

## Aurelian Crăciunescu



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### Personal

Born on Jan. 18, 1941.  
Romanian citizen.

### Education

**Ph.D.** Electrical Engineering, the University *Politehnica* of Bucharest, 1973.  
**M.Sc.** Electrical Engineering, the University *Politehnica* of Bucharest, 1963.

### Teaching and Research Fields

Electrical Machines, Electrical Drives, Renewable Energies.

### Employment

**Professor of Electrical Engineering**, University *Politehnica* of Bucharest, 1991-present.  
**Asociat Professor of Electrical Engineering**, University *Politehnica* of Bucharest, 1978-1990.  
**Lecturer of Electrical Engineering**, University *Politehnica* of Bucharest, 1973-1977.  
**Assistant Professor of Electrical Engineering**, University *Politehnica* of Bucharest, 1963-1972.

### Professional Activities

Supervised PhD thesis: 34, with electrical machines, drives and renewable energy subjects.



#### Responsible for International Project:

1. Transparent Simulation Programme for Electrical and Hybrid Vehicles, 1982 – 1983  
Associated Contract ERB-CIPDCT-930349 to the Contract ERB-JOU2-CT92-0200. Coordinated by University of Kaiserslautern, Germany
2. Development and application of water pumping system for remote areas consisted of photovoltaic (PV) modules with inverters integrated into the PV modules and a new type of a asynchronous pump motor. Contract ICOP-DEMO-2154-1996, coordinated by Agricultural University of Athens, Greece. 2000 – 2002
3. NETCAMPUS – Improving Open and Distance Learning in a Network, Socrates-Minerva Project. Coordinated by Europace Organization, Leuven, Belgique. 2000 – 2003
4. PV ENLARGEMENT – Technology Transfer, Demonstration and Scientific Exchange Action for the Establishment of a Strong European PV Sector. Contract no. NNE5/736/2001, coordinated by WIP, München, Germany. 2002 – 2006
5. Proiect „Leonardo da Vinci” D/98/2/05157/PI/II.1.1a/CONT „TEQUITA – Teamorientierte Qualifizierungsmodelle für Informations- und Telekommunikationsausbildung”, Koordinator: Bezirksregierung Düsseldorf (NRW-Deutschland). 1998 – 2000
6. EURO-EXIST: Kooperationsvertrag „Qualifizierungskonzept(e) zur Förderung europäisch ausgerichter Existenzgründungen”, LEONARDO-Pilotproject No. D/99/2/011081/P1/II.1.1.a/FPC, Koordinator: Bezirksregierung Düsseldorf (NRW-Deutschland). 1999 – 2000
7. VICO-ECOM: Virtual Corporate Learning about Electronic Commerce, LEONARDO DA VINCI Pilot Project D/01/B/F/PP-112511, Coordinator: the Berufskolleg Rheydt Mülfort für Wirtschaft und Verwaltung, 3738 Euro 2000 – 2003

#### Director of National Project:

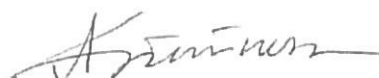
1. Motor de curent continuu cu magneți permanenți pentru transport uzinal realizat în gabaritul motorului Ce 80-TU. Contract de cercetare științifică nr. 4-2-3/29.06.1982, beneficiar: UMEB, București. 1982 – 1983
2. Acționări electrice monofazate cu performanțe de pornire îmbunătățite pentru pompe și ventilatoare, Contract de cercetare ANSTI. 1999
3. Tehnici avansate de comandă a acționărilor electrice, M.C.T., Contract de cercetare U.P.B.; 1999
4. RELANSIN/ Vehicul electric ușor cu utilizări multiple 2001 – 2002
5. RELANSIN/ Sistem electric de propulsie pentru vehicule rutiere 2001 – 2002

#### Member of professional societies:

- IEEE Industrial Electronics Society,
- SEPA – Solar Electric Power Association,
- EPE – European Power Electronics.

#### Session Conference Chairman:

- Symposium on Advanced Topics in Electrical Engineering – ATEE 2013, May 23÷25 2013, Bucharest, Romania.
- International Conference on Renewable Energies and Power Quality – ICREPQ'13, March 20÷22, 2013, Bilbao, Spain.



- International Conference on Renewable Energies and Power Quality – ICREPQ'12, March 28 - April 1, 2012, Santiago de Compostela, Spain.
- International Conference on Renewable Energies and Power Quality – ICREPQ'11, April 13-15, 2011, Las Palmas, Spain.
- International Conference on Renewable Energies and Power Quality – ICREPQ'10, March 23-25, 2010, Granada, Spain.
- World Congress on Engineering and Computer Science – WCECS 2009, October 20-22, 2009, San Francisco, USA.
- The 10<sup>th</sup> International Conference on Optimization of Electrical and Electronic Equipment – OPTIM 2006, May 18-19, 2006, Braşov, Romania.
- The 12<sup>th</sup> International Conference on Optimization of Electrical and Electronic Equipment – OPTIM 2010, May 20-22, 2010, Braşov, Romania.
- The 6<sup>th</sup> Symposium on Advanced Topics in Electrical Engineering – ATEE 2008.

**Founding Member and Member of Board of Directors:**

- **EuroPACE 2000** – Virtual University of Europe (1992-2000). Central quartier in Leuven, Belgium.
- **CPRU** - "Centrul pentru Perfecţionarea Resurselor Umane – Center for Human Resources Development" of University Politehnica of Bucharest (1990).

**Conference Paper Reviewer:**

- IEEE AFRICON 2009,
- EDPE 2011 – the 17<sup>th</sup> International Conference on Electrical Drives and Power Electronics, the High Tatras, Slovakia, 28-30 September, 2011,
- OPTIM – International Conference on Optimization of Electrical and Electronic Equipment, Brasov, Romania, 2008, 2010, 2012.
- The 8<sup>th</sup> Int. Symposium on Advanced Topics in Electrical Engineering – ATEE'13, May 23-25, 2013, Bucharest, Romania.

**International Grants:**

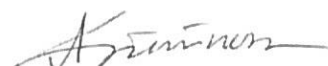
DAAD Grant for Visiting Professor at University of Duisburg, Duisburg, Germany, 1992.  
 DAAD Grants for Visiting Professor at Technical University of Darmstadt, Germany, 1994, 1996, 2000.

**Socrates-Erasmus Mobility Coordinator:**

Technical University of Darmstadt, Germany, Partner: Prof. Dr.-Ing. Dr.habil, Dr.h.c, Andreas Binder.  
 Technical University of Eindhoven, the Netherlands, Partner: Prof. Dr. Ir. Elena Lomonova.  
 University of Lisbon, Portugal, Partner: Prof. Dr. Ing. Stan Valtchev.

**Administrative activities:**

- **Vice-dean** of Electrical Engineering Faculty: 1978-1981; 1982-1985; 1986-1989.
- **Dean** of Electrical Engineering Faculty: 1990-1992.



Several conferences and journal papers from the last years:

1. M. Louzazni, A. Khouya, K. Amechnoue, M. Mussetta and **A. Craciunescu**, "Modelling and Parameters Optimization of Flexible Hydrogenated Amorphous Silicon a-Si:H Solar Cell by Firefly Algorithm" *Applied Solar Energy*, (2018).
2. A. Al-Gizi, M. Al-Saadi, S. Al-Chlaihawi, **A. Craciunescu**, and M. A. Fadel, "Experimental installation of photovoltaic MPPT controller using Arduino board," *Proc. of the IEEE International Conference on Applied and Theoretical Electricity (ICATE 2018)*, Craiova, Romania, October 4-6, (2018).
3. L. Laggoun, L. Youb, S. Belkacem, S. Benaggoune, and **A. Craciunescu**, "Direct torque control using second order sliding mode of a double star permanent magnet synchronous machine," *U.P.B. Sci. Bull., Serie C, Vol. 80, Iss. 4*, (2018).
4. Ammar Al-Gizzi, M. Louzazni, M. A. Fadel, and **A. Craciunescu**, "Critical constant illumination time in comparison of two photovoltaic maximum power point tracking algorithm", *U.P.B. Sci. Bull., Serie C, Vol. 80, Iss. 2*, (2018).
5. M. Al-Saadi, A. Al-Gizzi, S. K. Ahmed, and **A. Craciunescu**, "Charge Plate Configurations Analysis in Unipolar Capacitive Power Transfer System for Electric Vehicles' Batteries Charging," *The 12th International Conference Interdisciplinarity in Engineering*, 4-5 Oct., Targu-Mures, Romania, (2018).
6. Al-Saadi M., Al-Bahrani L., Al-Qaisi M., Al-Chlaihawi S., **Crăciunescu A.**, "Capacitive power transfer for wireless batteries charging", in *Electrotehnica, Electronica, Automatica (EEA)*, vol. 66, no. 4, pp. 40-51, ISSN 1582-5175. (2018).
7. Al-Saadi M., Al-Omari A., Al-Chlaihawi S., Al-Gizi, A., **Crăciunescu A.**, "Inductive Power Transfer for Charging the Electric Vehicle Batteries", in *Electrotehnica, Electronica, Automatica (EEA)*, vol. 66, no.4, pp.29-39, ISSN 1582-5175. (2018).
8. M. Louzazni, A. Khouya, K. Amechnoue, M. Mussetta and **A. Craciunescu**, "Comparison and evaluation of statistical criteria in the solar cell and photovoltaic module parameters extraction", *International Journal of Ambient Energy*, volume 39, pp 1-20, (2018).
9. Ammar Al-Gizzi, M. Al-Saadi, S. Al-Chlaihawi, and **A. Craciunescu**, "Experimental Installation of Photovoltaic MPPT Controller Using Arduino Board." *Int. Conf. on Applied and Theoretical Electricity*," Craiova, Romania, (2018).
10. Ammar Al-Gizi, **A. Craciunescu**, M. A. Fadel, and M. Louzazni, "A new hybrid algorithm for PV MPPT under partial shading conditions," *Rev. Roum. Sci. Techn.-Électrotechn. et Énerg.*, vol. 63, no. 1, (2018)
11. M. Louzazni, A. Khouya, K. Amechnoue, A. Gandelli, M. Mussetta and **A. Craciunescu** "Metaheuristic Algorithm on Photovoltaic Parameters: Comparative Study and Prediction with Firefly Algorithm" *Applied Sciences*, volume 8, N°. 3, pp. 339-361, February. (2018).
12. S. Al-Chlaihawi, **A. Craciunescu**, M. Louzazni, and Ammar Al-Gizi "Full bridge three port converter power flow control using fuzzy logic controller", *IEEE International Conference on Environment and Electrical Engineering and IEEE Industrial and Commercial Power Systems Europe (EEEIC / I&CPS Europe)*, Milan, Italy, 6-9 June (2017).



13. S. Al-Chlaihawi, **A. Craciunescu**, and Ammar Al-Gizzi „The use of ANN to supervise the PV MPPT based on FLC”, *10th International Symposium on Advanced Topics in Electrical Engineering (ATEE)*, Bucharest, Romania, (2017).
14. Ammar Al-Gizzi, **A. Craciunescu**, and S. Al-Chlaihawi, „The use of ANN to supervise the PV MPPT based on FLC”, *10th International Symposium on Advanced Topics in Electrical Engineering (ATEE)*, Bucharest, Romania, (2017).
15. M. Louzazni, A. Khouya, K. Amechnoue, **A. Craciunescu**, and M. Musetta, “Comparative prediction of single and double diode parameters for solar cell models with firefly algorithm”, *10th International Symposium on Advanced Topics in Electrical Engineering (ATEE)*, Bucharest, Romania, (2017).
16. Ammar Al-Gizi, S. Al-Chlaihawi, M. Louzazni and **A. Craciunescu** “Genetically Optimization of an Asymmetrical Fuzzy Logic Based Photovoltaic Maximum Power Point Tracking Controller”, *Advances in Electrical and Computer Engineering*, volume 17, N<sup>o</sup>. 4, pp. 69-76, (2017).
17. M. Louzazni, A. Khouya, K. Amechnoue, and **A. Craciunescu**, “Parameter estimation of photovoltaic module using bio-inspired firefly algorithm”, *International Renewable and Sustainable Energy Conference (IRSEC)*, Marrakech, Morocco, 14-17 Nov. (2016).
18. L. Patularu, S. Enache, and **A. Craciunescu**, “Experimental evaluation of reference values for PEM fuel cell”, *U.P.B. Sci. Bull., Serie C, Vol. 78, Iss. 1*, (2016).
19. J. Aymen, Z. Ons, M. M. Nejjib, and **A. Craciunescu**, “Maximum Power Point Tracking of Photovoltaic Modules: Comparison of Fuzzy Logic and Artificial Network Controllers' Performances,” *Third Int. Conf. on Mathematics and Computers in Sciences and in Industry (MCSI)*, Chania, Greece, August 27-29, (2016).
20. V. Olteanu, L. Pătaru, G. Ciumbulea, and **A. Crăciunescu**, „Use of surface response methodology for the fuel cells mathematical modelling,” *The 9th Int. Symposium on Advanced Topics in Electrical Engineering (ATEE)*, Bucharest, Romania, (2015).
21. M. Louzazni, **A. Craciunescu**, E. H. Aroudam, and A. Dumitrache, “Identification of Solar Cell Parameters with Firefly Algorithm”, *Second International Conference on Mathematics and Computers in Sciences and in Industry (MCSI)*, Sliema, Malta, 17 Aug. (2015).

Mai., 2019

Prof. univ. emeritus dr. ing. Aurelian Crăciunescu, PhD

