Georgios Fotis

Associate Professor

Department of Business Development and Technology

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Summary

Georgios Fotis, Ph.D., holds his Diploma and Ph.D. degrees in electrical engineering from the National Technical University of Athens in 2001 and 2006, respectively. He used to work for various companies: as a project engineer for medium voltage equipment for Schneider Electric S.A., as an R&D engineer in the development of new technologies in surge arresters for Raycap S.A., and also as a project engineer for the extension of the metro line in Athens, working for HM Engineering Consulting S.A. From 2009 to 2024, he worked for the Independent Power Transmission Operator (IPTO), working in various positions: as Supervisor of the National Energy Control Center, as Senior Engineer of the Operation and System Control Department, and Head of the Transmission Cable Lines Construction Section of the New Transmission Projects Department. From 2006 to 2008, he was a research assistant of the High Voltage Laboratory of the National Technical University of Athens and an adjunct lecturer, teaching high voltages. From 2010 to 2024, he was an adjunct Assistant Professor for the Department of Electrical and Electronics Engineering Educators, School of Pedagogical and Technological Education (ASPETE), teaching courses in power engineering such as electric power systems, electrical installations, and high voltages. He has been since August 2024 with the Center for Energy Technologies, Aarhus University, as an Associate Professor on Energy Systems Management. His research interests include power systems, renewable energy sources, transmission and distribution grids, high voltages, high voltage power cables, electromagnetic compatibility, and electrostatic discharge. He is the author of one book and more than 70 papers in international journals and conferences.

Personal Info

Google Scholar-profile:
https://scholar.google.dk/citations?hl=da&pli=1&user=MZ5gdM4AAAAJ

Employment

Adjunct Assistant Professor
Department of Electrical Engineering and Electronic Engineering Educators
of the School of Pedagogical and Technological Education (ASPETE)
Oct. 2008 July 2024

Adjunct Lecturer
School of Electrical & Computer Engineering
of the National Technical University of Athens (NTUA)
July 2007 – Sep. 2008

Adjunct Lecturer

Hellenic American University Athens,
Greece
Sep 2009 – Jan. 2010

Positions Held & Previous Appointments:
July 2021 – Dec. 2023: Senior researcher, H2020 OneNET: One Network for Europe, Independent Power Transmission Operator (IPTO)
Jan. 2019 – June 2021: Senior researcher, H2020 FLEXITRANSTORE: An integrated platform for increased flexibility in smart transmission grids with storage entities and large penetration of renewable energy sources, Independent Power Transmission Operator (IPTO)
July 2009- July 2024: Special Scientific Staff in the Greek Independent Power Transmission Operator (IPTO SA).
May 2007 – July 2009: Freelance engineer working with the 5th class design company HM Engineering Consulting S.A. Elaboration of electromechanical studies for the extension of the metro line Ag. Antonios – Ag. Dimitrios.
Jan. 2007 – June 2007: R & D Engineer at Raycap S.A.
Sep. 2006 – Dec. 2006: Research Assistant, “Development of modern methodologies for measurement and

simulation of grounding systems using new technologies (Archimedes II)", Technological Educational Institution of Athens - Special Account for Research Grants
Jan. 2005 – Sep 2006: Research Assistant, Immunity of electrotechnical equipment under the influence of induced high voltage parasites (Pythagoras II), National Technical University of Athens -– Special Account for Research Grants.
Mar. 2004 – Dec. 2004: Research Assistant, Quality control, electrical and EMC testing of electrotechnical and electronic equipment, National Technical University of Athens -– Special Account for Research Grants.
Feb. 2003 – Oct 2003: Medium Voltage project engineer at Schneider Electric S.A.

Education

2006: PhD, Title: Electrostatic Discharge Generator: Measurement of the discharge current and the produced electromagnetic field, National Technical University of Athens
2005: M.Eng, Electrical & Computer Engineering Diploma, National Technical University of Athens

Research areas

Energy Engineering, Electric Power Transmission and Distribution, Microgrids, Photovoltaics, Power Engineering, Renewable Energy, High Voltages, Electromagnetic Compatibility

Teaching areas

Energy Supply and Production
Energy Demand and Consumption
High Voltages
Electrical Installations
Lighting Technology
Electric Energy Systems
Computational Methods in Electric Energy Systems

Publications

Modified Criss-Cross-Based T-Type MLI with Reduced Power Components
Mahto, K.K.; Mahato, B.; Chandan, B.; Das, D.; Das, P.; Kumari, S.; Vita, V.; Pavlatos, C.; Fotis, G. A. Technologies 2024, 12, 90.

AI-Based Decision Support System Optimizing Wireless Sensor Networks for Consumer Electronics in E-Commerce
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Mahto, K.K.; Mahato, B.; Chandan, B.; Das, D.; Das, P.; Fotis, G.; Vita, V.; Mann, M. A. Electronics 2024, 13, 1975.

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Forecasting Wind and Solar Energy Production in the Greek Power System using ANN Models.
Fotis, G.; Sijakovic, N.; Zarkovic, M.; Ristic, V.; Terzic, A.; Vita, V.; Zafeiropoulou, M.; Zoulias, E.; Maris, T.I. WSEAS Transactions on Power Systems, vol. 18, pp. 373-391, 2023,

Improved relay algorithm for detection and classification of transmission line faults in monopolar HVDC transmission system using signum function of transient energy.
Deb, S.; Lata, S.; Bhadoria, V.; Tiwari, S.; Maris, T.I.; Vita, V.; Fotis, G. IEEE Access, vol. 12, pp. 15561-15571, 2024.

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Enhancing Electrical Load Prediction Using a Bidirectional LSTM Neural Network.
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Development and Implementation of a Flexibility Platform for Active System Management at Both Transmission and Distribution Level in Greece.
Zafeiropoulou, M., Sijakovic, N., Zarkovic, M., Ristic, V., Terzic, A., Makrygiorgou, D., Zoulias, E., Vita, V., Maris, T.I., Fotis, G. Appl. Sci. 2023, 13, 11248.

Analysis of the Factors Influencing the Performance of Single- and Multi-Diode PV Solar Modules,
Yadav, D., Singh, N., Bhadoria, V., Vita, V., Fotis, G., Tsampasis E.G., Maris T.I. IEEE Access, vol. 11, pp. 95507-95525, 2023

A Hybrid Artificial Ecosystem Optimizer and Incremental-Conductance Maximum-Power-Point-Tracking-Controlled Grid-Connected Photovoltaic System.
Abdullah, B.U.D., Lata, S., Jaiswal, S.P., Bhadoria, V.S., Fotis, G., Santas, A., Ekonomou, L. Energies 2023, 16, 5384.

Electromagnetic Fields Radiated by Electrostatic Discharges: A Review of the Available Approaches.
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Technical and 2E Analysis of Hybrid Energy Generating System with Hydrogen Production for SRM IST Delhi-NCR Campus.
Sambhi, S., Sharma, H., Bhadoria, V., Kumar, P., Fotis, G., Ekonomou, L. Designs 2023, 7, 55.

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Computation of the Injected Energy to Medium Voltage Surge Arresters for the Hellenic Distribution Network.
Christodoulou C.A., Ekonomou L., Fotis G., Vita V., Kyrtsopoulos P.M. Proceedings of the 9th WSEAS Int. Conf. on POWER SYSTEMS (PS '09), Budapest,

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Measurement of the Electric Field at the Near Field Radiating by Electrostatic Discharges.
Fotis G., Ekonomou L., Kourtesi St., Zoulias E., Nakulas A., Proceedings of the 6th WSEAS International Conference on Instrumentation, Measurement, Circuits and Systems, Hangzhou, China, pp. 43-47, April 15-17, 2007.

Modeling and simulation of a single-phase photovoltaic inverter and investigation of switching strategies for harmonic minimization.
Kourtesi St., Ekonomou L., Nakulas A., Fotis G., Zoulias E., 6th WSEAS Int.Conf. on Applications of Electrical Engineering (AEE '07), Istanbul, Turkey, May 27-29, ΠΠ. 155-159, 2007.

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