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WORK EXPERIENCE

Union University, Jackson, Tennessee

2002 – present

Currently teach seven courses and three labs; assist with activities required to start a new department, including determination of curriculum requirements, selection and procurement of lab equipment, and conformity to ABET requirements; assist with student recruitment through involvement with university-wide preview days; serve as departmental liaison to the university library to develop a collection of engineering references.

Vanderbilt University, Nashville, Tennessee

1997 – 2000

Taught a required sophomore-level course in circuit theory to 47 students; taught an elective course in fundamental concepts of electrical engineering to 37 students; performed research in the field of medical image processing; published papers and presented research findings at international conferences.

Note: From 1994 through 1997, I was awarded the NDSEG fellowship to pursue studies at Vanderbilt University.

Colorado State University, Fort Collins, Colorado

1993 – 1994

Worked as a teaching assistant for two professors; directed two sections of a business seminar course; developed macros to improve data entry speed and accuracy for one professor's research project.

Hewlett-Packard Corporation, Loveland, Colorado

1985 – 1993

Managed group personnel and resources as lead engineer; developed and delivered hardware maintenance courses for electronic test systems; trained new instructors; delivered customized training courses at overseas and domestic customer sites; designed new classroom space, including plans for equipment procurement and maintenance; led hardware support development team for introduction of a major new product line; performed serviceability engineering for new products; conceived and coordinated successful "field-on-loan" program; served as communication liaison between factory, field, and corporate offices; verified group compliance with ISO 9000 guidelines; provided on-line hardware and software support.

EDUCATION

- Doctor of Philosophy in Electrical Engineering December, 1999
Dissertation: *Surface-based Registration of CT Images to Physical Space for Image-guided Surgery of the Spine*
Vanderbilt University
- Master of Business Administration May, 1994
Minor: Computer Information Systems
Colorado State University
- Bachelor of Science in Secondary Math Education August, 1985
Mississippi State University
- Bachelor of Science in Electrical Engineering December, 1984
Mississippi State University

JOURNAL PUBLICATIONS

(All publications prior to 2002 are listed under my maiden name of J.L. Herring.)

D.M. Muratore, **J.H. Russ**, B.M. Dawant, and R.L. Galloway, Jr., "Three-dimensional image registration of phantom vertebrae for image-guided surgery: a preliminary study." *Computer-Aided Surgery* **7(6)**, pp. 342-353, 2002.

J.L. Herring and B.M. Dawant, "Automatic Lumbar Vertebral Identification Using Surface-Based Registration." *Journal of Biomedical Informatics* **34**, pp. 74-84, 2001.

A.J. Herline, **J.L. Herring**, J.D. Stefansic, W.C. Chapman, R.L. Galloway, Jr., and B.M. Dawant, "Surface Registration for Use in Interactive, Image-Guided Liver Surgery." *Computer-Aided Surgery* **5(1)**, pp.11-17, 2000.

J.L. Herring, B.M. Dawant, C.R. Maurer, Jr., D.M. Muratore, R.L. Galloway, Jr., and J.M. Fitzpatrick, "Surface-based Registration of CT Images to Physical Space for Image-guided Surgery of the Spine: A Sensitivity Study." *IEEE Transactions on Medical Imaging* **17(5)**, pp. 743-752, 1998.

CONFERENCE PROCEEDINGS

(All publications prior to 2002 are listed under my maiden name of J.L. Herring.)

J.H. Russ and D.M. Muratore, “First Experiences on the ‘Other Side’ of the Desk: Practical Techniques for New Professors of Engineering.” *Proceedings of the 2003 American Society for Engineering Education Annual Conference* (Nashville, Tennessee), 2003.

J.H. Russ and C. Song, “A Survey of State-based Initiatives to Encourage K-12 Engineering Education.” *Proceedings of the 2003 Memphis Area Engineering and Sciences Conference* (Memphis, Tennessee), 2003.

D.M. Muratore, **J.L. Herring**, B.M. Dawant, and R.L. Galloway, Jr., “Registration of 3D tracked ultrasonic spinal images to segmented CT images for technology-guided therapy.” *Proceedings of the SPIE Conference on Ultrasound* (San Diego, California), 2000 (received **Cum Laude Poster Award**).

A.J. Herline, **J.L. Herring**, J.D. Stefansic, W.C. Chapman, R.L. Galloway, Jr., and B.M. Dawant, “Surface Registration for Use in Interactive, Image-Guided Liver Surgery.” *Proceedings of MICCAI – Medical Image Computing and Computer-Assisted Intervention* (Cambridge, United Kingdom) **1679**, pp. 892-899, 1999.

J.L. Herring and B.M. Dawant, “Automatic Identification of a Particular Vertebra in the Spinal Column Using Surface-Based Registration.” *Proceedings of MICCAI – Medical Image Computing and Computer-Assisted Intervention* (Cambridge, United Kingdom) **1679**, pp. 613-620, 1999.

J.L. Herring, D.M. Muratore, R.L. Galloway, Jr., and B.M. Dawant, “Effect of vertebral surface extraction on registration accuracy: a comparison of registration results for iso-intensity algorithms applied to computed tomography images.” *Proceedings of the SPIE Conference on Image Processing* (San Diego, California) **3661**, pp. 97-108, 1999.

D.M. Muratore, **J.L. Herring**, B.M. Dawant, and R.L. Galloway, Jr., “The effect of ultrasonic transducer frequency on the registration of ultrasound to CT vertebral images.” *Proceedings of the SPIE Conference on Image Processing* (San Diego, California) **3661**, pp. 839-847, 1999.

J.L. Herring, C.R. Maurer, Jr., and B.M. Dawant, “Sensitivity Analysis for Registration of Vertebrae in Ultrasound and Computed Tomography Images.” *Proceedings of the SPIE Conference on Image Processing* (San Diego, California) **3338**, pp. 95-106, 1998.

J.L. Herring, “An Investigation of Predictive Support as a Board Test Service Tool.” *ATE&I Conference Proceedings* (Los Angeles, California), 1988 (received **Best Paper Award**).

PROFESSIONAL MEMBERSHIPS

Institute of Electrical and Electronics Engineers
IEEE Engineering in Medicine and Biology Society

SELECTED HONORS AND AWARDS

NDSEG Fellow, 1994-1997
Cum Laude Poster Award at SPIE Medical Imaging Symposium, 2000
Best Paper Award at ATE&I Conference, 1988
Tau Beta Pi (engineering honor society)
Eta Kappa Nu (electrical engineering honor society)
Pi Lambda Theta (education honor society)
Beta Gamma Sigma (business honor society)
Phi Kappa Phi
Society of Scholars in the Arts and Sciences
Outstanding Young Women of America