

Javaid R. Laghari, Ph.D

Chairperson / Federal Minister
Higher Education Commission
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RESEARCH INTERESTS

- Higher Education
- Energy and Power
- High Voltage Systems
- Space Power Technology
- Information Technology
- Leadership

EDUCATION

- Ph.D. Electrical and Computer Engineering (1980)
State University of New York at Buffalo
Buffalo, NY, USA
- M.S. Electrical Engineering (1975)
Middle East Technical University
Ankara, Turkey
- B.S. Electrical Engineering (1971)
University of Sindh
Jamshoro, Pakistan

ADVANCED INSTITUTES ATTENDED

- NATO Advanced Study Institute, "The Behaviour of Systems in a Space Environment," Pitlochry, Scotland, U.K., July 7-19, 1991.
- NATO Advanced Study Institute, "Fast Electrical and Optical Diagnostic Principles and Techniques," Castelvecchio Pascoli, Italy, July 10-24, 1983.

NATO Advanced Study Institutes are by invitation only, and limited to top 100 scientists in NATO countries.

EXPERIENCE

- **Chairperson / Federal Minister** August 2009 - present
Higher Education Commission (www.hec.gov.pk)
Government of Pakistan

The Commission is responsible for developing policy framework, establishing new and strengthening existing universities, funding of universities and research, quality assurance, and faculty and human resource development. HEC oversees 132 Universities and 258 campuses in Pakistan, including 59 private universities, with over 800,000 students and a budget of over Rs. 44 billion (\$ 500 million) in 2009.

The Commission has established formal collaborative networks with USAID, USEF, British Council, AusAID, DAAD (Germany), EGIDE (France), JICA (Japan), and also with a large number of leading universities, and science and technology parks, around the world.

Also officiating as:

- *Chancellor, Air University (www.au.edu.pk), Islamabad. A federally chartered public university. Air War College, a prestigious strategic institute of the Pakistan Air Force (PAF), is one of the affiliated institutes of Air University.*
- *Chairperson, Board of Governors, National College of Arts (www.nca.edu.pk), Lahore. Established in 1872 as the Mayo School of Industrial Arts to commemorate Lord Mayo, the British Viceroy to India, NCA is one of the premier arts school in South Asia.*

- **Senator** March 2006 –August 2009
Parliament of Pakistan

Represented Pakistan Peoples Party (PPP) led by Ms. Benazir Bhutto, former Prime Minister of Pakistan.

Officiated as Acting Chairman Senate in April 2009.

Member of the Senate Standing Committees on

- *Water and Power*
- *Information Technology*
- *Information and Broadcast*

Member, Board of Governors, Pakistan Institute of Parliamentary Affairs (PIPS), 2009

Member, Senate Strategic Planning Committee, 2009.

Key Advisor to Chairperson Ms. Benazir Bhutto on Education, Energy and Power, Science and Technology, Information Technology, and in formulating the Party Manifesto. Assigned the following responsibilities within the Pakistan Peoples Party (PPP):

- *Chairman, Energy and Power Committee (authored the PPP Energy and Power Policy).*
- *Deputy Coordinator, Policy Planning Committee.*
- *Co-Chairman, Task Force on Manifesto Implementation.*
- *Member, Manifesto Committee (authored the PPP Election 2008 Manifesto) and*

Secretary, Manifesto Implementation Committee.

- *Coordinator, International Liaison.*

- **President** July 95 – August 2009
Shaheed Zulfiqar Ali Bhutto Institute of Science and Technology (SZABIST), Pakistan.

SZABIST(www.szabist.edu.pk) is ranked among the best Business and Science & Technology Schools in Asia by BusinessWeek, AsiaInc, Asia Week and CNN-Time Inc.

Established SZABIST from scratch in 1995, and within 6 years was ranked among the best universities in Asia.

SZABIST had 4 campuses (Karachi, Islamabad, Larkana and Dubai, UAE) with 7 faculties and over 3000 students, and had graduated over 4000 students during my tenure.

SZABIST had many divisions, including ZabFM, ZabNet, ZabSolutions, ZabOnline University, Executive Development Center, and the Center for Management and Development, which all reported to me as CEO.

- **Professor and Director of Graduate Studies** August 92 – July 95
Department of Electrical and Computer Engineering, State University of New York at Buffalo, NY, USA.

SUNY Buffalo (www.buffalo.edu) is the flagship university in the SUNY system, and the largest public university in northeastern USA.

Tenured Full Professor. Over \$5 million in Sponsored Research. Established the Space Power Institute at SUNY with additional \$4 million of federal state and private funding.

- **Associate Professor** August 88 – August 92
Department of Electrical and Computer Engineering State, University of New York at Buffalo, NY, USA
- **Assistant Professor** September 80 – August 88
Department of Electrical and Computer Engineering, State University of New York at Buffalo, NY, USA

BOOK PUBLICATIONS

BOOKS

1. 'Reflections on Benazir Bhutto,' SZABIST Publication, ISBN 978-969-8666-13-2, February 2008, 195 pages.
2. 'Leaders of Pakistan,' SZABIST Publication, ISBN 978-969-8666-14-9, August 2009, 102 pages.

INVITED BOOK CHAPTER

1. J. R. Laghari, "Dielectric Films for High Temperature High Voltage Power Electronics,"

Materials for Electronic Packaging, ed. Deborah D. L. Chung, Butterworth Publishers, 1994.

MONOGRAPH

1. J. R. Laghari, A. H. Qureshi and G. D. Theophilus, "Flashover Studies in SF₆-N₂ Mixtures Using Direct Applied Voltages," Gaseous Dielectrics II, edited by L. G. Christophorou, Pergamon Press, 1980, pp. 227-236.

IEEE STANDARD

IEEE Guide for Designing Multistress Aging Experiments in a Radiation Environment," IEEE Std 775-1993, J. R. Laghari, Chairman, IEEE Radiation Effects Committee, June 1993, pp. 1-16.

REFEREED JOURNAL PAPERS

1. J. R. Laghari and A. H. Qureshi, "Surface Flashover of Spacers in Compressed Gas Insulated Systems," IEEE Transactions on Electrical Insulation, Vol. EI-16, No. 5, 1981, pp. 373-387.
2. J. R. Laghari and A. H. Qureshi, "A Review of Particle-Contaminated Gas Breakdown," IEEE Transactions on Electrical Insulation, Vol. EI-16, No. 5, 1981, pp. 388-398.
3. J. R. Laghari, "Spacer Flashover in Compressed Gases," IEEE Transactions on Electrical Insulation, Vol. EI-20, No. 1, 1985, pp. 83-92.
4. J. R. Laghari, "Testing and Evaluation of Insulating Films: Part I: Description of Test Facilities at the University at Buffalo," IEEE Electrical Insulation, Vol. 2, No.6, 1986, pp. 16-21.
5. J. R. Laghari, "Testing and Evaluation of Insulating Films: Part II: Test Results using Facilities at the University at Buffalo," IEEE Electrical Insulation, Vol. 2, No. 6, 1986, pp. 22-26.
6. J. R. Laghari, "A Review of ac and Pulse Capacitor Technology," Applied Physics Communications, Vol. 6, No. 2, 1986, pp. 213-251.
7. S. Cygan and J. R. Laghari, "On the Design of Field-Controlled Multi-Layer Foil Insulation," IEEE Transactions on Electrical Insulation, Vol. EI-22, No. 1, 1987, pp.107-108.
8. J. R. Laghari, "Multifactor Stress Aging of Dielectrics," Applied Physics Communications, Vol. 7, No. 1, 1987, pp. 19-55.
9. M. Treanor, J. R. Laghari and A. K. Hyder, "Repetitive Phenomena in Dielectrics" IEEE Transactions on Electrical Insulation, Vol. EI-22, No. 4, 1987, pp. 517-522.
10. S. Cygan and J. R. Laghari, "Dependence of Electrical Strength on Thickness, Area and Volume of Polypropylene," IEEE Transactions on Electrical Insulation, Vol. EI-22, No. 6, 1987, pp. 835-837.
11. B. Krishnakumar, R. K. Gupta, E. O. Forster and J. R. Laghari, "ac Breakdown of Melt-Crystallized Isotactic Polypropylene," Journal of Applied Polymer Science, Vol. 35, 1988, pp. 1459-1472.
12. N. Hammoud, J. R. Laghari and B. Krishnakumar, "Electron Radiation Effect on the

- Electrical and Mechanical Properties of Polypropylene," IEEE Transactions on Nuclear Science, Vol. NS-34, No. 6, 1987, pp. 1822-1826.
13. S. Cygan and J. R. Laghari, "Field-Grading of Multi-Layered Composite Insulation Structures," Applied Physics Communications, Vol. 7, No. 4, 1987, pp. 255-274.
 14. N. Hammoud, J. R. Laghari and B. Krishnakumar, "Characterization of Electron Irradiated Biaxially - Oriented Polypropylene Films" IEEE Transactions on Nuclear Science, Vol. NS-35, No. 3, 1988, pp. 1026-1029.
 15. N. Hammoud, J. R. Laghari and B. Krishnakumar, "Effect of High Energy electron Radiation on MIPB-Impregnated Polypropylene Film," IEEE Transactions on Nuclear Science, Vol. NS-35, No. 4, 1988, pp. 1061-1065.
 16. S. Cygan and J. R. Laghari, "Visual Observations of Surface Damage to Polypropylene and Polyvinylidene Films from High Voltage Discharges," Journal of Materials Science Letters, Vol. 8, 1988, pp. 835-837.
 17. P. Cygan and J. R. Laghari, "Lifetimes of Polypropylene Films Under Combined High Electric Fields and Thermal Stresses," IEEE Transactions on Electrical Insulation, Vol. EI-24, No. 4, 1989, pp. 619-625.
 18. S. Cygan and J. R. Laghari, "Effects of Fast Neutron Radiation on Polypropylene," IEEE Transactions on Nuclear Science, Vol. NS-36, No. 4, 1989, pp. 1386-1390.
 19. J. R. Laghari, "Model for Electro-Thermal Aging of Electrical Insulation," Applied Physics Communications, Vol. 9, Nos 1 & 2, 1989, pp. 73-86.
 20. W. Khechen and J. R. Laghari, "Breakdown Studies of SF6-Argon Gas Mixtures," IEEE Transactions on Electrical Insulation, Vol. EI-24, No. 6, 1989, pp. 1141-1146.
 21. J. R. Laghari and A. N. Hammoud, "A Brief Survey of Radiation Effects on Polymer Dielectrics," IEEE Transactions on Nuclear Science, Vol. NS-37, No. 2, 1990, pp. 1076-1083.
 22. J. R. Laghari and A. N. Hammoud, "Effect of Nuclear Radiation on the Electrical Properties of Chemical Double Layer Capacitors," IEEE Transactions on Nuclear Science, Vol. NS-37, No. 2, 1990, pp. 1072-1075.
 23. P. Cygan and J. R. Laghari, "Models for Insulation Aging Under Electrical and Thermal Multistresses," IEEE Transactions on Electrical Insulation, Vol. EI-25, No. 5, 1990, pp. 923-934.
 24. J. R. Laghari, J. L. Suthar and S. Cygan, "PSPICE Applications in High Voltage Engineering Education," Computers and Education, Vol. 14, No. 6, 1990, pp. 455-462.
 25. J. R. Laghari, P. Cygan and W. Khechen, "A Short Method of Estimating Lifetime of Polypropylene Film Using Step-Stress Test," IEEE Transactions on Electrical Insulation, Vol. EI-25, No. 6, 1990, pp. 1180-1182.
 26. J. L. Suthar and J. R. Laghari, "Effect of Ionizing Radiation on the Electrical Characteristics of Polyvinylidene Fluoride (PVF2)," IEEE Transactions on Nuclear Science, Vol. NS-38, No. 1, 1991, pp. 16-19.
 27. J. L. Suthar and J. R. Laghari, "The Influence of High Energy Electron Radiation on Tensile Properties of Polyvinylidene Fluoride Film," Journal of Materials Science Letters, Vol. 10, 1991, pp. 786-788.
 28. S. Cygan and J. R. Laghari, "Effect of Multistress Aging (Radiation, Thermal, Electrical) on Polypropylene," IEEE Transactions on Nuclear Science, Vol. 38, No. 3, 1991, pp. 906-912.
 29. J. L. Suthar, J. R. Laghari and T. J. Saluzzo, "Usefulness of SPICE in High Voltage Engineering Education," IEEE Transactions on Power Systems, Vol. 6, No. 3, 1991, pp.

1272-1278.

30. J. R. Laghari and W. J. Sarjeant, "Energy Storage Pulsed Power Capacitor Technology," IEEE Transactions on Power Electronics, Vol. 7, No. 1, 1992, pp. 251-257.
31. J. L. Suthar and J. R. Laghari, "Breakdown Studies of Teflon Perfluoroalkoxy Film at High Temperature," Journal of Materials Science, Vol. 27, 1992, pp. 1795-1800.
32. J. L. Suthar and J. R. Laghari, "Evaluation of High Temperature Dielectric Films for High Voltage Power Electronic Applications," Journal of Materials Science: Materials in Electronics, Vol. 3, 1992, pp. 77-81.
33. J. R. Laghari, "High Voltage Pulsed Life of Multistressed Polypropylene Capacitor Dielectric," IEEE Transactions on Nuclear Science, Vol. 39, No. 1, 1992, pp. 21-24.
34. J. L. Suthar, J. R. Laghari and P. C. Cheng, "Laser Scanning Confocal Microscopy: A Non-Destructive Tool for Examining Microstructure of Polymer Dielectric Films," IEEE Electrical Insulation Magazine, Vol. 8, No. 4, 1992, pp. 20-24.
35. W. Khachen and J. R. Laghari, "Estimating Lifetime of PP, PI and PVDF Under Artificial Void Conditions Using Step-Stress Tests," IEEE Transactions on Electrical Insulation, Vol. 27, No. 5, 1992, pp. 1022-1025.
36. J. R. Laghari, "Complex Electro/Thermal/Radiation Aging of Polymers," Invited Review Paper, IEEE Transactions on Electrical Insulation, Vol. 28, No. 5, 1993, pp.777-788.
37. S. Akbar and J. R. Laghari, "Electromagnetic Guns and Launchers," Science Technology and Development, Vol. 12, No. 2, 1993, pp. 29-40.
38. W. Khechen and J. R. Laghari, "Determination of Aging Model Constants Under High Frequency and High Electric Fields," IEEE Transactions on Electrical Insulation, July 1994.
39. P. Cygan and J. R. Laghari, "Accelerated Life Studies of Polyimide Film Under Electrical and Thermal Multistresses," IEEE Transactions on Electrical Insulation, July 1994.
40. Mohammad Nadeem & J. R. Laghari, "Study of Pakistan Election System "Intelligent e-Election," Journal of Independent Studies & Research, Vol. 1, No. 2, July 2003, pp. 2 – 7.
41. Syed Zeeshan Arshad and J. R. Laghari, "CEMENTIDE: A Creativity Enhanced Model for Effective Integration and Technology Implementation in Developing Countries," Journal of Independent Studies & Research, Vol. 4, No. 2, 2006, pp 2 – 7.
42. Naheed Malbari and J.R. Laghari, 'Transformational Leadership and Benazir Bhutto', Journal of Independent Studies & Research, Vol. 8, No.1, January 2010, pp 203-220.
43. Naheed Malbari and J.R. Laghari, "Transformational Leadership in Bhutto's Reconciliation: Islam, Democracy and the West", Accepted for publication, Journal of Independent Studies and Research, 2010.

INTERNATIONAL CONFERENCE PROCEEDINGS

1. J. R. Laghari and A. H. Qureshi, "Effects of Partial Discharges on Synthetic Insulation Materials and Air and Other Gases," Proceedings, Third International Symposium on High Voltage Engineering, Milano, Italy, August 1979, pp. 221-224.
2. J. R. Laghari and A. H. Qureshi, "Effects of Surface Discharges on Synthetic Insulation Materials," Proceedings, International Electrical Electronics Conference and Exposition, Toronto, Canada, October 1979, pp. 180-181.
3. J. R. Laghari and A. H. Qureshi, "Surface Flashover Voltages in SF6-N2 Mixtures Under Uniform and Non-Uniform Fields," Proceedings, Conference on Electrical Insulation and Dielectric Phenomena, Pocono Manor, PA, October 1979, pp. 268-276.

4. J. R. Laghari, N. A. Malik, A. H. Qureshi and G. D. Theophilus, "Surface Flashover of Spacers in SF₆-N₂ Mixtures and Design of High Impulse Ratio Compressed Gas Insulated Apparatus," Proceedings, International Conference on Development in Design and Performance of EHV Switching Equipment, London, U.K., November 1979, pp. 71-74.
5. J. R. Laghari and A. H. Qureshi, "Flashover Studies of Cylindrical Spacers in SF₆-N₂ Mixtures," Proceedings, PES Winter Meeting, New York, NY, February 1980, pp. 1-7.
6. J. R. Laghari, A. H. Qureshi and G. D. Theophilus, "Flashover Studies in SF₆-N₂ Mixtures Using Direct Applied Voltages," Second International Conference on Gaseous Dielectrics, Knoxville, TN, March 1980, pp. 227-236.
7. J. R. Laghari and A. H. Qureshi, "Surface Flashover Along Spacers in SF₆ and SF₆-Gas Mixtures With and Without Electrode Surface Roughness," 18th Cage Club Meeting, Ottawa, Canada, May 1980.
8. J. R. Laghari and A. H. Qureshi, "Protrusion-Initiated Gas Breakdown in the Presence of Solid Insulators," Proceedings, Nordic Insulation Symposium, Trondheim, Norway, June 1980, pp. 111-120.
9. J. R. Laghari and A. H. Qureshi, "Flashover Voltages of Cylindrical Insulators in Gas Mixtures," Proceedings, Sixth International Conference on Gas Discharges and Their Applications, Manchester, U.K., September 1980, pp. 240-242.
10. J. R. Laghari and A. H. Qureshi, "Flashover of Spacers in SF₆-N₂ Gas Mixtures," Proceedings, 13th Symposium on Electrical Insulation Materials, Tokyo, Japan, September 1980, pp. 105-108.
11. J. R. Laghari and A. H. Qureshi, "Flashover of Spacers in Non-Uniform Fields," Proceedings, Canadian Conference on Communication and Power, Montreal, Canada, October 1980, pp. 280-283.
12. J. R. Laghari and A. H. Qureshi, "Breakdown Along Solid Insulators in Compressed SF₆," Proceedings, 16th Universities Power Engineering Conference, Sheffield, U.K., April 1981, pp. 1-5.
13. J. R. Laghari and A. H. Qureshi, "Impulse Breakdown Voltages for a Cylindrical Spacer in the Presence of Electrode Protrusion," Proceedings, Third International Pulsed Power Conference, Albuquerque, NM, June 1981, pp. 285-288.
14. J. R. Laghari, D. T. Shaw and K. Chou, "Corona Discharges at High Temperatures and Pressures," 14th Aerosol Technology meeting, Baltimore, MD, August 1981.
15. J. R. Laghari and A. H. Qureshi, "Breakdown Voltages of Spacers in Compressed SF₆," Proceedings, International Electrical, Electronics Conference and Exposition, Toronto, Canada, October 1981, pp. 42-43.
16. M. Alem and J. R. Laghari, "A Prediction of Deposition of Contaminants on Insulator Surface With and Without Grading Rings," Proceedings, IEEE International Symposium on Electrical Insulation, Pittsburgh, PA, June 1982, pp. 192-196.
17. J. R. Laghari and M. Alem, "Particle Deposition on HVDC Insulators with Grading Rings," Proceedings, First Annual Conference, Aerosol Research Association, February 1982, pp. 282-283.
18. W. J. Sarjeant, J. R. Laghari and K. J. Bickford, "Charge Injection Effects Upon Partial Discharges in a dc and dc Plus ac Laminate Insulation Environment," Proceedings, Workshop on Space-Based Power, Arlington, VA, February 1982.
19. J. R. Laghari and W. J. Sarjeant, "Charge Injection Effects Upon Partial Discharges in Polymer Films," Gordon Conference on Dielectrics, Plymouth, NH, August 1982.

20. J. R. Laghari and M. Alem, "Precipitation of Atmospheric Aerosols on Transmission Line Insulators," 15th Aerosol Technology Meeting, Anaheim, CA, August 1982.
21. J. R. Laghari, W. J. Sarjeant, R. Gupta, K. J. Bickford and T. Springer, "Partial Discharges and Charge Injection in Polymer Insulation," Proceedings, Conference on Electrical Insulation and Dielectric Phenomena, Buck Hill Falls, PA, October 1982, pp. 541-548.
22. J. R. Laghari, K. H. Chou and D. T. Shaw, "A Study of Corona Discharges at High Temperatures and Pressures for Application to Advanced ESPs," Proceedings, Industrial Pollution Control Symposium, Houston, TX, January 1983, pp. 185-192.
23. J. R. Laghari and W. J. Sarjeant, "Partial Discharges and Breakdown in Laminate Insulation Structures," Proceedings, 1st International Conference on Conduction and Breakdown in Solid Dielectrics, Toulouse, France, July 1983, pp. 282-285.
24. J. R. Laghari, "Insulation Experiments on the Space Station," NASA Workshop on Plasma Physics and Fusion Scientific Activity on the Space Station, Rogerville, AL, May 1985.
25. M. Treanor, J. R. Laghari and W. J. Sarjeant, "Repetitive Phenomena in Dielectrics," Proceedings, International Conference on Properties and Applications of Dielectric Materials, Xian, China, June 1985, pp. 1-4.
26. T. Bilodeau, M. Treanor, A. Hammoud, G. FitzPatrick and J. R. Laghari, "A Description of New Insulation Test Facilities at SUNY/AB," Proceedings, 5th IEEE Pulsed Power Conference, Arlington, VA, June 1985, pp. 481-484.
27. M. Rickley, R. N. Hitchcock, R. Dollinger and J. R. Laghari, "A Large 500 kV Double Resonant Transformer for Testing HV Probes and HV Resistor Materials," Proceedings, 5th IEEE Pulsed Power Conference, Arlington, VA, June 1985, pp. 824-827.
28. J. R. Laghari, A. H. Hammoud and W. J. Sarjeant, "Time-Induced Partial Breakdown in Laminate Structures," Proceedings, Conference on Electrical Insulation and Dielectric Phenomena, Buffalo, NY, October 1985, pp. 518-523.
29. S. Cygan, J. R. Laghari and W. Khechen, "Influence of Electrode Area and Weight on Breakdown of Multilayered Insulation Structures," Proceedings, IEEE International Symposium on Electrical Insulation, Arlington, VA, June 1986, pp. 62-65.
30. W. Khechen, A. Hammoud and J. R. Laghari, "A New Type of Life Testing of Dielectrics Under 60 Hz ac in the Laboratory," Proceedings, IEEE International Symposium on Electrical Insulation, Arlington, VA, June 1986, pp. 175-178.
31. G. J. FitzPatrick, J. R. Laghari and E. O. Forster, "The Effects of Impregnants on the Morphology and Dielectric Properties of Polypropylene Films," Proceedings, 2nd International Conference on Conduction and Breakdown in Solid Dielectrics, Erlangen, Germany, July 1986, pp. 211-216.
32. S. Cygan and J. R. Laghari, "Surface Damage to Films Under High Voltage Discharges," 23rd Annual Technical Meeting of the Society of Engineering Sciences, Buffalo, NY, August 1986.
33. B. Krishnakumar, J. R. Laghari, E. O. Forster and R. Gupta, "The Effect of Polypropylene Morphology on ac Breakdown," Proceedings, Conference on Electrical Insulation and Dielectric Phenomena, Wilmington, DE, November 1986, pp. 522-527.
34. W. Khechen, S. Cygan, J. R. Laghari and G. Kasper, "SF₆-Argon Gas Mixtures for Insulation," Proceedings, 6th IEEE Pulsed Power Conference, Arlington, VA, June 1987, pp. 647-649.
35. Hammoud, B. Krishnakumar and J. R. Laghari, "Breakdown Behavior of Isotactic Polypropylene with Varying Morphologies for Use in Pulsed Power Electrical Insulation,"

- Proceedings, 6th IEEE Pulsed Power Conference, Arlington, VA, June 1987, pp. 205-208.
36. Krishnakumar, J. R. Laghari, P. Cygan and M. Takacs, "Influence of Impregnation Temperature and Time on Electrical Properties of Dielectric Films," Proceedings, Fifth International Conference on Dielectric Materials, Measurements and Applications, Manchester, U.K., June 1988, pp. 89-92.
 37. P. Cygan B. Krishnakumar and J. R. Laghari, "High Field Electrical and Thermal Aging of Polypropylene Films," Proceedings, IEEE International Symposium on Electrical Insulation, Boston, MA, June 1988. pp. 188-191.
 38. W. Khechen and J. R. Laghari, "Glow Discharge Aging of Kapton Film." IEEE International Conference on Plasma Science, Buffalo, NY, May 1989, p 98.
 39. J. Shea, D. McDonald and J. R. Laghari, "Air Conductivity Enhancement by Surface Charges Insulators in the Presence of Free Ions," Proceedings, Sixth International Symposium on High Voltage Engineering, New Orleans, LA, August 1989, pp. 34.05.1-4.
 40. J. L. Suthar and J. R. Laghari, "High Temperature Studies of Perfluoroalkyl (PFA) Film," Conference on Electrical Insulation and Dielectric Phenomena, Leesburg, VA, October 1989, pp. 495-502.
 41. W. Khechen and J. R. Laghari, "Polypropylene for High Voltage High Frequency Airborne Applications," IEEE International Symposium on Electrical Insulation, Toronto, Canada, June 1990, pp. 80-83.
 42. P. Cygan and J. R. Laghari, "A Review of Electrical and Thermal Multistress Aging of Electrical Insulation," Invited Review Paper, IEEE International Symposium on Electrical Insulation, Toronto, Canada, June 1990, pp. 15-20.
 43. N. Hammoud, J. L. Suthar and J. R. Laghari, "Characterization of Polybenzimidazole (PBI) at High Temperatures," IEEE International Symposium on Electrical Insulation, Toronto, Canada, June 1990, pp. 449-451.
 44. J. R. Laghari and W. J. Sarjeant, "Energy Storage/Pulsed Power Capacitor Technology," Invited Review Paper, IEEE International Power Source Symposium, Cherry Hill, NJ, June 1990, pp. 380-386.
 45. J. L. Suthar, J. R. Laghari and T. J. Saluzzo, "Usefulness of SPICE in High Voltage Engineering Education," IEEE Winter Power Meeting, New York, NY, February 1991, Paper No. 91WM077-8PWRS, pp. 1-7.
 46. J. L. Suthar and J. R. Laghari, "Dielectric Films for High Temperature High Power Electronics Applications," First International High Temperature Electronics Conference, Albuquerque, NM, June 1991, pp. 105-110.
 47. J. L. Suthar and J. R. Laghari, "Simulation of Air Core Pulse Transformer," 8th IEEE Power Conference, San Diego, CA, June 1991, pp. 237-240.
 48. W. Khechen, J. R. Laghari and W. J. Sarjeant, "Influence of Space Pressure on Dielectric Properties of Pulsed Power Insulation," 8th IEEE Pulsed Power Conference, San Diego, CA, June 1991, pp. 346-350.
 49. J. R. Laghari and J. L. Suthar, "Dielectric Films for High Temperature High Voltage Power Electronics," Invited Paper, Conference on Materials for Electronic Packaging, Buffalo, NY August 1991.
 50. J. L. Suthar, J. R. Laghari and W. Khechen, "Poly-P-Xylene Film for High Temperature High Voltage Dielectric Applications," Conference on Electrical Insulation and Dielectric Phenomena, Knoxville, TN, October 1991, pp. 244-249.
 51. J. R. Laghari, "Radiation Effects on Electrical Insulation," NATO Advanced Study Institute

- on "The Behaviour of Systems in the Space Environment," Pitlochry, Scotland, U.K., July 1991.
52. W. Khechen and J. R. Laghari, "Dielectric Breakdown of Polypropylene Under High Frequency Fields," IEEE International Symposium on Electrical Insulation, Baltimore, MD, June 1992, pp. 185-188.
 53. J. R. Laghari and P. J. Cygan, "Accelerated Life Studies of Polyimide Film Under Electrical and Thermal Multistress," IEEE International Symposium on Electrical Insulation, Baltimore, MD, June 1992, pp. 66-69.
 54. J. Suthar, J. R. Laghari, et al., "Evaluation of Dielectric Materials for Aerospace and Space Power Wiring Insulation," IEEE International Symposium on Electrical Insulation, Baltimore, MD, June 1992, pp. 17-20.
 55. W. Khechen, J. L. Suthar, J. R. Laghari and W. J. Sarjeant, "High Energy Density Capacitor Dielectric Mismatch and Aging Characteristics," IEEE 35th International Power Sources Symposium, Cherry Hill, NJ, June 1992, pp. 377-380.
 56. N. Stokes, J. L. Suthar, J. R. Laghari and W. J. Sarjeant, "Lifetime Characteristics of Electrically and Thermally Preaged Polypropylene Films," Conference on Electrical Insulation and Dielectric Phenomena, Victoria, British Columbia, October 1992, pp. 741-746.
 57. Hammoud, E. D. Bauman, J. R. Laghari, et al., "High Temperature Properties of Apical Kapton, PEEK, Teflon AF and Upilex Polymers," Conference on Electrical Insulation and Dielectric Phenomena, Victoria, British Columbia, October 1992, pp. 549-554.
 58. N. Stokes, J. R. Laghari and W. J. Sarjeant, "Effect of Thermal and Electrical Prestressing on the Lifetime Characteristics of Polypropylene," Gordon Conference on Dielectrics, Plymouth, NH, August 1992.
 59. J. L. Suthar, A. Stokes, W. Khachen and J. R. Laghari, "Statistical Analysis of Multistress Aging Studies of Polyetherimide," Conference on Electrical Insulation and Dielectric Phenomena, Pocono, PA, October 1993, pp. 568-573.
 60. J. R. Laghari, "Breakdown Testing for Wiring Insulation," Invited Paper, NASA 2nd Workshop on Space Applications, Cleveland, OH, October 1993, pp. 1-18.
 61. N. Hammoud, J. R. Laghari and J. L. Suthar, "Breakdown Behaviour of Wiring Constructions for Space Applications," 2nd International Conference on High Temperature Electronics, Charlotte, NC, June 1994, pp. 1-6.
 62. H. Hammoud, J. L. Suthar, W. Khachen and J. R. Laghari, "Testing of Cable Insulation for Aerospace Applications," IEEE International Symposium on Electrical Insulation, Pittsburgh, PA, June 1994, pp. 174-177.
 63. N. Stokes, J. R. Laghari and W. J. Sarjeant, "Comparative Statistical Studies of Aging Models for Polypropylene Films," IEEE International Symposium on Electrical Insulation, Pittsburgh, PA, June 1994, pp. 332-335.
 64. Mohammad Nadeem and J. R. Laghari, "An Implementation of Web based OLAP Model for Data Warehousing," National Research Conference, Karachi, Pakistan, December 2001.
 65. Syed Zeeshan Arshad and J. R. Laghari, "Business Plan – ZabSolutions," National Research Conference, Karachi, Pakistan, December 2002.
 66. Mohammad Nadeem & J. R. Laghari, "Study of Pakistan Election System as Intelligent e-Election," National Research Conference, Karachi, Pakistan, May 2003.
 67. S. Zeeshan Arshad and J. R. Laghari, "Learning Media Production," National Research Conference, Karachi, Pakistan, December 2003.

68. Naheed Malbari and J. R. Laghari, "Valorous Leadership and The Potter Mania," National Research Conference, Karachi, Pakistan, May 2007.
69. Naheed Malbari and J. R. Laghari, "Honor and Leadership and the Potter Mania," National Research Conference, Karachi, Pakistan, May 2007.
70. Naheed Malbari and J. R. Laghari, "Leadership – The East / West Dichotomy," National Research Conference, Karachi, Pakistan, May 2008.
71. M. Nadeem and J. R. Laghari, "Content WebData Mining Approach for Automated Meta-Rule Extraction and Information Retrieval," International Conference on Data Mining – DMINO8, Las Vegas, US, July 2008.
72. Naheed Malbari and J.R. Laghari, "Transformational Leadership and Mohtarma Benazir Bhutto", National Research Conference, Karachi, Pakistan, May 2009.
73. Naheed Malbari and J.R. Laghari, "Bhutto as Transformational Leader in 'Reconciliation: Islam, Democracy and the West'", National Research Conference, Karachi, Pakistan, December 2009.
74. Naheed Malbari and J.R. Laghari, "Narcissist Leadership: Alexander in Film", National Research Conference, Karachi, Pakistan, December 2009.
75. Muniza Irshad and J.R. Laghari, "IPv6 QoS Strategy and Practices using MPLS Integrated Modeling for Quality Assessment", National Research conference, National Research Conference, Karachi, Pakistan, May 2010.

INVITED PROFESSIONAL LECTURES

Conferences

1. "A Review of Electrical and Thermal Multistress Aging of Electrical Insulation," IEEE International Symposium on Electrical Insulation, Toronto, Canada, June 4-6, 1990.
2. "Energy Storage Pulsed Power Capacitor Technology," IEEE International Power Sources Symposium, Cherry Hill, NJ, June 25-28, 1990.
3. "Dielectric Films for High Temperature High Voltage Power Electronics," Conference on Materials for Electronic Packaging, Buffalo, NY, August 20-22, 1991.
4. "Breakdown Testing of Wiring Insulation," NASA 2nd Workshop on Space Applications, Cleveland, OH, October 26-27, 1993.

Societies

1. "Space Power Technology," Royal Aeronautical Society/Institute of Engineers, Karachi, Pakistan, January 11, 1989.
2. "Sindh Today," SANA 5th Annual Meeting, St. Louis, MO, July 1, 1989.
3. "Electrical Insulation and Dielectrics for Space Power Applications," IEEE Toronto Section, Electrical Insulation Society, Toronto, Canada, November 14, 1990.
4. 'Information Technology Education,' Jang Forum, Karachi, Sept 17, 1998.

Professional Groups

1. "March Towards the 21st Century," Asian Development Group, Jamshoro, Pakistan, January 15, 1989.
2. "Development Strategy for Sindh," Asian Development Group, Jamshoro, Pakistan, January 12, 1990.
3. "Marketing in the E-Future," Thought Leader, Marcon 99, Karachi Pakistan, Nov 11-13,

1999.

Universities

1. "Electrical Breakdown in Sulphur Hexafluoride," SUNY at Buffalo, October 29, 1980.
2. "Danger High Voltage," SUNY at Buffalo, October 23, 1981.
3. "Nuclear Technology and its Non-Transference to South-West Asia," International College, SUNY at Buffalo, November 19, 1981.
4. "The Nuclear Controversy," SUNY/AB, April 27, 1983.
5. "High Voltage Engineering," Wayne State University, Detroit, MI, March 4, 1982.
6. "Current Research and Applications of High Voltage Engineering," Mehran University of Engineering and Technology, Jamshoro, Pakistan, January 23, 1983.
7. "Space Insulation," Institute for Aerospace Studies, University of Toronto, November 27, 1987.
8. "Engineering Education in the United States," Mehran University of Engineering and Technology, Jamshoro, Pakistan, March 21, 1988.
9. "Advanced Technologies for Developing Countries," Mehran University of Engineering and Technology, Jamshoro, Pakistan, March 24, 1988.
10. "High Powered Electrical Space Systems," Mehran University of Engineering and Technology, Jamshoro, Pakistan, January 19, 1991.
11. "Vision of Higher Education by 2010," Vice Chancellors' Meeting, University Grants Commission, Islamabad, June 6, 1997.
12. "Information Technology," COMSTECH – ISESCO Workshop on University – Industry Interaction, Karachi, Sept 12-13, 1997.
13. "Pulse Power and Space Systems," SZABIST Forum, Karachi, August 25, 1998.
14. "Role of Private Sector in Higher Education," Vice Chancellors' Meeting, University Grants Commission, Islamabad, Oct 1, 1998.
15. "Information Technology and the Internet," 68th Advanced NIPA Course in Administration and Development, Karachi, Pakistan, Oct 23, 1999.
16. "e-Revolution," SZABIST, Jan 25, 2000.
17. "Information Technology & the Internet," Beacon House School System, Karachi, March 1, 2000.
18. "Creative Leadership", National Defence University, Islamabad, February 16, 2010.

Government

1. "Field-Induced Phenomena in Electrical Insulation," Air Force Office of Scientific Research, August 8, 1984.
2. "Space-Power Conditioning Mini Symposium," SDIO/DNA, Washington, DC, July 2, 1987.
3. "Wiring Insulation for Space Applications," NASA Lewis Research Center, October 27, 1993.
4. "The Role of University in the Information Technology Industrial Revolution", to Governor of Sindh, Karachi, Nov 11, 1997.
5. "Challenges in Higher Education", to Governor of Punjab, Lahore, October 14, 2009.
6. "Role of Higher Education in the Development of Pakistan", to President of Pakistan at Vice-Chancellors' Conference, Islamabad, October 16, 2009.
7. "Quality in Higher Education", to Governor of Sindh, Karachi, October 24, 2009.
8. "Challenges in Higher Education", to Governor of NWFP, Peshawar, February 17, 2010.
9. "Challenges in Higher Education", to Governor of Sindh, Karachi, February

20, 2010.

10. "Role of Higher Education in the Development of Pakistan", to Prime Minister of Pakistan at Vice-Chancellors' Conference, Islamabad, February 27, 2010.

Industries

1. "Impregnants in High Voltage Capacitors," Exxon Chemical Company, November 28, 1984.
2. "Gaseous Insulation for Pulsed Power Applications," Liquid Air Corporation, Countryside, IL, September 5, 1985.

Chief Guest

1. 'University and the Information Technology Industrial Revolution,' Rotary Continental, Karachi, Oct 6, 1997.
2. "The Role of University in the Information Technology Revolution," University of Sindh, Jamshoro, March 7, 1998.
3. 'Information Technology and the Internet,' Sind Madrassat-ul-Islam, Karachi, Jan 29, 2000.
4. 'Empowering the Internet Generation,' University of Sindh, Jamshoro, Feb 24, 2000.
5. 'Research & Development in Universities,' IEEE SCONEST, August 21, 2002.
6. 'Skill Development and the Future,' SZABIST JSTC, Hyderabad, Jan 18, 2003.
7. Unemployment, Challenges, Opportunities & Role of Job Skill Training Centers, JSTC Nawabshah, March 1, 2005.
8. CSR in Action, CR Conference by Revelation, Karachi, December 10, 2005.
9. "Pakistan's Upcoming Election: A View From the Late Benazir Bhutto's Pakistan People's Party," The Brookings Institution, Washington, DC, January 21, 2008.
10. "Pakistan and Central Asia: Post-Bhutto Implication," Lecture at the Paul H. Nitze School of Advanced International Studies, The Johns Hopkins University, Washington DC, January 25, 2008.
11. "Literacy and Education," Annual Rotary International Conference, April 5, 2008.
12. 'Medical Education', Inaugural of the Minimal Invasive Surgery Center, LUMHS, Jamshoro, September 29, 2009
13. 'Engineering Education', Convocation, College of Electrical and Mechanical Engineering, NUST, Islamabad, October 3, 2009
14. 'Advances in Biotechnology', 5th International Symposium on Biotechnology, (IBS-09), University of Sindh, Jamshoro, October 5, 2009.
15. 'Vision of Higher Education in Pakistan', 5th Vice-Chancellors' Conference, Islamabad, October 15, 2009.
16. 'Halophyte, Research and its Economic Implications', UNESCO Chair on Halophyte, University of Karachi, Karachi, October 26, 2009.
17. 'Challenges to Higher Education', Strategic Workshop, National Defence University, Islamabad, October 20, 2009.
18. 'Higher Education in Pakistan', USAID, Washington, DC, November 10, 2009.
19. 'Collaboration between US-Pakistan in Higher Education', American-Pakistan Business Council, Washington, DC, November 11, 2009.
20. 'Higher Education in the Developing World', World Bank, Washington, DC, November 12, 2009.

21. 'Engineering Education', Convocation, Mehran University of Engineering and Technology, Jamshoro, December 17, 2009.
22. 'Climate Change and Global Warming', International Seminar on "Impact of Climate Change on Water Resources and Challenges", National Center for Physics, Quaid-i-Azam University, Islamabad, January 7, 2010.
23. 'Nursing Profession in the Developing World', Dow University of Medical and Health Sciences, Karachi, Pakistan, January 9, 2010.
24. 'Technological Advances and Education', Roots School System, January 14, 2010.
25. 'Role of Media and Fine Arts in Developing Economies', University of Gujrat, Gujrat, January 18, 2010.
26. 'Need for Research in Teaching Training', Pre-STEP National Educational Research Initiative, USAID, Islamabad, January 26, 2010.
27. 'Higher Education and Technology', 18th Convocation, National University of Computer & Emerging Sciences, Karachi, January 30, 2010.
28. 'Medical Education and its Challenges', 8th Convocation, Chandka Medical College, Larkana, February 1, 2010.
29. 'Biodiversity in Pakistan', Center for Biodiversity and Conservation', Shah Abdul Latif University, Khairpur, February 2, 2010.
30. 'Career Planning & Development', Sukkur Institute of Business Administration, Sukkur, February 2, 2010.
31. 'Quality in Higher Education', 6th Vice-Chancellors' Conference, Islamabad, February 28, 2010.
32. 'Participation of Women in Economic Development', 2010 Convocation, Fatima Jinnah Women's University, Islamabad, March 18, 2010.
33. 'Split Ph.D Program', Joint UK-Pakistan Ph.D Program Round Table Discussion, London, UK, March 28, 2010.
34. 'Pakistan-China Collaboration in Education', Pakistan China Institute, Islamabad, April 6, 2010.
35. 'Science and Technology for Economic Development', 6th Post-Graduate Convocation, National University of Science and Technology, Islamabad, April 15, 2010.
36. 'Universities Building Communities', 2010 Convocation, Federal Urdu University of Arts, Science and Technology, Karachi, April 17, 2010.
37. 'HEC Scholars and Fulbright', Annual Fulbright Conference, Islamabad, April 23, 2010.
38. 'Technology and Economic Development', 4th Convocation, University of Management and Technology, Lahore, April 25, 2010.
39. 'Career Placement and Alumni Associations', Government College University, Lahore, April 26, 2010.
40. 'France-Pakistan Research Collaboration', Pakistan-France Alumni Network, Islamabad, April 27, 2010.
41. 'Quality Assurance in Education', Liaquat University of Medical & Health Sciences, Jamshoro, May 3, 2010.
42. 'INSPIRE – Joint UK-Pakistan Research Program', British Council – HEC Event, Islamabad, May 10, 2010.
43. 'Technology and Education', Inaugural Wi-Fi Mesh Network, Allama Iqbal Open University, Islamabad, May 13, 2010.
44. 'Health Technologies and Post-Graduate Education', College of Physicians and Surgeons,

Karachi, May 14, 2010.

45. 'Challenges in Quality Education', 3rd Convocation, SZABIST, Islamabad, May 17, 2010.
46. 'Education Challenges and Development', Convocation, Forman Christian College, Lahore, June 13, 2010.
47. 'Technology and Education', People Soft Launch, Liaquat University of Medical and Health Sciences, Jamshoro, July 2, 2010.

Keynote Lectures

1. 'The Role of Universities in the Information Technology Industrial Revolution,' 1st General Conference of the Federation of the Universities of the Islamic World, Rabat, Morocco, Feb 24 – 26, 1998.
2. 'Trends in Information Technology,' International Computer Conference and Exhibition 98, MUET, Hyderabad, Dec 8-9, 1998.
3. 'e-Revolution and Business Education,' National Conference on Restructuring IBA Curriculum, Oct 12, 1999.
4. 'Internetworking the Universities 1st Asia University Federation (AUF) Annual Conference of University Presidents on University Networking for an Asian community, Manila, Philippines, Nov 22-26-, 1999.
5. CIR Power and Energy Conference 'Alternate Energy Options for Pakistan,' March 21, 2000.
6. 'E-Technologies – Vision and Challenges,' IEEE Conference on E-Technologies – Vision and Challenges, Karachi, Nov 25, 2000.
7. 'Role of Information Technology in Economic Revival,' Conference on National Economic Revival: Vision 2011, April 21, 2001.
8. 'Pakistan at 61 – Challenges and Opportunities,' NutShell Forum, September 27, 2008.
9. 'Socio-Economic Development of Sindh', Conference on Socio-Economic Development of Sindh, Institute of Business Management, Karachi, January 16, 2010.
10. 'Clash of the Titans', NSF Workshop on Indo-Asia Continental Collisions, Islamabad, May 10, 2010.

Interviews

1. The News, 'SZABIST – An Ambitious Venture,' July 29, 1996.
2. Jang, 'Higher Education in Pakistan,' August 9, 1997.
3. Durbeen (Jang Magazine), 'Science and Technology in Pakistan,' Oct 30, 1998.
4. Women's Own, 'Exploring New Frontiers,' November 1998.
5. New Age Magazine, 'Business Education, August 1999.
6. Pakistan & Gulf Economist Magazine, 'Aiming to be the Best in Pakistan,' Oct 25–31, 1999.
7. Computer Business Review (Europe), 'Y2K heat hits Pakistan,' November 1999.
8. The Nation, 'SZABIST plan for fast growth in IT,' Aug 25, 2000.
9. Pakistan & Gulf Economist Magazine, 'Moving towards e-SZABIST, Sept 25 – Oct 1, 2000.
10. Kainat, 'Center of Excellence in IT,' Nov 5, 2000.
11. South Asia Magazine, 'Empowering Democracy,' May 2002.
12. The Nation, 'IT Policies yielding negative results, Nov 20, 2002.
13. Star, 'Fight on Different Fronts,' Jan 11, 2003.
14. Pakistan & Gulf Economist, 'Private Sector Varsities need Financial Support from Government,' May 22-28, 2006 (Cover Story).

15. Spider, 'Virtual Campus – site unseen,' Feb 2006.
16. Pakistan & Gulf Economist, 'SZABIST progressing well ahead,' Nov 27 – Dec 3, 2006.
17. Daily Ausaf, "Higher Education in Pakistan", May 25, 2010.
18. Business Recorder, 'Economic Recession and Higher Education', August 30, 2010.

TV Interviews

1. Hum TV, "Komal Show," 2006.
2. Business Plus TV, Ayesha Tammy Haque Show, "Together with Sir Gerald Kaufman, MP, UK," March 30, 2007.
3. Geo TV, Kamran Khan, "Solo Interview on Power Crisis," April 23, 2007.
4. ATV, Asad Hussain Show, "Interview on Power Crisis," May 9, 2007.
5. Geo TV, Kamran Khan Show, "Solo Interview on Power Crisis (Second Interview)," May 10, 2007.
6. Business Plus TV, Twenty Four Seven with Ayesha Tammy Haque, "A Tribute to Benazir Bhutto," Dec 28, 2007.
7. Geo TV, "The Great Debate on Water," Jan 29, 2008.
8. DAWN TV, NewsEye with Saima Mohsin, "PPP Policies towards resolving the Energy Crisis in Pakistan," Feb 28, 2008.
9. DAWN TV, NewsEye with Saima Mohsin, "Remembering Shaheed Zulfikar Ali Bhutto," April 5, 2008.
10. Business Plus TV, Twenty Four Seven with Ayesha Tammy Haque, "Power Crisis and 100 Days," April 14, 2008.
11. Waqt TV, Budget Debates, "Interview on High Fuel Costs and Energy Crisis," June 8, 2008.
12. Waqt TV, Sitaron Pay Kamand, "Interview on Educational Issues," September 8, 2008.
13. DAWN TV, NewsEye with Saima Mohsin, "Karachi and the Power Crisis," September 17, 2008.
14. Business Plus TV, Twenty Four Seven with Ayesha Tammy Haque, "The Way Ahead to Resolving the Energy Crisis," September 20, 2008.
15. Dawn TV, Breakfast with Naveen Naqvi, 'Vision for Higher Education', August 31, 2009.
16. Business Plus TV, Twenty four Seven with Ayesha Tammy Haque, 'Vision for Higher Education', August 31, 2009.
17. Express TV (Urdu), Higher Education, September 4, 2009.
18. Express TV (English), Higher Education, September 10, 2009.
19. Dawn TV, Newseye with Saima Mohsin, Higher Education Policy, September 11, 2009.
20. Business Plus TV, Twenty four Seven with Ayesha Tammy Haque, Higher Education, September 30, 2009.
21. Geo TV, 50 Minutes, Higher Education, November 24, 2009.
22. British Council Documentary, Linkages with UK, November 25, 2009.
23. Pakistan TV, Samina Waqar Show, "Higher Education Commission", April 26, 2010.
24. Al-Jazeera TV, 'Fake Degrees Saga', June 28, 2010.
25. SAMAA TV, Pakistan This Week with Ihtesham, "Education in Crisis", August 1, 2010
26. Business Plus TV, 24/7 with Ayesha Tammy Haq, "Who is Dr. Javaid Laghari", August 7, 2010
27. Geo TV, Jirga, "Education and Governments", August 8, 2010.
28. SAMAA TV, "Fake Degree Documentary", August 15, 2010.

29. CNBC TV, "Shahzad Mithan Show", Higher Education and Economic Development, August 17, 2010.
30. Waqt TV, Yashfeen Show, "Leadership and Education", August 18, 2010.
31. ATV, Farah Show, "Pakistan's Energy Crisis" August 19, 2010.

TECHNICAL REPORTS

1. W. J. Sarjeant, J. R. Laghari, et al., "Laminate Insulation Structures," Final Report, Subcontract SCEE-SRAP/81/11, April 10, 1983, 23 pages.
2. J. R. Laghari, W. J. Sarjeant, et al., "Field-Induced Phenomena in Electrical Insulation," First Annual Report, AFOSR-830344, September 30, 1984, 119 pages.
3. W. J. Sarjeant, R. Dollinger, J. R. Laghari, et al., "Investigation on High Energy Density Capacitors," Final Report, WJSA-SC-83-109, September 30, 1984, 200 pages.
4. J. R. Laghari, W. J. Sarjeant, et al., "A Comparison of Four Liquid Impregnants for Use in Power Capacitors," Final Report, Exxon Chemical Company, December 31, 1984, 46 pages.
5. J. R. Laghari, P. Mukherjee, et al., "On Zeugmatorgraphy and Other Imaging Processes," Text Draft, December 31, 1984, 115 pages.
6. J. R. Laghari, W. J. Sarjeant, et al., "Field Induced Phenomena in Electrical Insulation," Second Annual Report, AFOSR-830344, September 30, 1985, 67 pages.
7. J. R. Laghari, "Breakdown Studies in Ultra-Pure Gases and Gas Mixtures," Final Report, Liquid Air Corporation, July 31, 1986, 44 pages.
8. J. R. Laghari, "Breakdown Studies in Ultra-Pure Gases and Gas Mixtures," Addendum to Final Report, Liquid Air Corporation, November 10, 1986, 142 pates.
9. J. R. Laghari, "Insulation for the Multistress Space Environment," Final Report, ONR-N0001485K0727, December 1, 1986, 83 pages.
10. J. R. Laghari, W. J. Sarjeant, et al., "Field Induced Phenomena in Electrical Insulation," Final Report, AFOSR 830344, December 1, 1986, 112 pages.
11. J. R. Laghari, "Sindhi," Text-Editing Software Manual for the IBM-PC, December 1986, 24 pages.
12. J. R. Laghari, "High Electric Field Phenomena in Insulation," First Annual Report, AFOSR-870063, December 15, 1987, 120 pages.
13. J. R. Laghari, "Feasibility Studies on Gas on Gas Mixtures for use in Pulsed Power Devices," Final Report, Liquid Air Corporation, August 15, 1988, 37 pages.
14. J. R. Laghari, "High Electric Field Phenomena in Insulation," Final Report, AFOSR-870063, January 15, 1989, 88 pages.
15. J. R. Laghari, "Multifacator Stress Aging of Electrical Insulation," First Annual Report, AFOSR-890272, December 15, 1989, 90 pages.
16. J. R. Laghari, "Electrical Insulation for High Temperature Space Environment," NASA-NAG 31019, July 31, 1990, 39 pages.
17. J. R. Laghari, "Multifactor Stress Aging of Electrical Insulation," Final Report, AFOSR-890272, December 1, 1990, 33 pages.
18. J. R. Laghari, "Electrical Insulation for High Frequency and High Temperature Space Power Applications," NASA-NAG 31019, July 31, 1991, 68 pages.
19. J. R. Laghari, "Electrical Insulation for High Frequency and High Temperature Space Power Applications," NASA-NAG 31019, May 1, 1992, 65 pages.

20. J. R. Laghari, "Electrical Insulation for High Frequency and High Temperature Space Power Applications," NASA-NAG 31019, October 1, 1992, 78 pages.
21. J. R. Laghari, "Wiring Insulation for Space Power Applications," NASA-NAG 33145, October 1, 1992, 66 pages.
22. J. R. Laghari, "Wiring Insulation for Space Power Applications," NASA-NAG 31345, May 1, 1994, 58 pages.

MISCELLANEOUS TECHNICAL PUBLICATIONS

1. J. R. Laghari, W. J. Sarjeant and R. K. Gupta, "High Voltage Research at SUNY/AB," Engineering Progress, Vol. 4, No. 1, 1984, pp. 19-20.
2. R. Dollinger, W. J. Sarjeant, J. R. Laghari, et al., "But is it Safe," Physics Teacher, February 1985, pp. 70, 126.
3. J. R. Laghari, "Space Power Technology," Meh. Univ. Res. Jour. of Engr. and Tech., Vol. 4, No. 4, 1985, pp. 29-32.
4. T. Bilodeau, J. R. Laghari, et al., "A Description of New Insulation Test Facilities at UB," Engineering Progress, Vol. 5, No. 2, 1985.
5. J. R. Laghari, "Design of an EMP Simulator," Meh. Univ. Res. Jour. of Engr. and Tech., Vol. 6, No. 1, 1987, pp. 1-4.
6. J. R. Laghari, "The Kalabagh Dam and Loss of Waters to Sindh," Sindh Quarterly, Vol. 14, No. 4, 1986, pp. 24-30.
7. J. R. Laghari, "Exploration of Sindh's Energy Resources," Sindh Quarterly, Vol. 16, No. 2, 1988, pp. 50-56.
8. J. R. Laghari, "Pakistan's Return to Democracy," Sindh Quarterly, Vol. 17, No. 2, 1989, pp. 22-31.
9. J. R. Laghari, "Hard Times for Benazir Bhutto Ahead," Sindh Quarterly, Vol. 17, No. 3, 1989, pp. 9-18.
10. J. R. Laghari, "March Towards the Twenty-First Century," Sindh Quarterly, Vol. 17, No. 4, 1989, pp. 46-56.
11. J. R. Laghari, "Sindh Today," Sindh Quarterly, Vol. 18, No. 2, 1990, pp. 13-19.
12. J. R. Laghari, "Environmental Concern: Kalabagh Dam and Sindh-Punjab Water Dispute in Pakistan," Journal of Asian and African Affairs, Vol. 2, No. 2, 1990, pp. 175-192.
13. J. R. Laghari, "Kalabagh Dam: A Socio-Political Analysis," The Government, Vol. 5, 1991, pp. 75-96.

PUBLICATIONS IN NEWSPAPERS / MAGAZINES

1. 'Promoting Research for Development,' Dawn, Feb 7, 1997.
2. 'Internet in Pakistan,' The News, May 17, 1997.
3. 'Letter to the Editor on 'Asia's Best Universities,' Asiaweek, June 6, 1997.
4. 'An Institute of the 21st Century,' The News, June 30, 1997.
5. 'Vision of Professional Education in the 21st Century,' The News, Sept 29, 1997.
6. 'Wake-up Call for Pakistan,' The News, June 30, 1997.
7. 'The Next Fifty Years,' The News, March 23, 1998.
8. 'Next Generation Internet,' The News, Sept 12, 1998.

9. 'Role of Private Sector in Higher Education,' The News, Oct 25, 1998.
10. 'e-Commerce and the Business World-Cover Story,' Pakistan and Gulf Economist, Nov 8-14, 1999.
11. 'Building a Work Force for the Internet-Based Economy,' Invited paper, 'Training for the New Millennium,' Souvenir, Skills Development Council, Karachi, March 2000.
12. 'Leadership as a Career, H2 Consulting,' January 2006.
13. 'Power Vision for Pakistan,' Dawn, July 24, 2006 and The Nation, August 14, 2006.
14. 'Charter of Freedom,' The Nation, September 1, 2006.
15. 'What's the Big Deal,' Dawn, April 21, 2007.
16. 'Power Mess and Energy Conservation,' Dawn, April 23, 2007.
17. 'Pakistan's Choice,' The Guardian, Sept 3, 2007.
18. 'The Way Ahead,' Dawn, October 26, 2007.
19. 'The Constitution' Indus Asia Online Journal, December 5, 2007.
20. 'PPP Accuses Govt. for Creating Energy Crisis in Country,' Asia Pulse Data Source, December 24, 2007.
21. 'Musharraf Rule has Created Energy Crisis,' Frontier Post, December 25, 2007.
22. 'Mohtarma Benazir Bhutto and the Pakistan Peoples Party,' EMEL Magazine, January 2008 Issue.
23. 'A Ruler of Hearts,' The News, January 19, 2008.
24. 'PPP Leaders Flay Musharraf,' Rediff News, January 23, 2008.
25. 'The Lion King,' The News, April 4, 2008.
26. 'Challenges and Opportunities,' The Nation, October 09, 2008.
27. 'The Centurion Leader,' The Nation, December 23, 2008.
28. 'Challenges in Higher Education,' Dawn, January 4, 2010.
29. 'Quality in Higher Education,' The News, February 11, 2010.
30. 'Higher Education,' The News, May 8, 2010.
31. 'Knowledge is Power,' Dawn, July 7, 2010.

PROFESSIONAL ACTIVITIES

CONFERENCE CHAIRMAN

1. IEEE International Symposium on Electrical Insulation, Baltimore, MD, June 1992.
2. Chairman, Academic Symposium on Universities and the Islamic Ummah, "First General Conference of the Federation of the Universities of the Islamic World" Rabat, Morocco, Feb. 1998.
3. IEEE / ACM National Conference on Emerging Technologies, Karachi, Pakistan, Dec 2004.

CONFERENCE ORGANIZING COMMITTEE MEMBER

1. IEEE International Symposium on Electrical Insulation, Boston, MA, June 5-8, 1988.
2. IEEE International Conference on Plasma Science, Buffalo, NY, May 21-24, 1989.
3. 6th International Symposium on High Voltage Engineering, New Orleans, LA, August 28-September 1, 1989.
4. IEEE International Symposium on Electrical Insulation, Toronto, Canada, June 3-6, 1990.

5. Gordon Research Conference on Dielectric Phenomena, Plymouth, NH, July 19-24, 1992.

CONFERENCE LOCAL ARRANGEMENTS CHAIRMAN

1. IEEE Conference on Electrical Insulation and Dielectric Phenomena, Buffalo, NY, October 21-24, 1985.
2. IEEE International Conference on Plasma Science, Buffalo, NY, May 21-24, 1989.

SESSION ORGANIZER

1. "Streamers in SF6," NATO Advanced Study Institute on "Fast Electrical and Optical Diagnostic Principles and Techniques," Castelvecchio Pascoli, Italy, July 19-24, 1983.
2. "Recent Advances in Pollution Control Technology," ASME First Industrial Pollution Control Symposium, Energy-Sources Technology Conference, Houston, TX, January 30-February 3, 1983.
3. "Aging," IEEE International Symposium on Electrical Insulation, Boston, MA, June 5-8, 1988.
4. "Special Measurements," 6th International Symposium on High Voltage Engineering, New Orleans, LA, August 28-September 1, 1989.
5. "Multifactor Stress Aging," IEEE International Symposium on Electrical Insulation, Toronto, Canada, June 3-6, 1990.

SESSION CHAIRMAN

1. "Recent Advances in Pollution Control Technology," ASME First Industrial Pollution Control Symposium, Energy-Sources Technology Conference, Houston, TX, January 30-February 3, 1983.
2. "Material Behavior," 23rd Annual Meeting of the Society of Engineering Science, Buffalo, NY, August 25-27, 1986.
3. "Vacuum," 6th International Symposium on High Voltage Engineering, New Orleans, LA, August 28 - September 1, 1989.
4. "Energy Storage Devices," IEEE International Power Sources Symposium, Cherry Hill, NJ, June 27-29, 1990.
5. "Aging," IEEE Conference on Electrical Insulation and Dielectric Phenomena, Pocono, PA, October 18-20, 1993.
6. UNOPS – GoS, Consultative Workshop on Commercialization of Wind Power Potential in Pakistan, Karachi, Nov 5, 2002.
7. IEEE Pakistan 19th Multi Topic International Symposium 2004, Karachi, Feb 27, 2004.
8. International Conference on Sindh, Past, Present and Future, Karachi, April 29 – May 2, 2006.
9. Going Global 4 and Split-Site Ph.D Round Table Discussion, London, UK, March 29 – 30, 2010.

PROFESSIONAL SOCIETY EXECUTIVE COMMITTEE

1. Vice Chairman, Industrial Pollution Control Committee, ASME Petroleum Division,

1983-1984.

2. Member, IEEE Education Committee, DEIS, 1986-1991.
3. Representative, United States Activities Board, IEEE Committee on Man and Radiation (COMAR), 1989.
4. Member, Nominations Committee, Conference on Electrical Insulation and Dielectric Phenomena, 1991.
5. Member, Administrative Committee (ADCOM), IEEE Dielectric and Electrical Insulation Society, 1991-1994.
6. Chairman, IEEE Technical Standards Committee on Radiation Effects, S-32-4, 1991 - 1994 (Secretary, 1985-1991).

WORKSHOP TECHNICAL COMMITTEE MEMBER

1. Plasma Technology, NASA Workshop on Plasma Physics and Fusion Scientific Activity for the Space Station, Rogersville, AL, May 19-22, 1985.
2. Particle Beams, Workshop on Research Issues in Power Conditioning, Los Angeles, CA, December 3-4, 1985.
3. Sliding and Materials, Tamarron VI, Durango, CO, March 10-13, 1986.

RESEARCH GRANTS AND CONTRACTS

1. University Awards Program (SUNY), "Performance of Insulators Under Polluted Conditions," \$3,050, 3/1/81 to 2/28/83.
2. National Science Foundation, "International Travel Support," \$1,500., 12/27/82 to 1/29/83.
3. North Atlantic Treaty Organization, "Fast Electrical and Optical Diagnostic Principles and Techniques," \$1,270., 7/10/83 to 7/24/83.
4. Southeastern Center for Electrical Engineering Education, "Laminate Insulation Structures," \$33,300., 5/30/82 to 3/31/83.
5. Air Force Office of Scientific Research, "Field-Induced Phenomena in Electrical Insulation," \$298,802., 10/1/83 to 11/30/86.
6. Exxon Chemical Company, "Electrical Capacitor Elements," \$30,000., 5/21/84 to 1/31/85.
7. Hughes Aircraft Company, "Characterization of Dielectric Materials Under the Influence of High Electric Field," \$40,000., 10/1/84 to 9/30/86.
8. Defense Nuclear Agency, "Space Power Institute for SDI," \$1,900,000., 1/3/85 to 2/28/90 (with W. J. Sarjeant as Principal Investigator).
9. Naval Surface Weapons Center, "Space Power Insulation Institute for SDI," \$200,000., 9/27/90 to 11/27/91 (with W. J. Sarjeant as Principal Investigator).
10. Office of Naval Research, "Material Research Institute for SDIO," \$108,044., 7/14/85 to 10/14/86.
11. Liquid Air Corporation, "Survey and Feasibility Studies of Breakdown in Pure Gases," \$23,950., 10/1/85 to 11/10/86.
12. Air Force Office of Scientific Research, "High Electric Field Phenomena in Insulation," \$186,922., 11/15/86 to 1/14/89.
13. Naval Research Laboratory, "Insulation Diagnostic Facility," Equipment Grant, \$70,914., 1988.

14. National Aeronautic Space Agency, "Electrical Insulation for the High Temperature Space Environment," \$39,000., 3/1/89 to 6/30/90.
15. Air Force Office of Scientific Research, "Multifactor Stress Aging of Electrical Insulation," \$87,714., 1/15/89 to 9/30/90.
16. National Aeronautic Space Agency, "Electrical Insulation for High Frequency and High Temperature Space Power Applications," \$199,910., 7/1/90 to 6/30/93.
17. National Aeronautic Space Agency, "Wiring Insulation for Space Power Application," \$155,014., 4/1/92 to 12/31/94.
18. Office of Naval Research, "Space Power Insulation Institute for SDI," \$988,298., 9/15/91 to 9/14/.

CONSULTING IN US

- Texas A&M University, College Station, TX 1983
- Boone B. Owens, Inc., Minneapolis, MN 1988
- Enercap Corporation, San Diego, CA 1988 - 1989
- State University of New York, International Development Assistance Office, Albany, NY 1989 - 1990
- David Sarnoff Research Center, Princeton, NJ 1990
- Sierra Research Division, LTV Missiles and Electronics Group, Buffalo, NY 1990
- Powertech International, Buffalo, NY 1992
- Buffalo Technologies, Buffalo, NY 1993

SOCIETY MEMBERSHIPS

- Institute of Electrical and Electronic Engineers (U.S.A.) - Senior Member
- Association of Computing Machinery (USA) - Senior Member
- Institute of Engineers (Pakistan)
- Society of Engineering Science (U.S.A.)
- New York Academy of Sciences
- Chairman of the ACM (Karachi Chapter)
- Member, Executive Committee, Federation of the University of Islamic World (FUIW)
- Member, Executive Committee Asia University Federation (AUF).

REVIEWER OF JOURNALS AND BOOKS IN US

- National Science Foundation
- National Research Council
- Am. Soc. Mech. Engr.
- IEEE International Symp. Elect. Insul.
- International Symp. High Voltage
- IEEE Trans. on Elect.

- NY State Science & Tech. Fdn.
- Chem. Engg. Comm.
- Pak. Journal of Sci. and Ind. Research
- Polymer Engineering and Science
- Chronicle Guidance Publication
- Prentice Hall
- Houghton Mifflin
- John Wiley

GRADUATE COMMITTEES

Ph.D Major Professor

1. Ahmad Hammoud, "Effect of High Energy Electron Radiation on Polypropylene Dielectric," (October 1987).
Present Employment: NASA Lewis Research Center, Cleveland, OH,
2. Stanley Cygan, "Effects of Multistress Aging (Electrical, Radiation, Thermal) on Polypropylene," (December 1989).
Present Employment: AVX Corporation, Olean Advanced Products, NY
3. Peter Cygan, "Accelerated Life Studies of High Temperature Polyimide Film Under Simultaneous Electrical and Thermal Multistresses," (July 1991).
Present Employment: Electronics Technology and Devices Laboratory (ETDL) U.S. Army, Fort Monmouth, NJ
4. Jayant Suthar, "An Investigation of High Temperature High Voltage Insulators for Aerospace Applications," (May 1992).
Present Employment: General Electric, NY
5. Wassim Khechen, "Breakdown Studies of Polypropylene Film Under High Voltage High Frequency and High Temperature for Aerospace Applications," (January 1993).
Present Employment: Space Power Institute, Buffalo, NY
6. Amany Stokes, "An Investigation of Aging Mechanisms and Statistical Life Models for Polypropylene Films," (November 1994).
Present Employment: University of Cairo, Egypt
7. Mohammad Nadeem, "Data Mining Approach and Association Model Algorithm Design," 2010.
8. Syed Zeeshan Arshad, "Technology Implementation in Developing Economies," 2010.
9. Naheed Malbari, "Hero Tyrant Narcissist and Alexander the Great," 2010.

M.S. Major Professor

1. Ahmad Hammoud, "Partial Discharge Induced-Breakdown of Laminate Insulation Structures," Thesis, September 1984.
2. Stanley Cygan, "Field Grading of Multi-Layered Composite Insulation Structures," Thesis, March 1987.
3. Wassim Khechen, "Breakdown Studies in SF₆-Argon Gas Mixtures," Thesis, September 1987.
4. Jayant Suthar, "A Study of High Temperature Dielectrics," December 1988.
5. Peter Cygan, "Electrical and Thermal Aging of Films Under ac and dc Stresses," Thesis, September 1989.

6. Thomas Saluzzo, "Use of PSPICE in the Design of High Voltage Circuits," Thesis, May 1992.

Ph.D. Committee

1. Ramesh Chandra, "An Investigation of the Vibrational Electronic Excitation Energy Exchange Between Nitrogen and Cesium" December 1983.
2. Milan Nikolich, "A Theoretical Development of the Experimental Operation of High Current Opening Switches," October 1985.
3. K. Kumar, "Effect of Isotactic Polypropylene Morphology on ac Breakdown," November 1986.
4. Dennis Dettman, "Anode Sheath Dynamics of Metal Plasma Arc Switches," March 1987.
5. Donal J. McDonald, "Development of a New Technique for High Frequency stressing and Multimegahertz Detection of Partial Discharges," June 1990.
6. Salem Akbar, "A Fully Automated Spectroscopic Set-Up for Plasma Studies," December 1991.
7. John P. Stopher, "A New and Novel High Frequency Stressing and Micro-Discharge Detection Technique," December 1993.

M.S. Committee

1. G. H. Liu, "A Computer-Aided Measurement of Aerosol Mass Concentration and Size Distribution," August 1981.
2. Irfan-ul-Haq, "Microprocessor Based Temperature Monitoring System," August 1981.
3. Michael Treanor, "The Effect of Pulse Shape on the Electrical Properties of Some Polymers," December 1984.
4. Thomas Bilodeau, "The Design and Development of an ac Partial Discharge Detection System," February 1985.
5. John Shea, "Breakdown Voltage Dependence of Polypropylene Laminates on Impulse Voltage Risettime," May 1985.
6. Michael Belling, "A Proposed Technique for the Determination of Instantaneous Energy Loss in a Magnetic Medium Due to Hysteresis," May 1987.
7. Donald J. McDonald, "Characterization Methods of High Energy Density Capacitors," November 1987.
8. Kenneth H. Ziemann, "General Analysis of Saturating Iron Cores as Fault Current Limiters on 145 kV Systems," December 1987.
9. Sherry J. Stanton, "Modeling of Linear and Nonlinear Pulse Forming Networks," December 1987.
10. John P. Stopher, "The Development of a New Electric Field and Capacitor Analysis Program," February 1988.
11. Bruce R. Wallmann, "Model Relation of Barium Titanate for Application Towards Fault Current Limiter Investigations," May 1988.
12. Donald J. Enzinna, "Design Considerations for a Surface Potential Sensor," August 1990.
13. Christopher S. Nowak, "Design Improvement of a Partial Discharge Analyzer for Heightened Detection of Microdischarges," December 1993.

M.E. Committee

1. Michael J. Bernard, "Electromagnetic Acceleration of a Metallic Carrier Plate: Experiment

- and Computer Simulation," December 1987.
2. Vincent Conners, "Rep-Rate Modeling of a High Voltage Supply," December 1988.
 3. Eugene I. Shkurko, "Safety Improvements for a Power Lab," December 1989.
 4. Valerie J. Jaegge, "Ion Current Measurements from a Common Mode High Voltage Arc Source," December 1989.
 5. Michael P. Valcourt, "A Linear High Voltage dc Power Supply for Simulating the Influence of Common Mode Voltage on Ion Generation in a Plasma Arc," December 1989.
 6. Christine M. Bates, "Analog Fiberoptic Link," March 1990.
 7. Jill A. Alberico, "Low Frequency Magnetic Flux Meter for Permanent Magnet dc Motor Design," March 1990.
 8. Mark Delucia, "In-Situ dc-Coupled Current Monitors," April 1990.
 9. Julio Vasquez, "Non-Destructive Examination of an Impulse Generator During Swift Energy Transients," December 1990.
 10. Kevin Stablewski, "Western New York Transmission Reinforcement Study," April 1991.
 11. Mark A. Phillips, "A Technique for Modeling Gapped Magnetic Core Characteristics for Conceptualizing Electromagnetic Mass Mover Systems," May 1991.
 12. Joseph M. Muhitch, "Thin Magnetic Flux Density Meter for ac Harmonic Analysis in Electric Motors," May 1991.
 13. Mehrdad Sahba, "Novel Design for an Isolation Transformer with Highly Visible Barrier Insulation," January 1992.
 14. Glenn J. Wolf, "A Design for a 100 kJ Capacitor Bank with Passive Fault Current Limiting," January 1992.
 15. Joseph P. Chau, "Factors to Consider for High Voltage Optoisolators," May 1992.
 16. Patrick Connolly, "Computer Modeling of Stray Inductance," May 1992.
 17. Sureindran Nedesan, "A Motor Technique for Remote Rotation," May 1992.
 18. William Washington, "Modeling Induction Launchers Using Transformer Concepts," August 1993.
 19. Joseph Steward, "Characteristics of Partial Discharge Detection," January 1994.

UNIVERSITY COURSES TAUGHT (US AND PAKISTAN)

EAS-103 Introduction to Engineering (1)

Orientation to Engineering, Ethics, Energy, Professionalism, Engineering in Industry, Private Practice and Government, Management, Organizational Relationship, Salaries, Creativity, Design and Development, Patents, Engineering Societies, Professional Registration, Engineers' Unions, Engineering Education, Branches of Engineering.

ECE-202 Circuit Analysis - I (4)

Fundamental Relationships in Circuit Theory, Resistive Networks, Source Conversion, Superposition Principle, Thevenin and Norton Theorems, Maximum Power Transfer, Power and Energy, Mesh and Node Analysis, Laplace Transforms, Impedance and Admittance, Voltage and Current Divider Rules, Transfer Function, Frequency Domain Solutions, Poles and Stability, Partial Fraction Expansion, Inverse Transformation, Step Response, Sinusoidal Response, Phasers, Phase Lag and Phase Lead, Power Relationship, Root Mean Square.

ECE-495/595 High Voltage Engineering (3)

Introduction to High Voltage Technology, High Voltage ac and dc Transmission; Generation of

High Voltages by Various Techniques (ac, dc, impulse, pulse), Measurement of High Voltages (electrostatic voltmeters, high impedance, voltage dividers, sphere gaps). Destructive and non-destructive Insulation Test Techniques, Types of Breakdowns, Partial Discharges, High Voltage Bridges, Term paper.

ECE-495/595L High Voltage Engineering Laboratory (1)

Safety in High Voltage Environment, Shielding and Grounding Techniques, Demonstration of Operation of High Voltage Equipment, Measurement of High Voltage by various Techniques, Calibration of Sphere-Sphere gap, Measurement of Capacitance and Loss Factor of high voltage capacitors, High Voltage Experiments with Tesla Coil, Van de Graaff generator and Wimhurst Electrostatic machine.

ECE-572 Electrical Insulation and Dielectrics (3)

Introduction to Electrical Insulation and Dielectrics, Classification of Materials, Breakdown in Gases, Liquids and Solids. Properties and Applications of Electrical Insulation, Diagnostics, Characterization, Evaluation and Testing of Dielectrics and Components. Term Paper.

ECE-596 Advanced Topics in High Voltage Engineering - I (3)

Introduction to High Voltage Insulation, Prebreakdown and Breakdown phenomena in Gases, Breakdown in SF₆ and SF₆-gas mixtures, Particle contaminated gas breakdown, Surface Flashover, Lightning Discharges, Breakdown in Solids, Liquids, and Vacuum, Composite Insulation, Insulation and Dielectrics for Energy-storage Devices, High Performance Insulators. Term paper.

MS-5210 Quality Information Systems (3)

This course introduces Quality in Individuals and Organizations. It also discusses examples of leaders who have contributed towards the advancement of quality era such as Deming, Juran, and Balridge. ISO 9000, other quality awards and Six Sigma is explained in the light of existing TQM models

MS-5211 Creative Leadership (3)

This course is about the art and adventure of leadership. Leadership today includes, among others, academic, corporate, social, performing, artistic, scientific, technical, spiritual, bureaucratic, military and political. The course builds up the traits required to be an effective leader. From a discussion of personality development techniques to an overview of various leadership skills, leadership styles will be studied and discussed in the context of what it takes to be a creative and successful leader.

SPACE POWER INSTITUTE (EQUIPMENT WORTH OVER US\$ 4 MILLION ACQUIRED THROUGH SPONSORED FUNDING IN 1980-85)

High Voltage Generation

600 kV, 15 kJ Impulse Generator; 300 kV, 2 mA dc Generator; 250 kV, 32 J Pulser-Transformer; 200 kV Van de Graaf Generator; 200 kV, 200 J High Voltage Construction Kit; 100 kV, 20 kVA ac Transformer and controller; 100 kV Tesla Coil; 15 kV, 25 kVA ac Transformer and controller; 50 kV, 5 mA dc Generator; 50 kV, Electrostatic Generator;

35 kV, 1.5 mA dc Generator, 5 kV, 30 kHz, 1 kVA High Voltage Transformer and Amplifier.

High Voltage Measurements

600 kV, Mixed Voltage Divider; 200 kV Resistive voltage divider; 168 kV Gas-filled capacitive voltage divider; 50 kV Electrostatic voltmeter; 40 kV High voltage probes; Sphere-gaps.

High Voltage Testing

40 kV ac Partial Discharge Analyzer; 30 kV dc Partial Discharge Detector; Schering Bridge; Precision Capacitance Bridges, Ultrasonic Corona leak detector; 2 kV High Voltage capacitance bridge with solid and liquid test cells; Receptivity chamber.

Low Voltage Measurements and Diagnostics

Storage Oscilloscopes with camera; Peak reading voltmeter; Picoammeter; Multimeters; Personal computers; Graphic plotter; Chart recorder.

Other Support Facilities

RFI/EMI shielded room; Electrical and Thermal Aging facility; Vacuum oven and film impregnation facility; Vacuum chambers for material storage; Gas test cell with special electrodes; High pressure gas test cell, Liquids and solids test cell and electrodes; Polarized light microscope; Temperature circulator and controller; High voltage resistors, capacitors and cables.

US UNIVERSITY SERVICE

Advisor, Fulbright - Scholars, IELI Institute, SUNY at Buffalo, 1981.

- Senator-Alternate, University Senate, SUNY at Buffalo, 1982-1984.
- Faculty Advisor, Pakistan Students' Association, SUNY at Buffalo, 1980-1984.
- Judge, Engineering Student Project Night, SUNY at Buffalo, April 16, 1985.
- Participation in University Open Houses, 1985, 1986, 1987.
- Senator-Alternate, University Senate, SUNY at Buffalo, 1986-1989.
- Faculty Mentor, President's Honor Program, SUNY at Buffalo, 1987.
- Secretary, University at Buffalo Toastmasters, 1989.
- Member, Nuclear Reactor Advisory Committee, 1990-1991.
- Member, Personnel Committee, Graduate School, 1993-1994.
- Faculty Advisor, Safety and Ethics in Engineering Society, 1993
- Member, Graduate School Executive Committee, 1994

COMMUNITY SERVICE IN US

- Member, International Committee on Preservation of Moenjodaro (the 5000-year old Indus Valley Civilization), 1985-1986.
- General Secretary, Sindhi Association of North America, 1986-1990.

MISC. SERVICE IN PAKISTAN

- Board Member, Pakistan Council for Science & Technology, 1996.
- Board Member, Pakistan Software Export Board, 1996.

- Board Member, Sindh Information Technology Board, 2000.
- Board Member, Sindh Education Advisory Board, 2000.
- Member, Governor's Vice Chancellors of Sindh Universities Committee on Information Technology, Pakistan, 2000.
- Member, Ministry of Science and Technology Human Resource Development Committee, 2000.

HONORS AND AWARDS

- Distinguished Leadership Award, 1987.
- International Cultural Diploma of Honor, 1988.
- Best Paper Award, "Characterization of PBI Film at High Temperatures," IEEE International Symposium on Electrical Insulation, Toronto, Canada, June 1990. Authors J. L. Suthar (Graduate Student), A. N. Hammoud and J. R. Laghari.
- Nominated for "Teacher of the Year" Award, 1990, Tau Beta Pi Association, National Engineering Honor Society.
- Dedicated Services Award, Chairman IEEE Technical Committee on Radiation Life, 1991-1994.
- IEEE Award for Leadership and Dedicated Services, 1994.
- Top Civilian National award 'Tamgha-e-Imtiaz' conferred by the President of Pakistan, 1998.

LISTINGS

- American Men and Women of Science (1989 - present).
- Who's Who in Science and Engineering (1991 - present).
- Who's Who in the East (1987 - present).
- Who's Who in the World (1989 - present).