

## SUMMARY VITA- Russell W. Patterson, P.E.

*Adjunct Faculty of Electrical Engineering*

### Education

University of Tennessee Chattanooga, TN	Electrical Engineering	Ph.D.-Present
University of Tennessee Chattanooga, TN	Electrical Engineering	M.S. 2013
Mississippi State University, Starkville MS	Electrical Engineering	B.S. 1991

### Experience

**Owner/Consultant** (Chattanooga, TN) March 2010- Present  
Patterson Power Engineers, LLC

- Power system protection and analysis
- Transient analysis
- Power system education (short courses, mentoring etc.)

**Vice President** - Engineering (Chattanooga, TN) May 2009- March 2010  
Tennessee Valley Infrastructure Group, Inc.

- Wind farm protection
- Utility protection and analysis

**Consultant** (Chattanooga, TN) August 2008 - May 2009  
Relayman Protection Services, LLC

- Power system protection (settings and analysis for all levels including distribution, transmission, and generation)

**Manager System Protection & Analysis** (Chattanooga, TN) Feb 2006- Aug 2008  
Tennessee Valley Authority

- Responsible for the setting of all protective relays in the TVA transmission system and at Hydro, Fossil and Nuclear generating plants.
- Responsible for ensuring that TVA's protective relays maximize the reliability and security of the transmission system. This includes setting and ensuring the proper application and development of protection philosophy for the TVA.
- Responsible for industry participation at the IEEE PSRC level and at protective relaying conferences and regulatory bodies.

**Manager Advanced Power Applications** (Chattanooga, TN) Oct 2005- Feb 2006  
Tennessee Valley Authority

- Responsible for maintaining and expanding the TVA state-estimator models required to support TVA's Reliability Authority function.
- Conceived and initiated a project to integrate CAPE (Computer Aided Protection Engineering) analysis capabilities with the TVA Telegyr scada and Areva state-estimator systems to find real-time overload issues with protective relaying and potential problems (using state-estimator contingency analysis).

**System Protection Project Specialist** (Chattanooga, TN) 2000-2002  
Tennessee Valley Authority

- Responsible for recommending and approving protection schemes for all types of new construction projects and system upgrades including IPPs.
- Responsible for support of field engineers for a fourth of the TVA system for problems/issues related to system protection and operation.

- Responsible for the calculation of set points for protective relays and control devices in the transmission system (13kV up to 500kV) and for generators at fossil, hydro, and nuclear generation stations including low voltage plant systems.
- Responsible for providing support to system dispatchers and for providing protective relay settings for temporary configurations.

**Manager of Power Quality** (Chattanooga, TN) 1999-2000  
Tennessee Valley Authority

- Responsible for supporting field engineers with power quality and related issues and disturbances.
- Responsible for the direction of TVA's Power Quality program.

**Lead System Protection Engineer** (Chattanooga, TN) 1993-1999  
Tennessee Valley Authority

- Responsible for support of field engineers with problems/issues related to system protection, analysis and operation.
- Responsible for the calculation of set points for protective relays and control devices in the transmission system (13kV up to 500kV) and for generators at fossil and hydro generation stations including low voltage plant systems.
- Specified, constructed and administrated a 12-workstation NT network supporting Computer Aided Protection Engineering (CAPE) program.
- Instructor in the TVA. Advanced Protective Relaying class.
- Instructor in the T.V.A. Engineer In Training program.

### **Professional Organizations**

- Member of the IEEE Power System Relay Committee (PSRC).
- Chairman of the Line Protection subcommittee and member of Rotating Machinery subcommittee.
- Chairman of working group D4 ("Application of Overreaching Distance Relays") of the PSRC Line Protection subcommittee which was successfully concluded.
- Past co-chairman and member of the SERC Protection and Controls Subcommittee (NERC regional body).
- Member of Georgia Institute of Technology Protective Relaying Conference planning committee.

### **Honors/Awards**

TVA Engineer of the Year, 2002.