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CURRICULUM VITAE

SUSAN C. SCHNEIDER

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Areas of Special Interest

A Evaluation of the electrical properties of electronic materials for use as sensors
A Interactions between mechanical and electromagnetic properties of materials
A Educational methods

Academic Experience

9/1988-present	Associate Professor of Electrical Engineering, in the Department of Electrical and Computer Engineering, Marquette University, Milwaukee, Wisconsin 53233.
7/2009 – present	Director of Undergraduate Studies, Department of Electrical and Computer Engineering, Marquette University
8/1998 – 7/2009	Associate Chair, Department of Electrical and Computer Engineering, Marquette University
8/1990-6/1991	Adjunct Associate Professor, Department of Physics, University of Wisconsin-Milwaukee (sabbatical leave appointment)
2/1990-5/1996	Associate Chair, Department of Electrical and Computer Engineering, Marquette University
7/1989-2/1990	Assistant Chair, Department of Electrical and Computer Engineering, Marquette University
8/1988-7/1989	Assistant Chair, Department of Electrical, Computer, and Biomedical Engineering, Marquette University.
9/1981-9/88	Assistant Professor of Electrical Engineering and Computer Science, Department of Electrical, Computer, and Biomedical Engineering, Marquette University, Milwaukee, Wisconsin 53233.
1981	Post-Doctoral Associate, Department of Physics, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin 53201
1974 – 1981	Research Assistant, Department of Physics, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin 53201.

Education

B.S.	1972, University of Wisconsin-Stevens Point (Math and Physics)
Ph.D.	1981, University of Wisconsin-Milwaukee (Physics) Dissertation title: "Ultrasonic Attenuation Study of the Re-entrant Superconductor, $ErRh_4B_4$"

Professional Affiliations

- American Physical Society, member of society from 1977 to present.
- Institute of Electrical and Electronic Engineers (IEEE),
  - Member of society from 1983-present, advanced to Senior Member, 1997.
  - elected Administrative Committee representative, Ultrasonics, Ferroelectrics and Frequency Control Society, term 1/1/92-12/31/94

    - appointed Associate Editor for IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control, term 1/1/92-6/1/95
    - member of Technical Program Committee, Ultrasonics Symposium, 1988-present
    - Publications and Publicity Chair, 1990 Ultrasonics Symposium
    - Finance Chair, 1992 Ultrasonics Symposium
    - Technical Program Chair, 1993 Ultrasonics Symposium
    - Proceedings Co-editor, 1994 - 2003 Ultrasonics Symposia
    - Technical Reviewer, IEEE Trans. on Ultrasonics, Ferroelectives and Frequency Control.
    - Technical Reviewer, IEEE Trans. on Industrial Electronics
    - Technical Reviewer, IEEE Trans. on Education (2011)
    - member, IEEE Admissions and Advancement Panel, August 2003
- American Ceramic Society, member of society from 1987 to 1995.
- American Society for Engineering Education (ASEE)
    - Campus Representative for MU College of Engineering, March 2003 – present
    - Member, ASEE North Midwest Section Outstanding Educator Award Selection Committee, 2008.
    - ERM Division reviewer, 2008, 2010 and 2011 ASEE Annual Conference and Exposition.
    - Secretary/Treasurer, ASEE North Midwest Section, October 2009 – October 2011.
- The International Association of Science and Technology for Development (IASTED)
    - Member, Technical Program Committee for 2008 Circuits and Systems (CS 2008), Kona, HI, 8/18-20/2008.
    - Member, Technical Program Committee for 2010 Circuits and Systems (CS 2010), Maui, HI, 8/23-25/2010.
- Reviewer – Frontiers in Education Conference (2009, 2010)
- Reviewer – IEEE Conference on Decision and Control (49th, 2010)

Consulting Experience

- General Electric Medical Systems, 1983 - 1984.
- Harper and Row Publishing Company, 1984, 1986, technical text manuscript reviewer.
- McGraw-Edison Power Systems Division, 1985 - 1987.
- Addison-Wesley Publishing Company, 1986, 1987, technical text manuscript reviewer.
- Astronautics Corporation of America, 1987 - 1989.
- Holt, Rinehardt and Winston Publishing Company, 1987, technical text manuscript reviewer.
- Prentice Hall Publishing Company, 1996, technical text manuscript reviewer
- McGraw-Hill Publishing Company, 2008, technical text manuscript reviewer.
- John Wiley Publishing Company, 2009, technical text manuscript reviewer.
- Oxford University Press, 2011, technical text manuscript reviewer.

Honorary Societies

- Sigma Xi, 1988 - present
    - Vice President/President Elect (1997-1998), President (1998-1999), Past President (1999-2000)
- Eta Kappa Nu, 1987 - present (honorary initiation)

Honors Received

Eta Kappa Nu, Marquette University Chapter, 1997 Outstanding Teacher Award, March 23, 1997

Major Courses Developed

- *Design with Analog Integrated Circuits*

This course focuses on the design of analog circuits using "standard" analog integrated circuits as building blocks. "Rules of Thumb" pertinent to the design process are described and discussed. Topics

covered in this course include (but are not limited to) power supply design, op-amp circuit design, active filter design, analog and digital display circuits, passive component selection and miscellaneous analog integrated circuits and their applications. Students design a series of circuits during the semester which form the individual building blocks of a more complicated analog circuit package.

- *Circuits Laboratory 1 and 2*

Developed all labs for the sophomore circuits laboratories. Circuits Laboratory 1 includes 10 - 11 experiments which support material learned in Electric Circuits 1 (EECE 011). Circuits Laboratory 2 includes 10-12 experiments supporting materials covered in Electric Circuits 2 (EECE 012) and Electronic Devices (EECE 010). All experiments can be updated easily each semester and more experiments are "on file" than are actually used during any academic semester so that content can change from one semester to another.

Major Courses Taught

Design with Analog Integrated Circuits (see above)
Electromagnetic Fields I and II
Instrumentation Lab
Analog Electronics
Analog Design Lab
Advanced Analog Electronics Lab
Electric Circuits 1 and 2
Circuits Laboratory 1 and 2 (see above)
Digital Electronics
Digital Electronics Laboratory
Introduction to Structured Programming
Sensor Devices: Theory, Design and Applications

- **Other Academic**
  - Attended NSF sponsored workshop, "PC Controlled Instrumentation for Undergraduate Laboratories" at University of Notre Dame (Notre Dame, IN), June 27 - July 6, 1988.
  - Electrical Engineering Instructor, "Young Engineering and Science Scholars", enrichment program for minority/low-income eighth grade students, July 1989 and July 1990.
  - Instructor for Electrical Engineering segment "College of Engineering Hands-on Mini Course", August, 1991, August, 1992, September 1994 through 2001.
  - Instructor, "Upward Bound - Junior Practicum in Engineering", June-July, 1992.
  - Engineering Program Coordinator and Instructor for "Young Engineering and Science Scholars (YESS) Summer Science Camp", 1993-1997. (YESS is a SEM enrichment program for minority students in grades 6 through 9.)
  - Engineering Program Coordinator for YESS-Saturday Science Colloquium and YESS-School Science Clubs, September 1993 - May 1997.
  - Attended IEEE - ABET Assessment conference, Louisville Kentucky, June 2000.
  - Attended Best Assessment Practices IV Conference, Rose-Hulman Institute, Terre-Haute, IN, April 2001.
  - Attended "Assessing to Enhance Teaching and Learning Workshop", Marquette University, May 15-17, 2002 .
  - Attended ECEDHA - IEEE ABET Workshop, March 17-18, 2005, New Orleans, LA.
  - Attended "Making the Grading Process Fair ... and using the Grading Process for Departmental Decisions", presented by Barbara Walvoord, Marquette University, May 17, 2005.
  - Attended "Practical and Feasible Ways to Assess and Improve Student Learning in Departments", presented by Barbara Walvoord, Marquette University, May 18, 2005.
  - Completed "Certificate in Electronic Teaching", February - May, 2005, Marquette University.
  - Participated in "Writing Across the Curriculum" Workshop, January 20-21, 2006, Marquette

University.
- Completed MU-GROW classes “Introduction to SharePoint”, October 17, 2007, and “Sharepoint Administration”, October 24, 2007.
- Attended Frontiers in Education conference, October 11 – 14, 2007, Milwaukee, WI.
- Attended MU-COR
  - 2nd Annual Institute for Faculty, Marquette University, January 11, 2006.
  - 3rd Annual Institute for Faculty, Marquette University, January 10, 2007.
  - 4th Annual Institute for Faculty, Marquette University, January, 2008.
  - 5th Annual Institute for Faculty, Marquette University,September 26, 2008.
- Attended ASEE North Midwest Section Conference, October 6-2009, Marquette University.
- Participated in Wimba seminars/webinar,
  - “Wimba Study Break: Effectively teaching Math, Sciences, and Engineering Online”, October 22, 2009. (online)
  - “Wimba Study Break: Transitioning from Face-to-Face to Online Instruction”, November 17, 2009. (online)
  - “I Love (Wimba) CATs: Using Wimba Classroom to Bridge Online and Face-to-Face Learning and Assessment”, December 3, 2009. (online)
  - “Approaches to Organizing and Offering Blended Courses”, January 28, 2010. (online)
- Completed IRB training course "Protecting Human Research Participants," (NIH Office of Extramural Research), December 22, 2009 (online, completion certificate on file at Marquette University Office of Research Compliance).
- Participated in “Designing Effective Writing Assignments” Workshop – Monday, April 4, 2011. Presented by Dr. John Bean, sponsored by the Ott Memorial Writing Center.
- Participated in “Teaching System Dynamics with MATLAB & Simulink”, MathWorksWebinar, June 14, 2011.

Funded Research (Grants and Contracts)

$ 2,181	Marquette University, Committee on Research (RRG), "Surface Acoustic Wave Investigation of Magnetic Metallic Films", 1/1/82 - 12/31/82.
$ 3,644	Marquette University, Committee on Research (RRG), "Investigation to Determine Optimum Field Annealing Parameters of Metallic Glasses," (with Herbert Pietsch), 1/1/84 - 12/31/84.
$ 2,700	Marquette University, Committee on Research, Summer Faculty Fellowship, "Study of Electrochemical Processes in ZnO Varistors," summer, 1985.
$ 30,360	McGraw-Edison Power Systems Division, "Study of Electrochemical Processes in ZnO Varistors," (with Martin Seitz), 1/15/85 - 1/15/87.
$ 59,058	National Science Foundation, ROW, "AC Impedance Spectroscopy Study of ZnO/ZrO_2 Single Crystal Junctions," 12/1/87 - 5/31/90.
$ 57,532	Astronautics Corporation of America, "Research and Development of Advanced High Voltage/High Power Resistors" (with Martin Seitz), 9/1/87 - 12/31/89.
$ 1,000	Marquette University, Committee on Research (RRG), "AC Impedance Spectroscopy Study of the Light Degradation Phenomenon in Amorphous Silicon," 1/1/88 - 12/31/88.
$ 20,000	MacNeal-Schwendler Corporation, Engineering/Electromagnetics Applications Department, "Electromagnetics Finite Element Applications", 7/1/89 – 1 6/30/90.
$ 49,600	MicroSim Corporation, "PSPICE Software Education Donation Program", 2/15/90.
$187,500	National Science Foundation, Summer Science Camp Program, "Summer Science Camps," 1/1/93 - 6/30/95 (with Christine J. Faltz, EOP).

$ 25,000	General Electric Foundation, proposal to support activities of "Young Engineering and Science Scholars Program," 6/1/95 - 8/30/98. *This grant is payable over four years in equal installments of $6,250.*
$ 62,500	National Science Foundation, Summer Science Camp Program, "Young Engineering and Science Scholars-Summer Science Camp, 1/1/96 - 6/30/97
$500,000	Department of Education, "Electrical Engineering GAANN Fellowship in Smart Sensor Systems, 8-15/2004- 8/14/2007 (with E. Yaz and F. Josse).
$ 1,000	Marquette University, ORSP – "Jump Start" Grant program, "Mold Detection using Acoustic Wave Devices" (with Fabien Josse), 12/15/2007-6/31/2008.
$15,000	Marquette University, Way-Klingler Teaching Enhancement Award, "Development of On-Line Lecture and Preparation Resources for five EECE Laboratory Courses", 1/1/2010 – 6/30/2010 (with F. Jacoby and J. Richie).

Publications

(A) **Journal Articles**

1. Arnold K. Mensah-Brown, Darlington Mlambo, Fabien Josse and Susan Schneider, "Analysis of the Detection of Organophosphate Pesticides in Aqueous Solutions Using Hydrogen-Bond Acidic Coating on SH-SAW Devices", IEEE Sensors, (July 2011, in press).
2. Chung-Hoon Lee, Jun Hyun Han, Susan Schneider and Fabien Josse, "Suspended and localized single nanostructure growth across a nanogap by electric field", Nanotechnology (August 2011, ref: NANO/390334/PAP/255334, in press).
3. A. Mensah-Brown, M.J. Wenzel, F. Josse, E. Yaz, and S. Schneider, "Rapid detection of organophosphate pesticides in aqueous environment using a polysiloxane coated SH-SAW device," Sensors, pp. 1540-1543, 2008.
4. K.M. Anis Rahman, Christopher J. Durning, Susan C. Schneider, Martin A. Seitz and W.A. Chiou, "Annealing and Microstructural Characterization of Tin-Oxide Based Thick Film Resistors", J. Electroceramics 9, 137-150, (2002).
5. K.M.A. Rahman, S. C. Schneider, M.A. Seitz, "Hopping and ionic conduction in tin oxide based thick film resistor compositions", J. Amer. Ceram. Soc. 80 [5] , 1198-2002 (1997).
6. Fabien Josse, Rich Lukas, Rongnong Zhou, Susan Schneider and Dennis Everhart, "AC-impedance-based chemical sensors for organic solvent vapors", Sensors and Actuators B 35-36, 363-369 (1996).
7. Ronald H. Brown, Susan C. Schneider and Michael G. Mulligan, "Analysis of Algorithms for Velocity Observers from Discrete Position Versus Time Data," IEEE Transactions on Industrial Electronics 39, 11-19, (1992).
8. S.C. Schneider, "Electron-Phonon SAW Attenuation in Aluminum for all ql," IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control 36, 114-118, (1989).
9. S.C. Schneider, M.A. Seitz, and A. Choudhury, "Formation of a ZnO/YSZ Single Crystal Interface," J. Am. Ceram. Soc. 71 [7], c-321-c-332 (1988).
10. F. Behroozi, G.W. Crabtree, S.A. Campbell, S.C. Schneider, D.R. Snider and M. Levy, "Magnetic Free Energy of $ErRh_4B_4$ in Paramagnetic and Superconducting State," J. Low Temp. Phys. 49, 73-89, (1982).
11. D.R. Snider, H.P. Fredricksen and S.C. Schneider, "Surface Acoustic Wave Attenuation by a Thin Film," J. Appl. Phys. 52, 3215-3222, (1981).
12. S.C. Schneider, M. Levy, R. Chen, M. Tachiki, D.C. Johnston and B.T. Matthias, "Ultrasonic Attenuation Determination of H_{c1} and H_{c2} for $ErRh_4B_4$ at 1.5 K," Solid State Commun. 40, 61-64, (1981).
13. S.C. Schneider, M. Levy, D.C. Johnston and B.T. Matthias, "Temperature Dependence of the Ultrasonic Attenuation Coefficient for $ErRh_4B_4$ between 1.5 K and 20 K," Phys. Letts. 80A, 72-74, (1980).
14. S.C. Schneider, J. Waynert, M. Levy and Kazumi Maki, "Fluctuation Contribution to Sound Attenuation in a Clean Type II Superconductor," Phys. Rev. B15, 2600-2603, (1977).
15. J.A. Waynert, H. Salvo, Jr., S.C. Schneider and M. Levy, "Ultrasonic Attenuation Investigation of the

Mixed States in Three Vanadium Samples of Varying Purity," Phys., Rev. B15, 2559-2569, (1977).

A1 – In press

A2 – In preparation

X. Wang, E. E. Yaz, S. C. Schneider and Y. I. Yaz, "H2-H-infinity control of discrete time nonlinear systems using SDRE approach," ~~*International Journal of Control*~~, **in preparation**.

X. Wang, E. E. Yaz, S. C. Schneider and Y. I. Yaz, "State dependent control of discrete time nonlinear systems with random actuator failures", ~~*International Journal of System Science*~~, **in preparation**.

M. N. ElBsat, Edwin E. Yaz and S.C. Schneider, "Nonlinear Estimation of Viscous Fluid Properties with Fluid-Loaded Microcantilevers", Mathematical and Computer Modelling

(B) **Chapter in Book**

1. Moises Levy and Susan C. Schneider, "Surface Waves in Solids and Ultrasonic Properties", Encyclopedia of Acoustics, ed. Malcolm J. Crocker, John Wiley & Sons, Inc., New York, Chapter 58, 661-672 (1997).
2. Moises Levy and Susan C. Schneider, "Electron-phonon, Acousto-electric and Magneto-elastic SAW Interactions with Superconducting Films, 2-D Electron Gas or Magnetic Films", Perspectives in Physical Acoustics: Proceedings of the Bolef Symposium, eds. Y. Fu, R.K. Sundfors, and P. Suntharothok, World Scientific Publishing, New Jersey, 150-200, (1992).
3. Moises Levy and Susan C. Schneider, "Surface Acoustic Wave Measurements on Superconducting Films", chapter to be published in Mechanical Spectroscopy, ed. L.B. Magalas, Kluwer Science Publishers, Ltd. *(anticipated publication date sometime in fall 2001.*
4. Moises Levy and Susan C. Schneider, "Attenuation of SAW due to Electron-Phonon Interaction," in Condensed Matter Physics: The Theodore D. Holstein Symposium, ed. Raymond L. Orbach, Springer-Verlag, N.Y., 74-81 (1986).
5. S.C. Schneider, R. Chen, M. Levy, D.C. Johnston and B.T. Matthias, "Ultrasonic Attenuation Study of Induced Magnetic Order in $ErRh_4B_4$," in Ternary Superconductors, eds. G.K. Shenoy, B.D. Dunlap and F.Y. Fradin, Elsevier-North Holland, New York, 147-150, (1981).

(C) **Conference Publications**

1. X. Wang, E. E. Yaz, S. C. Schneider and Y. I. Yaz, "H2-H-infinity control of discrete time nonlinear systems using SDRE approach," *Proc. of the 2011 ASME Dynamical Systems and Control Conference*, Arlington, VA, 2011 (accepted).
2. Susan C. Schneider and Roger L. Schneider, "Measurement of the Burn Rate of Black Match as a Function of Moisture Content", Proceedings of the 12th International Symposium on Fireworks, Porto, Portugal, October 11-15, 2010, ed. E. Contestabile, et.al. (pgx) (2010).
3. Jennifer L. Riffer, Katrina H. Barhouse, Susan C. Schneider, Edwin E. Yaz, "Constrained Time-Optimal Control of Discrete-Time Systems with Known Waveform Disturbances", Proceedings of the 2010 IASTED Conference on Circuits and Systems (CS 2010), Maui HI, August 23-25, 2010, ACTA Press (2010.
4. Jennifer Riffer, Edwin Yaz, Susan Schneider, "Dead-Beat Control Of Discrete-Time Systems With Known Waveform-Type Unknown Disturbances", Proceedings of the 2009 IASTED Conference on Identification, Control, and Applications (ICA 2009), Honolulu HI, August 17-19, 2009, ACTA Press (2009).
5. George Bossarte, Paul McKinley, Roger L. Schneider and Susan C. Schneider, "Advances in Magnetic Chronographic Measurement of the Muzzle Velocity of Aerial Shells", Proceedings of the

9th International Symposium on Fireworks, Berlin, Germany, April 1-5, 2006, ed. E. Contestabile, et. al., 407-415 (2006).
6. Roger L. Schneider and Susan C. Schneider, “External Ballistics Calculations for Aerial Display Fireworks Launched from Elevated Locations”, Proceedings of the 8th International Symposium on Fireworks, Shiga, Japan, April 18-22, 2005, ed. E. Contestabile, et. al., 407-415 (2005).
7. O. Amu, S. Schneider, F. Josse, J. Hossenlopp, Y. Jones, "Characterization of PIB as a Chemically Sensitive Layer in Liquid Environments using TSM Resonators," Proceedings of the 2005 IEEE Ultrasonics Symposium, Rotterdam, The Netherlands, September 18-21, 2005, ed. M. Yuhas, Institute of Electrical and Electronic Engineers, cat. no. 05CH37716C, 649-652 (2005).
8. Roger L. Schneider and Susan C. Schneider, “Measurement of the Burn Rates of Short Lengths of QuickMatch”, Proceedings of the 6th International Symposium on Fireworks, Orlando FL, December 3-7, 2001.
9. R.L. Schneider and S.C. Schneider, "Ignition of Salute Compositions and Black Powder Under Vacuum and Inert Gases," Proceedings of the Fourth International Symposium on Fireworks 1998, 589-91, October 1998, Halifax, Nova Scotia, Canada, Minister of Public Works and Government Services Canada (1998), Catalog No. M39-57/1998, ISBN 0-660-17596-7.
10. S.C. Schneider and R.L. Schneider, “An Inexpensive Portable Chronograph for the Measurement of Muzzle Velocities of Aerial Display Shells”, Proceedings of the Third International Symposium on Fireworks, Florida September 1996, 479-494 (1996).
11. S.C. Schneider and R.J. Niederjohn, "Assessing Student Learning Outcomes-Using Graduating Senior Exit Surveys and Alumni Surveys", Proceedings of "Frontiers in Education-95", Atlanta, GA (November 1995) (CD-ROM publication, paper 2C11).
12. Paul S. Carpenter, Ronald H. Brown, James A. Heinen, and Susan C. Schneider, “On Algorithms for Velocity Estimation Using Discrete Position Encoders”, IECON ‘95,
13. Roger L. Schneider and Susan C. Schneider, “Development of Techniques to Improve the Locatability of Dud Aerial Display Shells”, Proceedings of the 2nd International Fireworks Symposium, Vancouver, BC, October 24-28, 1994.
14. Susan C. Schneider, Susan A. Riedel, and Christine J. Faltz, "Upward Bound - Junior Practicum in Engineering", Proceedings of the 1992 American Society for Engineering Education (ASEE) Midwest Regional Conference, 54th Annual Meeting, Milwaukee, WI, October 8-10, 1992, 12.2.1-12.2.7 (1992).
15. Roger L. Schneider and Susan C. Schneider, "Using University Undergraduate Engineering Senior Design Course Students to Conduct Pyrotechnics (Fireworks) Research and Development", Proceedings of the 18th International Pyrotechnics Seminar, Breckenridge, CO, July 1992, ed. A.J. Tulis, 803-814 (1992).
16. Susan C. Schneider, Susan A. Riedel and Christine J. Faltz, "Young Engineering and Science Scholars, Electrical Engineering for Eighth Graders", Proceedings of the 1991 Annual Conference, New Orleans, LA, June 16-19, 1990, American Society for Engineering Education, 521-524 (1991).
17. S.C. Schneider and R.H. Brown, "Frequency Domain Analysis of Discrete Velocity Observers," Proceedings of the 31st Midwest Symposium on Circuits and Systems, St. Louis, MO, August 10-12, 1988, ed. R. Eugene Stuffle and Linda R. Laub, 1988 Steering Committee, Midwest Symposium on Circuits and Systems, 1100-1103 (1988).
18. R.H. Brown and S.C. Schneider, "Analysis of Algorithms for Velocity Observers from Discrete Position Encoders," Proceedings of the 17th Annual Symposium on Incremental Motion Control Systems and Devices, Champaign, IL, June 14-16, 1988, ed. B.C. Kuo, Incremental Motion Control Systems Society, Champaign, IL,243-252 (1988).
19. R. Brown and S.C. Schneider, "Velocity Observations from Discrete Position Encoders," INVITED PAPER, Proceedings IECON '87: Signal Acquisition and Processing, Boston, MA, November 2-6, 1987, SPIE Vol. 858, SPIE 1111-1115 (1987).
20. S.C. Schneider and M. Levy, "The Effect of Poisson's Ratio on Electron-Phonon SAW Attenuation," Proceedings of the 1987 IEEE Ultrasonics Symposium, Denver, Colorado, October 14-16, 1987, ed. B.R. McAvoy, Institute of Electrical and Electronic Engineers, cat. no. 87CH2492-7, 1159-1162 (1988).

21. S.C. Schneider and J. Stillmank, "Systematic Op-Amp Macromodeling," Proceedings of the 30th Midwest Symposium of Circuits and Systems, Syracuse, N.Y., August 17-18, 1987, eds. G. Glasford and K. Jabbour, Elsevier Science Publishing Co., Inc., N.Y., 1296-1299 (1988).
22. S.C. Schneider, M. Levy, M. Tachiki and D.C. Johnston, "Ultrasonic Attenuation Study of $H_{c1}(T)$ for $ErRh_4B_4$," Proc. 16th Int. Conf. on Low Temp. Physics, LT-16, Physics B+C 108, 807-808, (1981).

C1 – in press
C2 – in preparation

X. Wang, E. E. Yaz, S. C. Schneider and Y. I. Yaz, "State dependent control of discrete time nonlinear systems with random actuator failures", *submitted to the Proc. of the 2012 American Control Conference*, 2012, **in preparation.**

M. N. ElBsat, Edwin E. Yaz and S.C. Schneider, "Nonlinear Estimation of Viscous Fluid Properties with Fluid-Loaded Microcantilevers", submitted to IASTED International Conference on Modelling, Simulation, and Identification, MSI 2011, November 7 – 9, 2011

(D) **Theses/Dissertations:**

Susan C. Schneider, "Ultrasonic Attenuation Study of the Re-entrant Superconductor, $ErRh_4B_4$," Ph.D. Disseration, University of Wisconsin-Milwaukee, Milwaukee, WI, 1981.

(E) **Talks at Conferences**

1. "Dynamic Response Modeling of Fluid-Loaded Microcantilevers: A State-Space and Nonlinear Estimation Approach to Determining Viscosity and Density of Fluids", Mohammad N. ElBsat, Edwin Yaz, Fabien Josse, Isabelle Dufour, and Susan C. Schneider, 7th International Workshop on Nanomechanical Cantilever Sensors, May 26-28, 2010, Banff, Canada. (Poster Presentation).
2. "Ultrasonic Attenuation Study of Fluctuation Effects in Clean Superconducting Vanadium and Niobium," American Physical Society Meeting, March 1976, Atlanta, Georgia.
3. "Ultrasonic Attenuation in $ErRh_4B_4$," American Physical Society Meeting, March 1979, Chicago, Illinois.
4. "Ultrasonic Investigation of the Ferromagnetic Superconductor: $ErRh_4B_4$," IEEE 1982 Ultrasonics Symposium, November 1982, San Diego, California, (INVITED).
5. "Formation of ZnO/ZrO_2 Single Crystal Interface," 89th Annual Meeting of the American Ceramic Society, May 1987, Pittsburgh, PA, (poster).
6. "AC Impedance Spectroscopy Study of a Solid Semiconductor/Electrolyte Interface," 90th Annual Meeting of the American Ceramic Society, May 1988, Cincinnati, OH.
7. "Analytic Approximation for SAW Attenuation", IEEE 1991 Ultrasonics Symposium, Orlando, Florida, December, 1991.
8. "Characterization of PIB as a Chemically Sensitive Layer in Liquid Environments using TSM Resonators," IEEE 2005 Ultrasonics Symposium, Rotterdam, The Netherlands, September, 2005.

(F) **Other Talks**

1. "The Role of Immittance Spectroscopy in Materials Research", Fall 1992 Department of Electrical and Computer Engineering Colloquium Series, October 27, 1992.
2. "Impedance Spectroscopy in Materials Research," 1988 March Meeting, Sigma Xi (Marquette University Chapter), Marquette University, Milwaukee, WI.
3. "Quick and Dirty Tell-a-Graph", ECBE Colloquium, 4/18/89 and College Computer Seminar, 4/4/89.
4. "Introduction to Design Center System 3", EECE TODNET Seminar series, 4/29/95.
5. "MATLAB for 'Dummies'", EECE TODNET Seminar series, 1/96.

University Activities

(A) **Current Committee Assignments**

Department of Electrical and Computer Engineering, Undergraduate Committee, 1989 - present. (Chair)
Department of Electrical and Computer Engineering, Goals Committee, 1988 - 2009.
Department of Electrical and Computer Engineering, Executive Committee, 2009 – present.
College of Engineering, College Curriculum Committee, EECE representative, 2007 – present.

(B) **Graduate Students Directed**

1. Nancy Grigsby, M.S., 1984, Thesis: "Magnetic Field Mapping"
2. John Stillmank, M.S., 1987, Thesis: "Systematic Development of Operational Amplifier Macromodels"
3. Mary Larson, M.S., 1987, Essay: "Electric Fields and Dielectric Force in a Simple Capacitor System"
4. Steven Michalski, M.S., 1989, Essay: "Computer Aided Engineering: Using IG SPICE"
5. Jennifer Miller, M.S., 1989 (course work option, no thesis/essay)
6. Apurba Choudhury, Ph.D., 1991, Dissertation: "AC Immittance Spectroscopy Study of ZnO/YSZ Single Crystal Junctions"
7. K.M. Anisur Rahman, Ph.D., 1994, Dissertation: "AC Spectroscopic Characterization of the Conduction Mechanism of Tin Oxide-Glass Composite Thick Film Resistors"
8. Ohiorenuan (Jude) Amu, M.S., 2005, Thesis: “Characterization of Poly(isobutylene) (PIB) in Aqueous Environments using Thickness Shear Mode (TSM) Resonators” (co-directed with F. Josse)
9. Katherine Holterman, M.S., 2008, Thesis: “A Neo-classical Approach to More Efficient Controller Design”(co-directed with E. Yaz).
10. Jennifer Riffer, M.S., 2009, Thesis: “Time-Optimal Control of Discrete-time Systems with Known Waveform Disturbances” (co-directed with E. Yaz)
11. Meetalee Dalal, M.S. 2009 (course work option)
12. Winston A. Baker, M.S. 2010 (co-directed with E. Yaz)

Current students
Katrina Barhouse, M.S. (anticipated May 2011) (co-directed with E. Yaz)
Winston A. Baker, Ph.D. (anticipated May 2013) (co-directed with E. Yaz)

(C) **Other University Activities**

- Served on numerous M.S. and Ph.D. committees.
- Advisor to Alpha Omega Epsilon Engineering Sorority, 1985-present.
- Advisor to MU Student Chapter of the Society of Women Engineers, 1989-1990.
- Coordinator, Department of Electrical, Computer, and Biomedical Engineering Colloquium Series, 1987-1989.
- Presenter for "Engineering Speakers Bureau", talk entitled "Dialog with a Woman Engineer", presented at local area high schools on request.
- "National Engineering Information Quiz", Marquette University College of Engineering Speakers Bureau, presented at local area high schools on request.

Major past committee assignments

- Engineering Representative to Honors Council, 1981-1982.
- Commuter Student Advisor Board, 1982-1983.
- Ad Hoc Committee on Word Processing, 1985.
- College of Engineering, Library Liaison for the Department of Electrical, Computer, and Biomedical Engineering, 1984-1988.
- Department of Electrical, Computer, and Biomedical Engineering, Undergraduate Committee,

1984 - 1989; Secretary, 1985 - 1988.

- Department of Electrical, Computer, and Biomedical Engineering, Electronics Area Committee, 1984 - 1989.
- Department of Electrical, Computer, and Biomedical Engineering, Solid State Research Group, 1984 - 1989.
- Department of Electrical, Computer, and Biomedical Engineering, Ad Hoc Computer Usage Committee, 1988 - 1989.
- Department of Electrical, Computer, and Biomedical Engineering, Ad-Hoc Committee on Electrical Engineering Undergraduate Laboratories, 1989.
- College of Engineering, Design Resources Committee, 1989 - 1990.
- Department of Electrical, Computer, and Biomedical Engineering, Faculty Search Committee, 1988 - 1989.
- Marquette University Child Care Center Advisory Committee, 1990 - 1992.
- College of Engineering representative to the Marquette University Committee on Faculty, 1988-1994, Secretary COF, September 1991-May 1992.
- Department of Electrical and Computer Engineering, Computer Software Coordination Committee, 1989 - 1993.
- Faculty Hearing Committee, Elected at large representative, 1996 - 1998, 1998-2004, 2004 – 2007 (committee was disbanded as part of faculty governance revisions).
- College of Engineering Representative, Academic Senate, 1995-2001.
- Member, selection committee for the "Rev. John P. Raynor, S.J., Fellows", (1991, 1992, 1993, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003).
- Academic Senate, At-Large Representative, 2001-2004.
- University Assessment Committee, 2001 - May 2005.
- College of Engineering, New Building Committee, EECE representative, 2007 – 2009.
- Committee on Teaching, Aug 2003 – May 2011.