
Curriculum Vitae

Stavros A. Papathanassiou

*Electrical Engineer, PhD
Professor NTUA*

Contact Information

Work address: National Technical University of Athens (NTUA)
School of Electrical and Computer Engineering,
Electric Power Division
9, Iroon Polytechniou str., 157 80 Athens, Greece

Home address: 13B, Davaki str.
151 21 Pefki, Athens, Greece

Tel. +30 210 7723658 (work), +30 6944 598557 (mobile)

Fax +30 210 7723593

e-mail: st@power.ece.ntua.gr, stavrospapath@gmail.com

Education

- 1997 **PhD in Electrical Engineering** (wind turbine technology). School of Electrical and Computer Engineering, National Technical University of Athens (NTUA).
- 1991 **Diploma in Electrical and Computer Engineering**, major in Power Engineering, with distinction (GPA 9.25/10), National Technical University of Athens (NTUA).

Professional Experience

- 1992- Consultant to renewable energy and storage projects (including wind, PV, solar thermal and hybrid stations employing pumped storage or battery energy storage technologies), distribution network, electricity infrastructure and smart grid projects.
- 2002- Faculty member (currently Full Professor) in the Electric Power Division, School of Electrical and Computer Engineering, NTUA. Areas of expertise: Renewable energy and distributed generation, electricity storage, island and autonomous power systems, distribution networks, electromobility, smart grids.
- 2005- Advisor to the International Olympic Committee (IOC), the Olympic Broadcasting Services (OBS) and Olympic Games Organizing Committees on the power supply infrastructure and energy services for the Olympic Games.

- 2012- Continuous engagement with the Energy Regulator (RAE) and the Distribution Network and Island System Operator (HEDNO – DEDDIE S.A.) on regulatory, technical and operational aspects of distribution, island systems, interconnections, renewables & distributed generation, storage, electromobility etc. Activities outlined in more detail in other sections of this document.
- 2009-2012 Member of the Board of Directors of the Hellenic Transmission System Operator (HTSO) and Market Operator.
- 2002-2009 Technical consultant to the Distribution Division of the Public Power Corporation (PPC S.A., the Greek generation, transmission and distribution utility)
- 2002-2004 Technical consultant to the Athens 2004 Olympics Organizing Committee (ATHOC) on the design and implementation of distribution networks for the electrification of Olympic venues for the Athens 2004 Olympic Games.
- 2000-2002 Electrical engineer for the Network Department of PPC S.A., involved in distribution network design and installation, quality of supply and distributed generation projects.
- 1990-2002 Researcher in the Electric Power Division of NTUA.
- 1997-98 Electrical engineer for the Hellenic Air Force, involved in the design and maintenance of Medium and Low Voltage electrical installations (during military service).
- 1992-94 Technical consultant to the Quality Control Department of distribution transformer manufacturer ELVIM S.A. (Group Schneider).

Academic Work

- **Published work** includes 70 articles in international peer-reviewed scientific journals and more than 140 articles in the proceedings of scientific conferences, mainly in the fields of renewable energy and distributed generation, storage, electricity distribution and smart grids. Published work has received **more than 5000 citations**.
- **Teaching experience** in several courses in the field of electric power engineering (including renewable energy sources, distribution networks, electric machines and power electronics).
- **Supervision** of more than 90 diploma and postgraduate theses, as well as of 12 PhD dissertations (6 completed).

Areas of Involvement and Expertise

Active involvement in more than **60 research and consulting projects** since 1991 (in more than 30 projects as the scientific responsible) in the areas of renewable energy (wind, PV, solar thermal, small hydro), electricity storage, integration of distributed energy resources to the grid, autonomous island systems, island interconnections, electricity distribution, smart grids and electromobility.

Specific involvement in the following fields:

- Integration of RES and storage stations to **non-interconnected island systems**. Technical and economic studies, operating strategies, station and system management, market integration, energy studies required for licensing/permitting etc.

- Analysis and design of **autonomous systems with very high RES penetration** (autonomous renewable-fed desalination plants, “green islands”, isolated installations).
- **Island system interconnections**, involving traditional AC and HVDC solutions. Analysis of technical, economic and operational aspects.
- Design, analysis, sizing and techno-economic studies for **RES stations** (wind, PV, solar thermal).
- **PPA and connection agreements** for RES and storage stations.
- **Technology and applications of storage**. Feasibility, sizing and technical studies for **storage and hybrid (RES-storage) stations in non-interconnected islands**, including different technologies of storage (pumped hydro and batteries) and RES generation (PVs, wind and small hydro).
- **Interconnection of RES and DG stations** to the network. Feasibility studies, technical design, special purpose studies (power quality, short circuits, protection etc.).
- Technology, analysis, sizing and feasibility studies for **AC and DC interconnections** of offshore wind farms.
- **Dynamic/transient analysis** of RES stations and power systems with high RES penetrations.
- Transmission and distribution **network technical issues**: Equipment selection, sizing and specification, standardization, electric and magnetic fields of equipment and installations (involving measurement campaigns for HV lines and substations), earthing, calculation of losses etc.
- **Power quality studies** in networks and installations, involving measurement campaigns and analysis.
- Design and analysis of **special purpose networks** and installations of **very high resilience** levels.
- **Development of Codes** for distribution networks, wind power and non-interconnected island systems.
- **Power electronics applications and control** for RES and storage installations.
- **Smart grid technologies**, such as active distribution networks, energy control centres, automated metering infrastructure, FACTS-HVDC, microgrids etc.
- Grid integration of **electric vehicles**. Institutional and regulatory aspects of **electromobility**.

As a member of the Board of Directors of the Hellenic Transmission System Operator and Market Operator (2009-2012), he dealt with issues related to:

- Transmission system planning and operation.
- System and market integration of RES generation.
- Electricity market operation.
- Cross-border interconnections and trading.

He has **international experience** in transmission and distribution networks, design and implementation of high resilience facilities and temporary power, having engaged in projects in several countries around the world, including Brazil, China, France, Japan, Russia, Senegal, South Korea and the UK.

Additional Information

- Senior Member of the IEEE (Power Engineering, Industry Applications, Industrial Electronics and Power Electronics Societies), member of CIGRE and the Technical Chamber of Greece.
- National representative to the CIGRE Study Committee SC6 – Distribution Systems and Dispersed Generation.
- Secretary of the CIRED Greek National Liaison Committee.
- Member of the Board of the Greek CIGRE Committee.
- Participation in several CIGRE Task Forces, dealing with distributed generation and storage. Convenor of CIGRE WG C6.24 “Capacity of Distribution Feeders for Hosting DER”.
- Recipient of the CIGRE Technical Committee Award 2013.
- Reviewer for most prestigious journals in electric power engineering (IEEE Transactions, IET Proceedings, Elsevier Journals etc.), as well as for several conferences in the field. Recipient of Reviewer Certificate of Excellence from the Elsevier Journals *Electric Power Systems Research* and *Renewable Energy*.
- Evaluator of research, development and demonstration proposals and projects for national and international programmes.
- National representative to the Mirror Group of the Technology Platform «Electricity Networks for the Future – SMARTGRIDS» of the European Union.