Ronnie A. Wunderlich, Ph.D.

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EXECUTIVE SUMMARY

⇒ Partner in consulting business called Innovative Ideas and Designs which finds solutions for everyday problems.

⇒ Chief Engineer for a multi-discipline team of 30 engineering professionals involved in the development of power products.

⇒ Co-developed a new, innovative ZVS Fullbridge topology.

⇒ Worked on development of diagnostic and power supply switching ASICs for Celestica/Intersil.

⇒ 20+ years of experience in taking a project from *cradle* to *grave*.

⇒ Taught instructional courses on the design and simulation of switch mode power supplies and analog circuitry at Binghamton University, Celestica Corporation and Wescon.

⇒ Proficient in analog circuitry, switch mode power supply design, electronic ballast design, EMC/EMI, magnetics design, and simulation at both macro level and device physics level.

⇒ Proficient on various simulation tools: PSPICE, Cadence's AWB and Simplis, ASTAP, Fielday, Supreme and ANSOFT's Maxwell.

⇒ Proficient in design for manufacturing, cost and scheduling.

⇒ Doctorate's field of study is in the area of semiconductor device physics.

⇒ Holds 6 patents

⇒ Perform design reviews for other companies on solving problems or improving their products

PROFESSIONAL EXPERIENCE

05 – Present **Consultant** Endicott, NY

⇒ Circuit reliability for DfR Solutions
⇒ Design review on products for Emerson Electric's 70 divisions
⇒ Conversion of Pspice model to Hspice for Intersil / AEi
⇒ Solved EMC/Immunity issue for Branson
⇒ Trained Primarion engineer's on Simplis

⇒ Design review for Asco on new design
⇒ Solved design issue for Daniel's on liquid analyzer
⇒ Application note on ZVS Full-bridge for Intersil.
⇒ Developed Simplis model for Primarion for analyzing their IC.
⇒ Proposal with Lockheed Martin on military vehicle.
⇒ Simulation model development for Transim, AEi, Intersil
⇒ Simulation models and software tool for Microchip.

01 – 05 **Senior Engineer** Transim Technology, Endicott, NY

⇒ Create simulation models of power supply IC's for use on the web.
⇒ Wrote programs to help design power supplies.
⇒ Develop new ideas for customers to simulate their products on the web.
⇒ Help formulate new marketing ways to market Transim's products.

Consultant Endicott, NY

⇒ Co-authored a course presented on power electronics at Wescon 2001
⇒ Power design review for Astec at Andover, MA.
⇒ Design review for Daniels Corp. on issues with non-functioning hardware.
⇒ Design review for Copeland on field failures.
⇒ Design review for Branson on field failures.
⇒ Design review for Emerson on new design.
⇒ Consulting for Carson Engineering on Xeon electronic ballast
⇒ Design review for Astec on digital controller.
⇒ Design review for Kriwan on new product.
⇒ Client consulting on CCFL / lamp ballast for legal firm
⇒ SBIR on high temperature, high power SiC JFET power system for NAVY

99 – 01 **Chief Engineer** Celestica Corp., Johnson City, NY

⇒ Overseeing all switch mode power supply, ASIC, and analog circuit development.
⇒ Developing macro-circuit approach for power supply and system design.
⇒ Development of advance technology for use in power electronics
⇒ Reduced both cost and development time on AC/DC power supplies.
⇒ Technical interface to a major microprocessor company.
⇒ Involved in the marketing aspect of the power supplies.
⇒ Central focus on the patent portfolio for the power supply group.

Consultant Endicott, NY

⇒ For JRS in development and design of fluorescent electronic ballast.
⇒ NYSERDA contract on development of advanced compact electronic ballast.
⇒ For Transim in development of circuit models for Simplis.
⇒ For Carsan Engineering in power supply debug.

94 -99 **Advisory Engineer** Celestica Corp., Endicott, NY

⇒ Chaired the technical strategy council and developed the 3 year technical strategy for Celestica Corp.
⇒ Provided advisory engineering support to lead engineers on over 25 new projects.

⇒ Architected, developed and taught the use of simulation library to technical users in Celestica Corp.
⇒ Lead engineer on a 600W DC/DC building block utilizing ZVS Fullbridge topology.
⇒ Consulted other engineers during the laboratory phase of projects.
⇒ Advised lead engineers on hardware design, EMC, manufacturability, and cost.
⇒ Mentor to new hires and co-ops.
⇒ Worked with other engineers in magnetic designs.

Consultant Endicott, NY
⇒ For Lawrence Livermore Labs on ARM project.

93 -94 **Staff Engineer** SUNY at Binghamton, NY
⇒ Earned Ph.D. degree while on educational leave from IBM Power Systems.

91 - 92 **Staff Engineer** IBM Power Systems, Endicott, NY
⇒ Simulation of AC/DC and DC/DC switch mode converters and library development.
⇒ Lead engineer for replacement 400W AC/DC power supply for PC servers.
⇒ Developed and tested EMC filtering for 3-Phase 2KW converter.
⇒ Taught by legal department to read and write patents.

84 - 91 **Associate Engineer** IBM - Glendale Labs, Endicott, NY
⇒ Designed switch mode power supplies for the data processing industry.
⇒ Developed and maintained simulation library for power engineers.
⇒ Lead engineer on DC/DC power system for a liquid nitrogen cooled processor.
⇒ Lead engineer for 4KW multi-output power system for midsize mainframe.
⇒ Team member on 16KW water cooled power system for large mainframe.

EDUCATION

Rochester Institute of Technology, Rochester, NY
B.S. Electrical Engineering, May 1984

Syracuse University, Syracuse, NY
M.S. Electrical Engineering, December 1989

State University of New York, Binghamton, NY
Ph.D. Electrical Engineering, May 1995

PATENTS / PUBLICATIONS / MEMBERSHIPS

- ⇒ 6 Patents
- ⇒ 11 externally published papers
- ⇒ 9 IBM Disclosures
- ⇒ 9 IBM internal papers
- ⇒ Celestica internal paper

Member of IEEE

Detailed list of patents and publications are available upon request.