

CONTACT INFORMATION 4 Prousis Street, Flat 101 *Tel:* +357 96455500
Lakatamia, 2314 *E-mail:* alazar01@ucy.ac.cy
Nicosia Cyprus

CURRENT POSITION **Special Scientist** January 2011 to present
Department of Electrical and Computer Engineering, University of Cyprus
PSM Lab, Foss Research Center

- Dr. Charalambos A. Charalambous (PSM Lab).
- Transformer Loss Evaluation Techno-Economic Methods and Asset Management Studies under RES Penetration.
- Financially supported by Electricity Authority of Cyprus (E.A.C).

Visiting Lecturer September 2015 to present
Department of Computer Science and Engineering, European University Cyprus

- Please see below the course delivered within this role.

EDUCATION **University of Cyprus, Nicosia, Cyprus**
Ph.D., Electrical Power Engineering 2011 – 2016

- Advisor: Dr. Charalambos A. Charalambous.
- Thesis Title: “*Life-cycle loss evaluation and Total Ownership Cost of transformers in vertically-integrated and decentralized energy systems integrating Renewable Energy Sources*”.
- Outcome: <http://psm.ucy.ac.cy/online-tools/>
- Research Projects: EVLOCOST, EARTHPORT, HIDNET (Financially supported by Electricity Authority of Cyprus – EAC).

University of Bristol, Bristol, United Kingdom
M.Eng. (Honours), Electrical and Electronic Engineering 2006 – 2010

- Advisor: Dr. Ian J. Craddock.
- Thesis Title: “*Electromagnetic modeling tools using the ADI-FDTD method*”.
- Grade: Second-class, upper division (2:1).

EMPLOYMENT **Course Instructor (Part – Time)** 2015 – 2016
Fall 2015, Spring 2016
Department of Computer Science and Engineering, European University Cyprus

Special Scientist – Research Assistant 2011 – 2016
PSM Lab, Foss Research Center
Department of Electrical and Computer Engineering, University of Cyprus

Teaching Assistant

2011 – 2016

Department of Electrical and Computer Engineering, University of Cyprus

RESEARCH INTERESTS

- Loss evaluation methodologies (transformers, transmission lines).
- Power plants techno-economic feasibility studies.
- Power system asset management (transformers, transmission lines).
- Renewable energy generation/penetration.
- Power system modeling.
- Power system long-term planning.

TEACHING EXPERIENCE

Department of Electrical and Computer Engineering University of Cyprus

Teaching Assistant

- ECE 681: Power Systems: Operation and Control
 - Spring 2016
 - Responsible for 2-hour lecture. Prepare and present class exercises and problems. Grading assigned homework and provide students with feedback and assistance when needed.
 - Instructor: E. Kyriakides, Ph.D.

Teaching Assistant

- ECE 105: Engineering Analysis and Modelling
 - Fall 2011/2014/2015
 - Responsible for 2-hour lecture. Prepare and present class exercises and problems. Grading assigned homework and provide students with feedback and assistance when needed.
 - Instructor: C.A. Charalambous, Ph.D.

Teaching Assistant

- ECE 340: Power Engineering
 - Spring 2011
 - Responsible for 2-hour lecture. Prepare and present class exercises and problems. Grading assigned homework and provide students with feedback and assistance when needed.
 - Instructor: C.A. Charalambous, Ph.D.

Teaching Assistant

- ECE 205: Electronic Devices and Circuits I
 - Spring 2011/2012/2013/2014/2015
 - Responsible for 2-hour lecture. Prepare and present class exercises and problems. Grading assigned homework and provide students with feedback and assistance when needed.

- Instructor: I. Krikidis, Ph.D.

Teaching Assistant

- ECE 203: Circuits and Measurements Lab
 - Fall 2013
 - Supervision of 3-hour laboratory. Students design and implement a system both in hardware and software to meet certain specifications and perform a specified task.
 - Instructor: G. Zaggoulos, Ph.D.

Teaching Assistant

- ECE 101: Introduction to Design and Engineering Lab
 - Fall 2012
 - Supervision of 3-hour laboratory. Students design and implement a system both in hardware and software to meet certain specifications and perform a specified task.
 - Instructor: E. Christoforou, Ph.D.

**Department of Computer Science and Engineering
European University Cyprus**

Course Instructor

- ECE 101: Electric Circuits I
 - Spring 2016
 - Supervision of 3-hour lecture. Basic principles of DC circuit analysis and design.
 - Instructor: A. Lazari, Ph.D.

Course Instructor

- ECE 242: Electric Circuits II Laboratory
 - Spring 2016
 - Supervision of 3-hour laboratory. Experimental analysis, design and report of AC circuit elements and behavior.
 - Instructor: A. Lazari, Ph.D.

Course Instructor

- CSG 193: Computer Science & Health
 - Fall 2015
 - Supervision of 3-hour lecture. Introduction of computer and network theory in Health Sciences. Practical section concerning the basic use of computers (Windows, Email, Word, Excel, SPSS).
 - Instructor: A. Lazari, Ph.D.

TUTORING
EXPERIENCE

Department of Electrical and Computer Engineering
University of Cyprus

Undergraduate Tutor

- Tutoring for students covering material from undergraduate modules in the area of Electrical and Power Engineering.
- Tutoring for students to fulfill their undergraduate final year research project.

THESIS
PUBLICATIONS

[1] **A. Lazari**. “*Life-cycle loss evaluation and Total Ownership Cost of transformers in vertically-integrated and decentralized energy systems integrating Renewable Energy Sources*”. Doctor of Philosophy (PhD) thesis, Department of Electrical and Computer Engineering, University of Cyprus, February 2016.

[2] **A. Lazari**. “*Electromagnetic modelling tools using the ADI – FDTD method*”. Master of Engineering thesis, Department of Electrical and Electronic Engineering, University of Bristol, United Kingdom, May 2010.

PEER REVIEWED
JOURNAL PAPERS

[3] **Lazari, A.L.**; Charalambous, C.A., "Probabilistic Total Ownership Cost of Power Transformers Serving Large-Scale Wind Plants in Liberalized Electricity Markets", *IEEE Transactions on Power Delivery*, vol.PP, no.99, pp.1,1. DOI: 10.1109/TPWRD.2014.2365832.

[4] **Lazari, Antonis L.**; Charalambous, Charalambos A.: 'Life-cycle loss evaluation of power transformers serving large photovoltaic plants in vertically integrated and decentralized systems', *IET Generation, Transmission & Distribution*, 2015, DOI: 10.1049/iet-gtd.2014.0465IET.

[5] Charalambous, C.A.; Milidonis, A.; **Lazari, A.**; Nikolaidis, A.I., "Loss Evaluation and Total Ownership Cost of Power Transformers—Part I: A Comprehensive Method", *IEEE Transactions on Power Delivery*, vol.28, no.3, pp.1872-1880, July 2013. DOI: 10.1109/TPWRD.2013.2262506.

[6] Charalambous, C.A.; Milidonis, A.; Hirodontis, S.; **Lazari, A.**, "Loss Evaluation and Total Ownership Cost of Power Transformers—Part II: Application of Method and Numerical Results", *IEEE Transactions on Power Delivery*, vol.28, no.3, pp.1881-1889, July 2013. DOI: 10.1109/TPWRD.2013.2262507.

[7] **Antonis L. Lazari** and Charalambos A. Charalambous, “Integrating Greenhouse Gas Emissions Costs in Lifecycle Loss Evaluations: A Case Study for Transmission Lines”, Journal of Conference Papers in Energy, vol. 2013, Article ID 682130, 6 pages, July 2013. DOI:10.1155/2013/682130.

REFEREED
INTERNATIONAL
CONFERENCE
PAPERS

[8] **Antonis L. Lazari** and Charalambos A. Charalambous, “Contemplation of Transformer Loss Evaluation Methods in Vertically Integrated and Decentralized Energy Systems”, IEEE Powertech 2015 Conference, Eindhoven, Netherlands, June 2015.

[9] **Lazari, A.L.**; Charalambous, C.A., "Integrating fossil fuel mix and pricing in evaluating the Total Ownership Cost of distribution transformers of vertically integrated utilities", 2014 IEEE International Energy Conference (ENERGYCON), vol., no., pp.1184-1189, 13-16 May 2014. DOI: 10.1109/ENERGYCON.2014.6850573.

[10] **Antonis L. Lazari** and Charalambos A. Charalambous, “A software tool to evaluate the Total Ownership Cost of Distribution Transformers”, Power Options for the Eastern Mediterranean Region Conference (POEM 2013), Nicosia, Cyprus, 7-8 October 2013.

TECHNICAL
REPORTS

[11] **A. Lazari** & Charalambous, C.A., “Loss Evaluation of Transformers Serving Large Scale Photovoltaic Plants”, Interim Report submitted to Electricity Authority of Cyprus, August 2013.

[12] **A. Lazari** & Charalambous, C.A., “Loss Evaluation of Transformers Serving Large Scale Wind Plants”, Final Report submitted to Electricity Authority of Cyprus, November 2014.

TALKS AND
SEMINARS

- **Electricity Authority of Cyprus:** “Life-Cycle Loss Evaluation of Power and Distribution Transformers in Vertically Integrated and Decentralized Energy Systems in the era of Renewable Energy Penetration”, September 2013, January 2015. (Talks for fulfillment and completion of HIDNET and EVLOCOST research projects)
- **Department of Electrical and Computer Engineering, University of Cyprus:** Postgraduate department seminars. Presentation regarding the advancements and work performed in the area of Transformers Loss Evaluation, November 2012.
- **Refereed International Conference Papers:** Have attended all the conference sessions to present the work described in the refereed conference papers. (15 minute presentation)

TECHNOLOGY
PRODUCTS

“Loss Evaluation Method of Power Transformers Serving Large PV Plants”:

<http://psm.ucy.ac.cy/loss-evaluation-method-for-power-transformers-serving-large-pv-plants/>

The product of a PhD research project (A. Lazari) sponsored by Electricity Authority of Cyprus – E.A.C. The online tool ascribes to a comprehensive loss evaluation method of power transformers serving large scale solar applications. The fact that these transformers are obliged to serve an intermittent energy source calls for a suitable method to evaluate their life-cycle losses and total ownership costs. These transformers may be owned by Independent Photovoltaic Power producers or by Regulated Utilities. Thus, the method embedded in this tool concurrently responds to the current efforts to address the concept of loss evaluation both in vertically-integrated and decentralized energy systems that are experiencing a high penetration of solar energy.

“Probabilistic Loss Evaluation Method for Transformers Serving Large Wind Plants”:

<http://psm.ucy.ac.cy/probabilistic-loss-evaluation-method-for-transformers-serving-large-wind-plants/>

The product of a PhD research project (A. Lazari) sponsored by Electricity Authority of Cyprus – E.A.C. The online tool ascribes to a probabilistic, life-cycle loss evaluation method to evaluate the Total Ownership Cost of power transformers that are obliged to exclusively serve large wind plants. The method introduced, responds to the ongoing efforts of developing risk and cost-based decision making processes in today's competitive and dynamic energy markets. Therefore, capitalizing the losses and consequently the ownership cost of transformers, serving intermittent wind energy sources, entails a probabilistic approach that integrates the financial and technical characteristics as well as the uncertainties of wind energy generation.

PROFESSIONAL
MEMBERSHIPS

Institute of Electrical and Electronics Engineers (IEEE)

- Member since 2013 in Power and Energy Society IEEE.
- Student Membership

Technical Chamber of Cyprus (ETEK)

- Member since 2010 as an Electrical Engineer

AWARDS AND
ACTIVITIES

University of Bristol, United Kingdom

- Full education tuition fees scholarship

LANGUAGES

Greek: Native language.

English: Fluent in written and verbal communication.

SOFTWARE
SKILLS

Desktop Editing and Productivity Software

- Microsoft Office and Open Office.org
- Adobe Dreamweaver CC

Numerical Analysis and Programming

- Matlab, MathCad, Maple, C++, Pascal

Power System Analysis

- DIGSILENT, MATPOWER

Operating Systems

- Microsoft Windows, Apple OS X

REFERENCES
AVAILABLE TO
CONTACT

Dr. Charalambos A. Charalambous

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- Associate Professor, Department of Electrical and Computer Engineering, University of Cyprus
- ❖ Kallipoleos 75, P.O. Box 20537 1678, Nicosia
- ★ *Dr. Charalambous was my doctoral supervisor.*

Dr. Stavros Iezekiel

E-mail: iezekiel@ucy.ac.cy; Phone: +357 22892190

- Associate Professor, Department of Electrical and Computer Engineering, University of Cyprus
- ❖ Kallipoleos 75, P.O. Box 20537 1678, Nicosia