WAJIHA SHIREEN

EDUCATION

1/91-8/93	**Ph.D. in Electrical Engineering.** Texas A&M University, College Station, Texas. Dissertation : *Analysis and Design of active power filter topologies to cancel neutral current harmonics in low voltage electric power distribution systems.*
8/88 - 12/90	**Master of Science in Electrical Engineering.** Texas A&M University.
8/82 - 7/87	**Bachelor of Science in Electrical Engineering.** Bangladesh University of Engineering & Technology, Dhaka, Bangladesh.

TEACHING EXPERIENCE

8/93 – 8/99	**Assistant Professor:** Department of Electrical-Electronics Technology, University of Houston, Houston, Texas.
8/99 -Present	**Associate Professor:** Department of Electrical-Electronics Technology, University of Houston, Houston, Texas.
8/92 - 8/93	**Teaching Assistant:** Department of Electrical Engineering, Texas A&M University.

RESEARCH EXPERIENCE

8/99 –Present	**Associate Professor:** Department of Electrical-Electronics Technology, University of Houston, Houston, Texas.
8/93 – 8/99	**Assistant Professor:** Department of Electrical-Electronics Technology, University of Houston, Houston, Texas.
8/88 - 8/93	**Research Assistant:** Department of Electrical Engineering, Texas A&M University, College Station, Texas.

PUBLICATIONS (REFEREED JOURNAL PAPERS)

1. W. Shireen and W. Shireen, “Laboratory setup for variable speed control of a three phase AC Induction Motor using a DSP Controller”, to be published in the Computers in Education Journal 2003.
2. W. Shireen and M. Arefeen, “Controlling multiple motors utilizing a single DSP Controller“, Accepted for publication in IEEE Transactions on Power Electronics, 2003.
3. W. Shireen, A. Ganesh and P. Enjeti, “Improved active power factor correction circuit using a zero voltage switching boost converter”, IEEE Transactions on Power Electronics, pp. 308-314 March/April 1998.
4. W. Shireen and M. S. Arefeen, “The neutral current harmonics problem and possible solutions”, ASEE Journal of Engineering Technology, pp. 38-41, Spring 1996.
5. W. Shireen and M. S. Arefeen, “An utility interactive power electronics interface for alternate/renewable energy sources”, IEEE Transactions on Power Engineering, vol 11, issue 3, pp. 643-649, September 1996.
6. W. Shireen, P. Enjeti and P. Packebush, “Analysis and design of a new active filter to cancel neutral current harmonics in three phase four wire electric distribution systems”, IEEE Transaction on Industry Applications, vol. 30, No.6, pp.1565-1572, Nov./Dec. 1994.
7. W. Shireen and P. Enjeti, “A new technique to reject dc-link voltage ripple for inverters operating on programmed PWM waveforms”, IEEE Transactions on Power Electronics, Vol. 7, No. 1, pp. 171-180, January 1992.
8. W. Shireen and P. Enjeti, “New technique to reject dc-link voltage ripple in PWM inverters”, Journal of the Institution of Electronics and Telecommunication Engineers, Vol.37, No.1, pp. 139-151, 1991.

PUBLICATIONS *(REFEREED CONFERENCE PAPERS)*

1. W. Shireen and R. Kulkarni, "A Soft Switching Inverter Module with Modified DC-Link Circuit for High Frequency DC-AC Power Conversion", Applied Power Electronics Conference (APEC) 2003.
2. W. Shireen and R. Kulkarni, "Harmonic Analysis of three phase PWM inverter systems using MATLAB ", Accepted for ASEE Annual Conference 2003.
3. W. Shireen and Srinivas Vanapalli, " Laboratory setup for variable speed control of a three phase AC Induction Motor using a DSP Controller" ASEE annual conference and exposition", 2002.
4. W. Shireen et. al., "Implementation of a DSP based active power filter for electric power distribution systems supplying nonlinear loads", IEEE Applied Power Electronics Conference (APEC) '00.
5. W. Shireen and M S Arefeen, "Operating multiple motors utilizing one DSP controller", IEEE Applied Power Electronics Conference (APEC) '99.
6. W. Shireen , C. Andrews, M. Arefeen and J. Chepin," A MCT Based Zero Voltage Switching PWM Inverter", IEEE Applied Power Electronics Conference (APEC) Records pp.770-775, 1997.
7. W. Shireen, D. Misir, H. Malki, and M. S. Arefeen,"Soft switching scheme for a PWM inverter using fuzzy logic controller", IEEE International Telecommunications Energy Conference (INTELEC) Proceeding, 1996, pp. 428-433.
8. W. Shireen, A. Ganesh and P. Enjeti, "Improved active power factor correction circuit using a zero voltage switching boost converter", IEEE Power Electronics Specialists Conference , pp. 701-706,1995 .
9. W. Shireen and M. S. Arefeen, "A new dc voltage notching scheme for zero voltage switching of PWM inverters", IEEE-IAS Conference Rec., pp.898-894, 1994.
10. W. Shireen, P Enjeti and I Pitel, "Analysis and design of an active power filter to cancel harmonic currents in low voltage electric power distribution systems", IEEE-IECON, pp.368-373, Nov. 1992.
11. W. Shireen and P. Enjeti, "An advanced programmed PWM modulator for inverters which simultaneously eliminates harmonics and rejects dc-link voltage ripple", IEEE 5th. Applied Power Electronics Conference (APEC), pp. 681-685, 1990.

AWARDS

Outstanding College Faculty Award for Research, 1998.

PATENTS

"Modified Space Vector Pulse Width Modulation technique to reduce DC-bus ripple effect in voltage source inverters", U.S. Patent 6,313,602 B1, 2001.

MEMBERSHIPS IEEE Senior Member, IEEE Power Electronics Society (IEEE-PES), IEEE Industry Applications Society (IEEE-IAS) , Society of Women in Engineering (SWE).

RECENT GRANTS

1.	DSP based power electronics interface for alternate/renewable energy systems	Department of Energy	1999-2002	$	39,514
2.	An energy efficient motor drive system	University of Houston GEAR	2000-2001	$	20,000