

SUMMARY VITA- Louie C, Elliot, Ph.D.

Assistant Professor

Degrees

University of Tennessee at Chattanooga, Computational Engineering	Ph.D.2005-2008.
North Carolina State University, Raleigh, NC, Physics	M.S. 1995-1998.
University of Tennessee at Chattanooga, Physics.	B.S. 1990-1994.

Academic Experience

University of Tennessee Chattanooga

Assistant Professor	2013-2015
Visiting Professor	2012-2013
Adjunct Faculty	2009-2012

Non-Academic Experience

Senior Simulation Engineer, Radiance Technologies Inc., Chattanooga, TN. 2008-2010

- Designed and performed electromagnetic experimental test matrix and equivalent simulations in support of advanced large radar design program.
- Performed simulation, modeling, and monitoring of 5kW Bloom Energy SOFC and worked on installation of 100kW unit.
- Designed, built, and implemented NVidia Tesla GPU cluster for in-house parallel computing platform.

Plasma Physicist, Accurate Automation Corporation, Chattanooga, TN. 2002-2005

- Ran experimental high energy plasma lab in support of aerodynamic drag reduction and radar cross section modification.
- Designed and built prototype plasma limiters in waveguide and micro strip configurations for RF radar system protection against UWB and EMP devices.
- Performed PIC simulations of atmospheric plasma and high speed breakdown formation in low pressure gas discharge tubes.

Senior Engineer, Fraba Inc., Princeton, NJ. 2000-2001

- Developed business plan and founded US subsidiary.
- Established national sales partners; responsible for marketing, inventory, accounting, and documentation.

Product Engineer, Fraba Sensorsysteme GmbH, Cologne, Germany.1999-2000

- Developed and supported rotary encoders with Interbus protocol for networked sensors in robotics and factory automation.
- Developed opto-electronic safety systems for high speed doors; performed UL certification.

Grant

- University of Tennessee at Chattanooga
Undergraduate Research Assistantship in Computational Engineering
P.I., \$5K, CEACSE, 2013.
- Radiance Technologies Inc.
Simulation and Design of Large Electromagnetic Systems

BAA, \$1.3M, Army/SMDC, 2008.

- Accurate Automation Corporation
Plasma Limiter: RF Mitigation Device for Radar and Electronic Warfare Systems
P.I., SBIR Phase I, \$99K, Navy, N031-0670, 2003.
P.I., SBIR Phase II, \$1.2M, Navy, N031-0670, 2005.
Plasma Limiter: RF Mitigation Device for Operation in Stressing Environments
P.I., SBIR Phase I, \$70K, DoD/MDA, 031-0511, 2003.
P.I., SBIR Phase II, \$750K, DoD/MDA, 031-0511, 2005.

Honors

General Engineering Faculty Teacher of the Year 2014, Sigma Xi Outstanding Graduate Research Award UTC 2007, Outstanding Teacher Assistant of the Year in Physics NCSU 1997, Clarence Jones Award for a Senior in Physics UTC 1994, National Merit Scholar, Honorary Member of the Tennessee House of Representatives, Tennessee Governor's School for the Sciences.

Publications

1. Elliott, L., Anderson, W. K., and Kapadia, S., "Solid Oxide Fuel Cell Design Optimization with Numerical Adjoint Techniques," ASME J. of Fuel Cell Science and Technology, Vol. 6, No. 4, November 2009.
2. Elliott, L., Anderson, W. K., Kapadia, S., and Burdyshaw, C., "Analysis and Design of Solid-Oxide Fuel Cells with Advanced Numerical Techniques," AIAA 2007-4834, AIAA 5th International Energy Conversion Engineering Conference and Exhibit, St. Louis, MO, June 25-27, 2007.
3. Kapadia, S., Anderson, W. K., Elliott, L., "Adjoint-Based Sensitivity Analysis and Error Correction Methods Applied to Solid-Oxide Fuel Cells," ASME J. of Fuel Cell Science and Technology, Vol. 6, No. 2, May 2009.
4. Kapadia, S., Anderson, W. K., Elliott, L., "Adjoint-Based Sensitivity Analysis and Error Correction Methods Applied to Solid-Oxide Fuel Cells," ASME J. of Fuel Cell Science and Technology, ASME 5th International Fuel Cell Science, Engineering, and Technology Conference, New York, NY., June 18-20, 2007.
5. Kapadia, S., Anderson, W. K., Elliott, L., and Burdyshaw, C., "Adjoint Method for Solid-Oxide Fuel Cell Simulations," J. of Power Sources, Vol. 166, February 2007, pp. 376-385.