

RESUME

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ACADEMIC QUALIFICATIONS

1. Bachelor of Electrical Engineering (B.Sc. EE), University of Peshawar in 1956 with First Class (Honors), and Gold Medal for obtaining highest overall grades for three consecutive years in all academic programs offered by the Engineering College.
2. Doktor-Ingenieur (Ph.D.) degree in Electrical Engineering, Technical University, Aachen, Germany in 1961. Scholar of the German Academic Exchange Service, DAAD.

PROFESSIONAL EXPERIENCE

1. June 1, 1986 - June 15, 1998:
Professor, Electrical Engineering Department, Cleveland State University, Cleveland, Ohio 44115 (Chairman 1986-89).
2. July 1, 1981 - June 30, 1986:
Professor and Associate Chairman, Electrical and Computer Engineering Department, Wayne State University, Detroit, MI.
3. July 1, 1966 - June 30, 1981:
Professor, Electrical Engineering Department, University of

Windsor, Windsor, Ontario, Canada.

4. July 1, 1976 - June 30, 1981:
Professor and Chairman, Electrical Engineering
Department, University of Windsor, Windsor, Ontario,
Canada.
5. September 1, 1965 - June 30, 1966:
Visiting Professor, Department of Physics, University of
Calgary, Alberta, Canada.
6. Sept. 1, 1964 - August 30, 1965:
First Chairman of the newly established Electrical
Engineering Department, King Saud University of Riyadh,
Saudi Arabia.
7. October 1, 1961 - August 31, 1964:
Assistant Professor, Electrical Engineering Department,
University of Waterloo, Waterloo, Ontario, Canada.
8. August 1, 1959 - September 30, 1961:
Research Associate, Nuclear Research Establishment (KFA),
Juelich, Germany.
9. May 1, 1957 - July 30, 1959:
Teaching Assistant, Rogowski Institute for High Voltage
Engineering, Technical University Aachen, Germany.
10. January 1, 1957 - April 30, 1957:
Design Engineer, High Frequency Furnace Design
Department, Brown Boveri and Company, Dortmund, Germany.
11. July 1, 1955 - December 30, 1956:
Project Electrical Engineer, Angus Robertson (Canada)
Ltd. Warsak Hydro-Electric Project, Warsak, Pakistan.

SABBATICAL AND SUMMER EXPERIENCE

1. January 1, 1964 - August 31, 1964:
Senior Research Associate, Institute for Reactor
Materials,
Nuclear Research Establishment (KFA) Juelich, Germany.
2. August 1, 1972 - July 31, 1973:
Visiting Professor, Faculty of Electrical Engineering,
Ruhr
University of Bochum, Germany.

3. April 1 to June 30, 1975:
Visiting Professor, Ruhr University of Bochum, Germany.
4. May 1 to August 31, 1979:
Research Fellowship, Nuclear Research Establishment (KFA) Juelich, worked on experimental determination of the effects of irradiation on materials.
5. June 1, 1980 - August 31, 1980:
Visiting Senior Research Fellow, High Voltage Research Laboratories, Westinghouse Electric Corporation, Pittsburgh.
6. September 1, 1980 - August 31, 1981:
Visiting Professor and Associate Chairman, Electrical and Computer Engineering Department, Wayne State University, Detroit, MI 48202.
7. June 16, 1988 - September 15, 1988:
Packard Electric Corporation, General Motors Warren, OH. Independent Consultant, Advanced Engineering, Automotive Electromagnetic Compatibility program.
8. 1990 - 1999:
Every summer since 1990 up to 1998 I have been awarded Summer Faculty Research Fellowships for 10-12 weeks to work at the Space Electronics Division of the NASA Lewis Research Center, Cleveland, Ohio. The research projects included traveling-wave tubes and microwave devices.
9. September 1, 1993 - September 25, 1994:
Spent my sabbatical leave at NASA Lewis Research Center, Cleveland, Ohio. Senior Research Associateship awarded by the US National Science Foundation.
10. January 1 - March 31, 1994:
Invited to visit the GIK Institute in Topi, Pakistan, to prepare graduate program and research strategy.

SERVICES TO THE UNIVERSITY COMMUNITY

a. University

Member, General Faculties Council
Chairman, Committee on Appointment and Tenure
Chairman, University Committee on Graduate Studies

Member, University Senate for many years
Chairman, University Committee on High School Liaison
Engineering College Accreditation Committees (both in
Canada and USA)

b. College of Engineering

Chairman, Academic Review Committee
Chairman, College Curriculum Committee
Chair, Dean's Advisory Committee
Chair, Faculty Promotions and Tenure Committee
Member, Continuing Education Committee
Chairman, Industrial Liaison Committee
Chairman, College High School Liaison Committee
Associate Director Advanced Manufacturing Center

c. Department of Electrical Engineering

Chairman, Graduate Studies Committee
Chairman, Curriculum Committee
Student Liaison Committee
Budget and Finance Committee
Chairman, Industrial Liaison Committee
Chairman, Appointments, Promotion and Tenure Committee
Member, Departmental Computer Science Liaison Committee
Chairman, Working Group on Power Systems Courses
Acting Chairman, Electrical Engineering Department
Chairman, Electrical Engineering

HONORS AND AWARDS

1. 1955: Gold Medal, University of Peshawar for achieving the highest academic grades in the University in final engineering examinations in 1952, 1953, 1954 and 1955.
2. Jan. 1957 - July 1959: Scholarship awarded by the German Academic Exchange Service (DAAD) for graduate studies in Germany at the Technical University, Aachen.
3. Aug. - Oct. 1972: Invited by the President of the German Academic Exchange Service

- months,
scientific
- (DAAD) to visit, for three
German universities and
institutions for research and
collaboration.
4. Aug. 1972:
to visit
Travel fellowship, National
Research Council of Canada
German universities during
sabbatical time.
 5. July 1973:
the
Awarded travel fellowship by
Heinrich-Hertz Foundation of
Germany.
 6. April - June 1975:
to
Invited by the President of the
German Academic Exchange Service
visit the Ruhr-University in
Bochum, Germany for three months
for seminars and research
participation.
 7. August 1976:
the
Awarded a travel fellowship by
Department of External Affairs,
Government of Canada to visit
Germany for one month where I
gave a special graduate course at
the Ruhr-University, Bochum.
 8. May 12 - 20, 1978:
of
Visited Kuwait University at the
invitation of the Dean, College
Engineering, as advisor on
electrical Engineering
undergraduate and graduate
programs. Delivered seminars to
students and faculty.
 9. May - August, 1979:
Canada,
research at the
Research Center, Juelich,
Germany.
National Research Council,
fellowship for
Nuclear

10. Aug. 7 - 11, 1979: Invited by the Middle East Technical University, Ankara. As a result of the visit a joint research project evolved and later funded by NATO.
11. 1980 - 1982: Received a NATO research grant for two years for research on high voltage overhead insulation in cooperation with Middle East Technical University, Ankara.
12. May 7 - 12, 1980: Invited by the Institute of Electrical Research, Mexico, to visit their institutes and research establishments in Mexico City and Cuernavaca.
13. June 23 - July 5, 1980: At the invitation of the Research Institute, University of Petroleum and Minerals, Dhahran, Saudi Arabia, visited electric utility companies in the Kingdom to study the energy transmission problems. Obtained a research grant to investigate the problem of outages due insulation contamination.
14. December 1981 Visit sponsored by the Government of Pakistan for one month to visit major research and academic institutions in the country. I visited the Pakistan Institute of Nuclear Science and Technology, the University of Peshawar, and the University of Multan.
15. December 1982 Invited by the High Voltage Research group, Cairo University, Giza, Egypt, to participate in research program on the project

"Flashover on Overhead
Transmission Line Insulators? .

16. March 1983:

At the invitation of the Dean of
Engineering, Kuwait University,
Spent two weeks as a research and
academic advisor.

17. June 1983:
University,

Invited to visit Cairo
Egypt, to participate in a
research project on the "Study of
Insulation characteristics of
Sulfur Hexafluoride and its
Mixtures with Other Gases".

18. Feb. 4 - 7, 1985:

Invited by the Supreme Council of
Universities, Cairo, Egypt to
deliver an invited paper at the
Third Symposium on Energy
Research.

19. July 14 - 27, 1985:

held in
Proceedings of
published by Springer-

Received a NATO grant for
organizing a NATO Advanced Study
Institute (ASI) on "Relational
Database Machine Systems",
Les Arcs, France.
the ASI were
Verlag.

20. December 1985:

Appointed Adjunct Professor,
University of Michigan, Dearborn.

21. Oct. - Nov. 1986:
Government

At the invitation of the
of Pakistan I conducted a three-
week workshop on electromagnetic
fields and compatibility at the
NWFP Engineering University,
Peshawar.

22. August 1987:

Invited by Cairo University, to
participate in discussions on
joint
research project on Insulation
Pollution. A joint research and
a
research paper presented at the

Fifth International Symposium on High Voltage Engineering, held in Braunschweig, Germany, August, 1986.

23. Sept. 1993-Sept. 1994 Awarded "Senior Research Associate" Fellowship by the US National Science Council to work at NASA Lewis Research Center, Cleveland, Ohio.

24. Jan. 1-March 31, 1994 Visited Pakistan at the Invitation of GIK Institute of Engineering Sciences and Technology. Formulated policies for graduate program and a Strategy of research collaboration with industry which were adapted by the Board of Governors of the Institute.

25. October-November 1998: Visited the Center for Nuclear Studies, Islamabad, Pakistan. Delivered seminars and a course on Electromagnetic Compatibility.

MEMBERSHIP IN PROFESSIONAL SOCIETIES, PAST AND PRESENT

1. Senior member of the Institute of Electrical & Electronics Engineers (IEEE).
2. Member of the IEEE Electromagnetic Compatibility Society.
3. Chairman, Education Committee and member of the Administrative Committee, Magnetics Society, IEEE, 1983-87.
4. Member of the IEEE Insulation Society.
5. Member, Program Committee, International Magnetics Conference (INTERMAG) IEEE.

6. Member, Program Committee, International Conference on High Technology in Power Sector of IASTED.
7. Treasurer, International Magnetism Conference (INTERMAG) 1996, held in Seattle, Washington, April 9 - 12, 1996.
8. Professional Engineer, Province of Ontario, Canada.

BOOKS WRITTEN

1. "Introduction of Electricity and Magnetism", Cantext Publications, Winnipeg, Manitoba (with Dr. E. Kuffel).
2. "Electrical Engineering Materials", University of Windsor Press, 1975.
3. "Theory of Electromagnetic Fields", University of Windsor Press, 1975.
4. "Chapter 7: "Electrical Breakdown in Gases" in the 1980 Digest of Literature on Dielectrics, Vol. 42, National Academy of Sciences, Washington, DC.
5. "Database Machines, Modern Trends and Applications", NATO ASI Series, Springer-Verlag.
6. "Modern Engineering Electromagnetics", a text book for senior undergraduate and junior graduate students, presently under preparation.

SEMINARS GIVEN INTERNATIONALLY:

1. "Magnetic Properties of Fe-Cu-Alloys with up to 2.2% Cu", Krupp Research Institute, Essen, Germany, April 1960.
2. "Kinetics of Precipitation and Their Influence on Magnetic Properties of Fe-Cu-Alloys", Technical University, Aachen, Germany, Feb. 1961.
3. "Investigations of the Magnetic Hysteresis in Iron-Copper Alloys as a Function of Precipitate Diameter", Nuclear Research Institute, Juelich, Germany, March 1964.

4. "Magnetic Properties of SmCo₅ Alloys", Krupp Research Institute, Essen, Germany, November 1972.
5. "Dependence of Coercive Field Intensity and Initial Permeability on Copper Precipitation in Fe-Cu-Alloys", University of Muenster, Germany, December 1972.
6. "Temperature Dependence of Coercivity in Plastically Deformed Fe-Si-Alloys", Ruhr-University, Bochum, Germany, August 1975.
7. A series of seminars delivered at the University of Kuwait during an invited visit to the University of Kuwait, May 1978.
8. "Breakdown Mechanism in Sulfur Hexafluoride", Kernforschungsanlage Juelich, Germany, July 1979.
9. "Pre-breakdown and Breakdown Behavior of SF₆ and SF₆-N₂ Mixtures", Technical University Braunschweig, Germany, July 1979.
10. "Surface Flashover Along High Voltage Overhead Insulators Under Contaminated Conditions", Technical University, Ankara, Turkey, August 1979.
11. "Development of New Materials for High Voltage Overhead Insulation", Institute of Electrical Research, Cuernavaca, Mexico, May 1980.
12. A series of seminars on the electrical and magnetic properties of materials and electromagnetic compatibility delivered at scientific and academic institutions in Pakistan, December 1981 and January 1982.
13. "Breakdown and Corona Behaviors of SF₆ and SF₆-N₂ Mixtures", presented at the Winter Session, Arab School of Science and Technology, Kuwait, Jan. 25, 1981.
14. A series of seminars delivered to the faculty and graduate students and professional engineers during an invited visit to Kuwait University, March 6 - 9, 1983.

15. "A Proposed Solution of Outages Caused by Flashover Along Overhead Insulators", Cairo University, Egypt, January, 1983.
16. "Grounding and Shielding Techniques Employed in the Design of Electronic Equipment", at the Society of Electrical Engineer, WAPDA (Pakistan), Peshawar, November 17, 1986.
17. "Circuit Modeling of Transmission Lines and Disc-Loaded Wave Guides", Seminar presented at the University of Victoria, Victoria, B.C., March 1, 1991.

SEMINARS GIVEN REGIONALLY

1. "Magnetic Properties of Fe-Si-Alloys as a Function of Dislocation Density", University of Dayton, Ohio, June 1974.
2. "Behavior of Sulfur-Hexafluoride and SF₆-Gas Mixtures in Compressed Gas Insulated Systems", General Motors Institute, Flint, MI, May 1982.
3. "Mathematical Modeling of Breakdown in Compressed Gases", Boston University, February 1983.
4. "Calculation of Breakdown Voltages in Compressed Gas Systems in the Presence of Spacers", George Washington University, Washington, DC, November 1983.
5. "Breakdown Phenomena in Compressed Gases", Packard Electric, Warren, Ohio, December 1983.
6. "Effect of Spacers on the Breakdown Behavior of SF₆ in Compressed Gas Systems", George Mason University, Fairfax, VA, April 16, 1984.
7. "High Voltage Compressed Gas Systems", South Dakota School of Mines and Technology, March 11, 1984.

8. "Effect of Contamination on the Flashover Behavior of Overhead Insulators", The University of Alabama, March 21, 1984.
9. "A Mathematical Expression for Determining the Flashover Voltage Along Spacers in Gas Insulated Systems", North Carolina A&T University, Greensboro, N.C., May 6, 1985.
10. "Electromagnetic Interference Due to Transmission Surges on Short Lines", University of Idaho, May 8, 1985.
11. "A Novel Technique for the Detection and Identification of Impurities in Gaseous Insulation", Memphis State University, Memphis, TN, February 5, 1988.
12. "Prebreakdown and Breakdown Characteristics of Sulfur-Hexafluoride and Other High Voltage Gaseous Insulation", University of Bridgeport, Bridgeport, CT, March 28, 1988.
13. "Electrical Breakdown Phenomenon in Gases and Solid Insulation", Colorado State University, Denver, April 25, 1980.
14. "Electromagnetic Interference in Automotive Vehicle, an Emerging Problem", University of Missouri, Columbia, May 17, 1988.
15. "Transfer Characteristics of Transmission Lines under the Influence External Electromagnetic Radiation", the Northern Illinois University, DeKalb, IL, June 9, 1990.
16. "Challenges in Engineering Education and Preparation of Engineering Manpower for the Competitive Profession", Behrend College, Pennsylvania State University, Erie, PA, March 24, 1992

Ph.D. AND MASTER'S DEGREE DISSERTATIONS SUPERVISED

Masters Theses:

1967: B. K. Bhat, "The Response of a Uniformly Wound

- Coil to
a Step Voltage", M.A.Sc.
- 1970: J. Ahmad, "The Effect of Plastic Deformation on Magnetic and Electrical Properties of Fe-Cu-Alloys",
- 1970: M. S. Khan, "The Effect of Precipitation of Non -
Magnetic Inclusions on the Coercive Field and Initial Permeability of Fe-Cu-Alloys", M.A.Sc.
- 1975: Frank J. Ewashyshyn, "Effect of Low Temperatures on the
DC Breakdown Characteristics of Plane-Plane and Rod-Plane Gaps Insulated with Compressed Sulfur Hexafluoride", M.A.Sc.
- 1976: N. H. Malik, "The Electrical Properties of Silicon
Carbide Filled Adiprene", M.A.Sc.
- 1982: A. A. A. Abdul-Wahab, "Computer-Aided Design of Overhead Insulators Using Charge Simulation Techniques", M.A.Sc.
- 1983: S. Mukherjee, "A Review of the Residential Usage of
Solar Energy", M.A.Sc.
- 1990-94 Rick Bosich, "Measurement Techniques for Evaluating Leakage Currents in Satellite Insulation", M.Sc. (E.E.).
- 1991-93 S. Svoboda: "Effect of Clouds and Rains on the Attenuation of Communication Signals from Satellites", M.Sc. (E.E.).
- 1992-93 David Molyneaux: "Design of Rectangular Coils for NMR Systems", M.Sc. (E.E.).
- 1996-97 Carol Kory: "Design and Simulation of Microwave Structures for Use in Aerospace Technology?", M.Sc.

Ph.D. Theses:

- 1971: L. N. Chaudhary, "Effects of Dislocations on the

Magnetic Properties of Grain-Oriented
Silicon-Steel", Ph.D.

- 1974: M. Y. Khan, "On the Physical Metallurgy of the Rare Earth - Cobalt Permanent Magnets", Ph.D.
- 1974: J. Ahmad, "Magnetic After-Effect in Transformer Steel and Other Ferromagnetic Alloys", Ph.D.
- 1978: J. Yializis, "Partial Discharges and Prebreakdown Characteristics of Sulfur Hexafluoride Subjected to High DC Voltages", Ph.D.
- 1979: N. H. Malik, "Static Field Breakdown and Corona Characteristics of Positive and Negative Rod-Plane Gaps Filled with SF₆-N₂ Mixtures", Ph.D.
- 1981: J. R. Laghari, "Surface Flashover Studies of Cylindrical Spacers in SF₆-N₂ Gas Mixtures Using Direct Applied Voltages", Ph.D.
- 1982-85 Y. A. Safar, "Impulse Breakdown and Corona Characteristics of SF₆ Mixtures with N₂, CO₂ and Air for Rod-Plane Gaps", Ph.D.
- 1982-85 H. R. Hiziroglu, "Breakdown of Sulfur-Hexafluoride Under Non-Uniform Electrostatic Fields", Ph.D.
- 1990-93 Thomas Wallet, "Analysis, Design, and Development of Miniature Traveling-Wave Tubes for Satellite Communications", Ph.D.
- 1993-97 David Molyneaux, "Analysis, Design, and Implementation of a Coil Array for Arbitrary Placement and Optimal Signal Detection in Nuclear Magnetic Resonance Imaging", Ph.D. Thesis.
- 1996-99: Robert Romanofsky, "Frequency/Phase Agile Microwave Circuits on Ferromagnetic Films", Ph.D. Thesis.
- 1997-00: Carol Kory, "Effect of Three-Dimensional RF Fields on PPM Focused Helical Traveling-Wave Tubes", Ph.D. Thesis.

TECHNICAL COURSES TAUGHT OR ATTENDED

1. A one-week special course on "Principles of Quantum Mechanics", 1966 Summer Technology Seminar program of the University of Minnesota, Minneapolis, MN.
2. Ford Foundation sponsored two-week course in the University of Michigan Engineering Summer Conference Program, "Application of Computers in Engineering", 1969.
3. NSF sponsored two-week course on "Modern Engineering Application of Coherent Optics and Holography", at the Oakland University, School of engineering, Rochester, MI, June , 1971.
4. A special course on "Power Electronics Applications in Power Systems", conducted by the Montreal Section of the IEEE in October 1980.
5. Taught a two-week special intensive course on "Power Systems Analysis and Planning", The Arab School of Science and Technology, Kuwait, January 20 - 31, 1981.
6. A two-week special course, "Fast Electrical and Optical Diagnostic Principles and Techniques", NATO Advanced Study Institute held in Castelvechio, Italy, July 11, 1983.
7. Organized a two-week special course, "Relational Database Machine Systems", NATO Advanced Study Institute held in Les Arcs, France on July 14 - 27, 1985.
8. Attended a one-week NSF Workshop on "Integrated Engineering Workstations", held at Bucknell University, Lewisburg, PA, July 7 - 12, 1991.
9. "Finite Elements Techniques for Instruction of Electromagnetic Fields" , a one-week NSF sponsored workshop held at Marquette University, Milwaukee, Wisconsin, July 1993.

LIST OF REFEREED PUBLICATIONS

1. "Experimentelle Untersuchungen ueber magnetische Eigenschaften und die Ausscheidungskinetik von Eisen-Kupfer-Legierungen", Z. Metallkunde, 52, (1961), 799-813.
2. "Magnetic Materials and Their Applications", Conference IEE, London, UK, September 26 - 28, 1976.
3. "Effects of Precipitation of Copper on the Ferromagnetic Properties of Fe-Cu-Alloys", IEE (UK) publication No. 33, (1967), 135-138.
4. "Fifteenth Annual Conference on Magnetism & Magnetic Materials", held in Philadelphia, PA, November 18 - 21, 1969, paper No. 3F
5. "Influence of Plastic Deformation on Coercive Field and Initial Susceptibility of Fe-3/25% Si-Alloys", with L. N. Chaudhary, J. Applied Physics.
6. International Conference on Magnetism held in Washington, DC, April 21 - 24, 1970, paper No. 28.1.
7. "Temperature Dependence of Coercive Field of Fe-Cu and Fe-3.25% Si-Alloys with L. N. Chaudhary, IEEE Trans.

Magnetics,

Vol. 6, (1970), 705-707.

8. Sixteenth Annual Conference on "Magnetism & Magnetic Materials", held in Miami Beach, Florida, Nov. 17 - 20, 1970, paper No. HD-5.
9. "Permalloy Thin Film Inductors", with N. Saleh, Electronics Letters, Vol. 6, (1970), 850-851.
10. International Conference on Magnetics held in Denver, CO, April 13 - 16, 1971, paper No. 15.9.
11. "Temperature Dependence of the Initial Susceptibility of Fe-3.25% Si-Alloy", J. Appl. Phys., Vol. 42 (1971), 1785-1786.
12. "Precipitation of Copper on the Surface of Fe-2.02% Cu-Alloy", with J. Ahmed, Scripta Metallurgica, Vol. 42 (1971), 1785-1786.
13. "Behavior of Coercive field and Initial Susceptibility During Recovery of Plastically Deformed Fe-3.25% Si-Alloy", IEEE Trans. Magnetics, Vol. 7 (1971), 560-563.
14. "The Conductivity Tensor and Hall Effect in Magnetic Semiconductors", J. Appl. Phys., Vol. 42 (1971), 4313-4314.
15. "Optical Properties of Anisotropic Non-Degenerate Semiconductors", Physica Status Solidi (b) 48 (1971), 155-158.
16. "Influence of Dislocations on Magnetization Processes in Soft Magnetic Materials", IEEE Trans. Magnetics, Vol. 8 (1972), 684.
17. International Conference on Magnetics held in Kyoto, Japan, April 20 - 23, 1972, paper No. 56.3.
18. International Conference on Magnetics (INTERMAG) held in Washington, DC, April 24 - 27, 1973, paper No. 2-2.
19. "A Correlation Between Coercive Field and Structure of SmCo_5 ", with Y. Khan, J. Less-Common Metals, Vol. 32 (1973), 307-310.

20. "Influence of Plastic Deformation and Carbon Content on the Magnetic After-Effect in Fe-3.25% Si-Alloy", International Conference on Magnetism, Moscow, USSR, August 22 - 28, 1973.
21. "Structure of Alloys Ce_2Co_7 - Ce_2Co_7 ", International Conference on Magnetism, Moscow, USSR, August 22 - 28, 1973.
22. "Gitterstoerungen bei weichmagnetischen Legierungen", Elektroanzeiger, Vol. 26, (1973), 59 - 61.23.
23. "Structure and Stability of $SmCo_5$ ", with Y. Khan, IEEE Trans. Magnetics, Vol. 9, (1973), 156-158.
24. Paper presented at the International Conference on Magnetics, held in Toronto, Canada, on May 14 - 17, 1974.
25. "Effect of Spherical and Needle Shaped Inclusions on Magnetic Properties and After Effect of Soft Magnetic Materials", Conference on Soft Magnetic Materials, Cardiff, Wales, April 9-11, 1976.
26. "On the Thermal Decomposition of $SmCo_5$ ", with Y. Khan, Physica Status Solidi (a), Vol. 28 (1975), 169-174.
27. "Effects of Non-Magnetic Inclusions on the Magnetic Properties of Iron", International Conference on Magnetism, Amsterdam, Holland, Sept. 6 - 10, 1976.
28. "Partially Conducting Polymers for Outdoor Insulation", with N. H. Malik, E. Kuffel and M. R. Raghuvver, Annual Meeting of the Canadian Electrical Association Montreal, March, 1977.
29. "Effects of Non-Magnetic Impurities on the Magnetic Properties of Iron", Physica, Vol. 86-88 B (1977), 1477-1478.
30. "Influence of Carbon, Plastic Deformation and Impurities on the Magnetic After-Effect of Iron and Fe-3.25% Si-Alloys", Soft Magnetic Materials III Conference, Bratislava, Sept. 14-16, 1977.
31. "Elektrische Eigenschaften von SiC-Haltigen Kunststoffen", Elektroanzeiger, Vol. 30 (1977), 24-26.
32. "A New Concept in Outdoor High Voltage Insulation", with M. R. Raghuvver, W. Opydo and E. Kuffel, International Electrical and

- Electronics Conference, Toronto, Canada, Sept. 26 - 28, 1977.
33. "Development of Partially Conducting Polymers for Outdoor Insulation", with N. H. Malik, E. Kuffel and M. R. Raghuvver, Trans. Canadian Electrical Association, Vol. 16 (1977),p 140-149.
 34. "Partially Conducting Polymeric Materials for High Voltage Outdoor Insulators in Polluted Environments", with M. R. Raghuvver, W. Opydo and E. Kuffel, IEEE Trans. PAS, 97 (1978), pp. 1672-1679.
 35. "Electrical Breakdown in Gases", Chapter 7, 1978 Digest of Literature on Dielectrics, Vol. 42, National Academy of Sciences, Washington, DC
 36. "Application of Partially Conducting Polymeric Materials for High Voltage Outdoor Insulators in Polluted Environments", with M. R. Raghuvver, W. Opydo, and E. Kuffel, Winter Power Conference,IEEE Power Society, New York, January 1978.
 37. "Finite Element Calculation of Three-Phase Pipe-Type Cable Losses", with R. J. Hohendorf, E. Kuffel and P. H. Alexander, International Conference on Magnetics, Florence, Italy, May 9-12, 1978.
 38. Prebreakdown Current Measurements and Impulse Breakdown Characteristics of SF₆ and SF₆-N₂ Mixtures", with N. H. Malik, The Cage Club Annual Meeting, Montreal, May 17-19, 1978.
 39. "Breakdown and Prebreakdown Phenomena in SF₆-N₂ Mixtures",VIII International Symposium on Discharges and Electrical Insulation in Vacuum, Albuquerque, NM, Sept. 4-7, 1978, pp. F7-1-13.
 40. "Present State of Research on the Partially Conducting Insulation Materials for High Voltage Overhead Applications in Polluted Environments", 1978 IEEE Canadian Conference on Communications and Power, Montreal, Canada, October 18-20, 1978.
 41. "Pre-breakdown and Impulse Breakdown Behavior of SF₆ and SF₆-N₂ Mixtures", 1978 IEEE Canadian Conference on Communications and Power, Montreal, Canada, October 18-10, 1978.

42. "Breakdown Mechanisms in Sulfur-Hexafluoride", with N. H. Malik,
IEEE Trans. on Electrical Insulation, Vol. 13, 1978, pp. 134-144.
43. "Partially Conducting Polymers for Insulators for Operation in Outdoor Polluted Environments", report prepared for the Canadian
Electrical Insulation, Montreal, Quebec, 1978.
44. "Breakdown Phenomenon in SF₆-N₂ Gas Mixtures", Second Far East Conference on Electrical Power Supply Industry, Hong Kong, December 1978.
45. "The Behavior of Synthetic Insulation Under the Influence of Prebreakdown Currents", Second Far East Conference on Electric Power Supply Industry, Hong Kong, December 1978.
46. "A Communal Source of Solar Derived Energy for Developing Countries", Proceedings of the IAHS International Conference, December 18-22, 1978, University of Petroleum and Minerals, Dhahran, Saudi Arabia.
47. "Electrical Breakdown in Mixtures of Sulfur Hexafluoride with Other Gases", IEEE Trans. Electrical Insulation, Vol. EI-14, 1979, pp. 1-13.
48. "Static Field Breakdown and Corona Characteristics of Rod-Plane
Gaps in SF₆-N₂ Mixtures", IEEE Trans. Elect. Insulation, Vol. EI-14, 1979, pp. 61-69.
49. "Impulse Breakdown and Corona Characteristics for Rod-Plane Gaps
in Mixtures of SF₆ and Nitrogen and with Less than 1% of SF₆ Content", IEEE Winter Power Meeting, New York, January, 1979.
50. "Calculation of Discharge Inception Voltages in SF₆-N₂ Mixtures",
IEEE Trans. Electrical Insulation, Vol. EI-24, 1979, pp. 70-76.
51. "Non-Uniform Field Breakdown in SF₆ and its Mixtures with Helium and Nitrogen", Third International Symposium on High Voltage Engineering, Milan, Italy, August 28-31, 1979.
52. "Effect of Partial Discharges on Synthetic Insulating Materials in Air and Other Gases", Third International

Symposium on High
Voltage Engineering, Milan, Italy, August 28-31, 1979.

53. "Effect of Surface Discharges on Synthetic Insulating Materials" International Electrical Electronics Conference and Exposition,
Toronto, Canada, October 2 - 4, 1979.
54. "Partially Conducting Insulation Materials for High Voltage Overhead Insulation", 1979 Electrical/Electronics Insulation Conference, Boston, MA, October 8 - 11, 1979.
55. "Experimental Investigations of the Electrical Discharge Mechanism of SF₆, N₂ and SF₆-N₂ Mixtures at Various Pressures", 1979 Electrical/Electronics Insulation Conference, Boston.
56. "The Influence of Voltage Polarity and Field Non-Uniformity on the Breakdown Behavior of Rod-Plane Gaps Filled with SF₆", IEEE Trans. on Electrical Insulation, Vol. EI-14, No. 6, 1979, pp. 327-333.
57. "Surface Flash-over Voltages in SF₆-N₂ Mixtures Under Uniform and Non-Uniform DC Fields", 1979 Conference on Electrical Insulation & Dielectric Phenomena, Oct. 21 - 25, 1979, Whitehaven, PA.
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