

Gerald B. Sheblé

Extensive academic, research, and professional expertise in sustainable energy systems, energy economics, smart grid, phasor measurements, and market analysis as a consultant, project manager, operations analyst, planning analyst, research director, and expert witness.

Particular emphases in:

*Wind and solar energy integration, Electric Power Deregulation •Market Simulations •Software Specifications
•Operations Restructuring • Power System Analysis and Planning •Energy System Economics
•Supply Chain Analysis •Real-Option Analysis for Capital Budgeting*

High-Profile, Breakthrough Accomplishments

- Developed/designed/implemented 1st EPRI Market Simulation software, downloaded by 500+ companies worldwide.
- Pioneered structure and market definition predicting successful industry deregulation. Authored 100+ research documents earning IEEE Fellow status (an honor bestowed on only 1% of its members).
- Restructured major utility by consolidating centers from 9 to 1 while maintaining high customer service levels.
- Designed/implemented next-generation software products for industry clientele.
- \$5 million in 1st-year savings realized by negotiating vendor software contracts for Indiana utility.
- Designed organizational structure for electric energy trading, risk assessment and management.
- Expert witness on software engineering, software business planning, and industrial trends.
- Designed EMSs to include phasor measurement applications
- Specified phasor measurement application for black start and restoration
- Developed PMU applications for Blackstart and Restoration Procedures for west coast utility.

Sought-After Industry Authority and Educator

- Associate Editor of IEEE PES Magazine as Business Scene Editor.
- Frequently highlighted in respected trade journals for industry innovations.
- Premier guest/contributor at 50+ specialized workshops/courses throughout Europe and North America.
- Expert witness on electrical accidents, deficient project management and intellectual property rights.
- Gained national exposure through appearances on radio talk shows (NPR) and trade magazine interviews.

Professional Profile

Engaged businessman and pacesetter who pioneers change and breaks barriers in electric power deregulation, operations, and planning. Leverages uncommon breadth of experience in finance and economics to simulate and identify new markets. Skilled educator respected for mentoring students on determining academic careers and critical technical aspects during development of new technologies. Career history of managing software engineering projects ranging from \$5 million to \$55 million. Comfortable in all environments from boardroom to classroom.

EDUCATION/HONORS/SELECTED BOARD & PROFESSIONAL MEMBERSHIPS

- PH.D.E.E. (OPERATIONS RESEARCH), VIRGINIA TECHNICAL INSTITUTE, 1985
- M.S.E.E., PURDUE UNIVERSITY, 1974 •B.S.E.E., PURDUE UNIVERSITY, 1971
- M.B.A. (ECONOMICS, FINANCE), UNIVERSITY OF IOWA, DECEMBER, 2001

DISTINGUISHED LECTURER AND FELLOW, INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS
WORKING MEMBER CONGRESS INTERNATIONALE DES GRANDS RESEAUX ELECTRIQUES (CIGRE)
INESC FELLOW (PORTUGAL), ERSKINE FELLOW (NEW ZEALAND)

PROFESSIONAL ASSOCIATIONS

IEEE, INFORMS, PRMIA, GARP, IAFE, EKN, PKP, OR, NYAS

PROFESSIONAL EXPERIENCE

- Expert witness in five successful court cases.
- Consulted to 36+ electric utility companies; co-designed 25+ control centers.
- Led downsizing/consolidation project for Georgia Power customer service centers
- Applied Real Option Value Techniques to identify potential value of renewable resources, as well as traditional electric power plants/transmission lines, and pumped hydro operation.
- Wrote specifications, reviewed/recommended vendors and managed energy management system implementation projects.

MAXISYS	2015-present	Principal Consultant
University of New South Wales	2012 to 2013	AUSGRID Chaired Professor
Quanta Technology, LLC	2009 to 2012	Executive Advisor/Senior Director US R&D
EPMT, INC.	1986 to Present	President / Executive Advisor
ENERGY AND CONTROL CONSULTANTS	1980 to 1986	Senior Consultant
CONTROL DATA CORPORATION	1976 to 1980	Consultant
SYSTEMS CONTROL, INC.	1975 to 1976	Engineer
COMMONWEALTH EDISON	1971 to 1973	Methods Engineer

ACADEMIC EXPERIENCE/RESEARCH

- Acknowledged expert on deregulation, its economic sensibility and how it could proceed.
- Generated \$2+ million in total research funding.
- Research:
 - electric power systems optimization for operation/planning
 - decision analysis
 - real option valuation
 - machine learning
 - data mining
 - market simulation
- Published 110+ journal/conference papers and presented at 80+ energy industry seminars.
- Taught C++, C, JAVA and MATLAB Programming, Financial Economics, Power System Analysis, statistics, and basic electrical engineering and computer engineering courses.
- Mentored 7+ faculty, 25+ doctoral students, 20+ master students and 10+ international doctoral students
- Assisted mentoring 25+ additional graduate students.

UNIVERSITY OF PORTO	2009-present	Professor, Electrical & Computer Engineering MIT Portugal Program Sustainable Systems PhD Senior Researcher INESC
PORTLAND STATE UNIVERSITY	2006 to 2009	Maseeh Professor Electrical & Computer Engineering
IOWA STATE UNIVERSITY	1990 to 2006	Professor Electrical & Computer Engineering
AUBURN UNIVERSITY	1986 to 1990	Associate Professor Electrical Engineering
VIRGINIA TECH	1978	Instructor

KEYWORD AREAS OF CONTRIBUTIONS

Smart Grid speaker series, Distributed Generation workshops, Microgrids, Computer Auction Market Simulation and Analysis, Risk Analysis and Risk Management, Demand Side Management, Competitive Strategies, Generation Valuation by Real Option Techniques, Economics of Competition, Porter's Five Forces, Supply Chain, Leontief Modeling of Composition, Game Theory and Bidding Strategies, Artificial Life Techniques for Simulation of Optimization, Computational Intelligence, Generation and Transmission Valuation by Real Option Techniques, Finite Element Analysis