Claudia, Cislariu Mihaela, Methods for Planar Integrated Low Pass Filter Performance Improvements in High Frequency, *Proc. of the 2014 International Conference and Exposition on Electrical and Power Engineering*, Iasi, Romania, 16-18 Octombrie 2014, pp. 617-621, ISBN 978-1-4799-5849-8
- [11]. Hebedean Claudia, Munteanu C., Racasan Adina, Pacurar Claudia, Efficiency determination for the improvement methods used for planar structures applied on EMI filters, *Proc. of the 2014 International Conference and Exposition on Electrical and Power Engineering*, Iasi, Romania, 16-18 Octombrie 2014, pp. 627-632, ISBN 978-1-4799-5849-8
- [12]. Pacurar Claudia, Topa V., Racasan Adina, Munteanu C., Hebedean Claudia, Rafiroiu D., Cislariu Mihaela, High Frequency Modeling of Square Spiral Inductor, *Proc. of the 2014 International Conference and Exposition on Electrical and Power Engineering*, Iasi, Romania, 16-18 Octombrie 2014, pp. 622-626, ISBN 978-1-4799-5849-8
- [13]. Hebedean Claudia, Munteanu C., Răcășan Adina, Păcurar Claudia, Parasitic Capacitance Removal with Embedded Ground Layer, *IEEE EuroCon 2013*, 1-4 July 2013, Zagreb, Croatia, pp. 1863-1868, ISBN 978-1-4673-2232-4
- [14]. Păcurar Claudia, Topa V., Răcășan Adina, Munteanu C., Hebedean Claudia, Spiral Inductors Inductance Computation And Layout Optimization, *Proceedings of the International Conference and Exposition on Electrical and Power Engineering, 7<sup>th</sup> edition, EPE 2012*, Iași, România, October 25-27, 2012, pp. 699-704, ISBN: 978-1-4673-1172-4
- [15]. Răcășan Adina, Munteanu C., Topa V., Păcurar Claudia, Hebedean Claudia, Minimization of the Equivalent Parallel Capacitance in Planar Magnetic EMI Filters, *Proceedings of the International Conference and Exposition on Electrical and Power Engineering, 7<sup>th</sup> edition, EPE 2012*, Iași, România, October 25-27, 2012, pp. 519-524, ISBN: 978-1-4673-1172-4
- [16]. Hebedean Claudia, Munteanu C., Răcășan Adina, Păcurar Claudia, Optimum geometry for planar structures regarding their loss factor, *Proceedings of the International Conference and Exposition on Electrical and Power Engineering, 7<sup>th</sup> edition, EPE 2012*, Iași, România, October 25-27, 2012, pp. 693-698, ISBN: 978-1-4673-1172-4
- [17]. Racasan Adina, Munteanu C., Topa V., Purcar M., Grindei Laura, Computation of the Potential Induced on the Fluid Transport Pipelines by Overhead High Voltage Lines, *Environmental Engineering and Management Journal*, vol. 10, no. 4, Aprilie 2011, pp. 505-510, ISSN: 15829596

**Research Grants in the past 5 years:**

- [1]. 2014-2017 – Manager, contract PN-II-PT-PCCA-2013-4-1019 with title: *Coupled Electromagnetic Interferences and Vibration Analysis for Safe Automotive Electrical Actuators – CEMIVA*

**PhD theses as supervisor in the past 5 years:**

- [1]. 2012 – Oana Antonescu – *Contribuții la modelarea propagării perturbațiilor electromagnetice pe linii electrice aeriene*
- [2]. 2012 – Claudia Hebedean - *Contribuții la îmbunătățirea performanțelor filtrelor realizate în tehnologie electromagnetică planară*
- [3]. 2013 – Ioan Tilea – *Contribuții la studiul perturbațiilor electromagnetice din sistemele motor-invertor*
- [4]. 2015 – Gheorghe Mates – *Pachet software de analiză și supresie a interferențelor electromagnetice între rețele electrice și conducte metalice subterane*

Cluj-Napoca,  
20.07.2016

Prof. Dr. eng. Călin MUNTEANU