

CURRICULUM VITAE

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PERSONAL INFORMATION

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EDUCATION

1969 **Ph.D.** in Industrial Engineering, *University of California, Berkeley*
Ph.D. Dissertation: Optimization Techniques for Optimal
Control Systems with State Space Constraints
(Thesis Advisor, Dr. R. M. Van Slyke)
1967 **M.S.** in Operations Research, *University of California, Berkeley*
1965-66 Graduate Studies in Industrial Engineering, Mathematics,
Computer Science, and Statistics, *University of Minnesota, Minneapolis*
1965 Master of Technology (**M. Tech**) in Industrial Engineering,
Indian Institute of Technology, Kharagpur, India
1963 **B.S.** in Mechanical Engineering, *Delhi University, India*
(Graduated with Distinction)

PROFESSIONAL REGISTRATION

Registered Professional Engineer, State of Michigan

PROFESSIONAL EXPERIENCE

A) Academic Appointments

August 1992 - Present Department of Industrial & Systems Engineering,
University of Washington, Seattle, WA 98195

- Professor – September 16, 1999 to present
- Director and Professor – January 1993 to September 1999
- Adjunct Professor-Department of Mechanical Engineering
- Adjunct Professor – 1996-98, Department of
Environmental Health
- Teaching and research in the area of quality engineering,

- design reliability engineering, system safety, industrial experimental design, system optimization and control, quality and productivity improvement including six sigma
- August 1989-
August 1992
- University of Oklahoma*, School of Industrial Engineering,
Norman, Oklahoma 73019
- Director and Professor
 - Provide management and leadership for the School with 9 faculty members, 28 doctoral students, 110 masters students and 120 undergraduate students.
 - Teaching and research in area of quality engineering, design reliability engineering, industrial experimental design, system optimization and control, quality and productivity improvement.
- September 1970 -
August 1989
- Department of Industrial and Manufacturing Engineering, *Wayne State University*, Detroit, Michigan 48202
- Professor (September 1980 - 1989)
 - Associate Professor (September 1973-1980)
 - Associate Professor and Associate chairman of the Department (July 1975-August 1976)
 - Assistant Professor (September 1970-1973)
 - Responsible for teaching and research in following areas: General Operations Research, Mathematical Programming, Optimization Theory, Systems Engineering, Reliability and Quality Control, Design of Experiments. Research in the areas of Quality Engineering, Design for Manufacturability and Reliability, Taguchi Methods
- September 1966 -
June 1969
- Department of Industrial Engineering and Operations Research, *University of California, Berkeley*
- Research and Teaching Assistant
 - Teaching Assistant in the area of production systems design and linear programming.
 - Research in the area of decision theory, large scale mathematical programming and optimal control.
- January 1966 -
June 1966
- Department of Industrial Engineering, *University of Minnesota*, Minneapolis
- Research Assistant
 - Worked on problems in production planning and control. Industrial consultant to Despatch Oven Company, Minneapolis, on production planning and plant layout

B) Visiting Appointments

- Jan – March 2011
- Visiting Professor, Department of Mechanical Engineering,
University of Maryland, College Park, Maryland

Sep – Nov 2010	Guest Professor, School of Reliability & Systems Engineering, Beihang University of Aeronautics and Astronautics, Beijing, China
Sep – Dec 2005	Department of Production and Quality Engineering, <i>Norwegian University of Science and Technology</i> , Trondheim Visiting Professor as Part of the Faculty Exchange Program
January 2000 – December 2000	Department of Industrial Engineering and Logistics Management, <i>Hong Kong University of Science and Technology</i> , Hong Kong Visiting Professor – teaching and research in quality and reliability
September 1977 - August 1978	Faculty of Engineering, Department of Management Sciences, <i>The University of Waterloo</i> , Waterloo, Ontario N2L3G1, Canada Visiting Associate Professor Research and teaching in reliability engineering, optimization techniques and operations research methodology

C) Industrial Appointments

1985 - 1987	Board of Directors, <i>American Supplier Institute</i> , Dearborn, MI <ul style="list-style-type: none"> • Consulting, management, engineering education and training on quality engineering and management
July 1978 - September 1978	U.S. Army, <i>Tank Automotive Command</i> , Warren, Michigan <ul style="list-style-type: none"> • Senior Reliability Engineer
June 1973 - September 1973	<i>Ford Motor Company</i> , Dearborn, Michigan <ul style="list-style-type: none"> • Visiting Scholar - Systems Engineering Reliability
June 1969 - August 1970	Transportation Research Department, <i>General Motors Research Laboratories</i> , Warren, Michigan <ul style="list-style-type: none"> • Senior Research Engineer • Worked in an interdisciplinary group on problems related automated transportation systems, DIAL-A-BUS, transportation economics and applications of multiple objective optimization theory to transportation planning and design.
June 1966 - to September 1966	<i>Control Data Corporation</i> , Minneapolis, Minnesota <ul style="list-style-type: none"> • Analyst Programmer • Worked on the development of computer codes for linear and mixed integer programs for CDC-3600
January 1962 - June 1965	Worked as a trainee in the following organizations: Hindustan Aeronautical Limited, Textile Machinery Manufacturing Company and Bombay Electric Supply Company

PROFESSIONAL CONSULTING/EDUCATION/TRAINING

TAUGHT THE 5-DAY COURSE ON SYSTEM SAFETY AND RELIABILITY ANALYSIS AT THE FOLOWING ORGANIZATIONS:

- NASA, Johnson Space Center, Dec 13-17, 2010
- NASA, Johnson Space Center, June 14-18, 2010
- Edwards Air Force Base, Sep 21-25, 2009
- NASA, Johnson Space Center, June 15-19, 2009

- Tinker Air Force Base, June 8-12, 2009
- Euro-Copter, Munich, Germany, Sep 15-19, 2008
- Tinker Air Force Base, June 16-20, 2008
- NASA, Kennedy Space Center, Cape Canaveral, Florida, Fault Tree Analysis Education, Oct 31-Nov 2, 2007
- Nuclear Systems, Kirtland AFB, Oct 1-5, 2007

Consulting/Training Cont.

- Expert Witness, Furnace Reliability (2007) and Intellectual Property Issues (2006)
- NASA, Marshall Space Flight Center, Huntsville, System Safety and Reliability Analysis Education, Sep 11-15, 2006 and Sep 18-22, 2006
- Siemens, Reliability analysis, 2007
- Chrysler Corp., Fault Tree Analysis Training, August 2005.
- Microsoft, April 2005
- Dendreon, 2004
- Hill Air Force Base, System Safety and Reliability Analysis, September, 2004
- Northrop Grumman, San Diego, CA, FAULT TREE ANALYSIS, March, 2004
- Moog, Inc., New York, Reliability Engineering, Design, Testing and Management, Consulting and Education (2003)
- South Korean Government – Reliability for Electronics – Training (2003)
- Rosetta Inpharmatics, a Division of Merck (2002-2003)
- Consulting and training on Statistical Design of Experiments and Robust Engineering for gene expression array technology
- Chinese Manufactures Association (2000) – Integrated Quality Management System and Six Sigma
- Vixel Corporation (1999 –2000) - Reliability evaluation and design, and evaluation of test plans.
- Lucky Goldstar (LG) Group, Korea (1995 - 1998)
- Design and implementation of reliability programs for industrial control systems; quality improvement of PCB manufacturing processes, and education and training to change culture to consider reliability throughout product life cycle
- Flowdrill Corporation, Kent, Washington (1996)
- Reliability growth process for high speed water jet drilling for gas
- Embraco, North America and Brazil (1994-1996)
- Reliability test plans, accelerated testing and reliability management
- Boeing, Fabrication Division (1993 - 1994)
- Reliability and maintainability for facilities and equipment
- Cummins Engines, Diesel Re Con (1991-1994)
- Education and training on topics related QFD and TQM in manufacturing
- General Motors Corporation (1982 - 1993)
- Consultant to various groups on the following topics: reliability in product design and testing, quality engineering, quality loss function, industrial experimental design, quality function deployment, Taguchi Methods.
- Ford Motor Company (1975 - 1990)

- Consultant to various groups in quality engineering, reliability engineering, product design and development, training programs, quality function deployment, etc.
- Chrysler Corporation (1984 - 1990)
- Training and consulting on reliability and quality engineering
- American Supplier Institute, Inc. (1985-1991)
 - Board of Directors (1985-1987)
 - Consultant on quality engineering, Taguchi Methods, reliability and quality function development (QFD).
- Caterpillar (1987-1988)
- Consultant on design and development of a system for new product introduction (also topics related to quality function deployment).
- Ford Supplier Institute, Michigan (1983 - 1985)
- Seminars on Statistical Thinking for Manufacturing Processes, Statistical Process Control and Quality Improvement through Quality Circles.
- U.S. Army, Tank Automotive Command, Warren, Michigan (1978 - 1985)
- Reliability Engineering, RAM analysis during concept and design, reliability training programs.
- Some of the other companies I have done consulting for are: Budd, Dana, Delco Remy (GM), 3M, Permonite, Phillip Morris, Shellar Globe, Texas Instruments, Whirlpool, and Xerox.

SPECIAL CONFERENCES, WORKSHOPS AND STUDY MISSIONS.

- Two-week mission to Japan to study the development and implementation of Quality Function Deployment (QFD) in Japanese companies, hosted by the Japanese Union of Scientists and Engineers (JUSE) and Japanese Quality Control Association (JQCA), March 1987.
- Leaders for manufacturing, Graduate Program Workshop, Massachusetts Institute of Technology (M.I.T.), April, 1991.
- National Science Foundation (NSF)-sponsored Workshop on Maintenance Science, University of Texas, Austin, April 17 - 19, 1996.
- National Science Foundation (NSF) and Foundation for Research Development (FRD) of South Africa - Manufacturing Collaboration Workshop and to visit various universities, Johannesburg, South Africa, March 16 - 21, 1997.
- National Science Foundation (NSF) – Workshop on Planning, Design, Management and Control of Transportation Systems, Dec. 1997.
- Institute for Teaching Excellence, University of Washington, June 15-20, 2003.

AWARDS/HONORS

Fellow-Institute of Industrial Engineers (IIE), 1991

Fellow-American Society of Quality Control (ASQ), 1990

Allan Chop Technical Advancement Award, Reliability Division, ASQ, 1987

Craig Award, Automotive Division, ASQ, 1989

Outstanding Instruction Award, Ford Masters Class, 1985

Excellence in Teaching Award, Industrial Engineering, University of Washington, 1993, 1996, 2003, 2004, 2005, 2006, 2008.

Received a plaque from **American Society for Quality in recognition of leadership and Distinguished Service** for Chairing the Edwards Medal Committee, April 27, 2006.

Biographical Entries and Citations:

Who's Who in America
Who's Who in Engineering
Personalities of the West and Midwest
Who's Who in Frontier Science and Technology
Who's Who in the Midwest
International Who's Who in Engineering
Who's Who in the World
And several others

Member, Alpha Pi Mu

And has been member of Sigma Xi

FUNDED RESEARCH – GRANTS AND CONTRACTS

October 2001 – September 2006

Co-Investigator, "*Identification and Prevention of Injuries in Northwest Orchards*"

Mathew Kiefer, Project Director, Department of Environmental Health, UW Medical School,
Pacific Northwest Agricultural Safety and Health Center,

Department of Health and Human Services, State of WA

September 1999- August 2000

Principle Investigator, Enterprise Quality, Boeing Co.

September 1998- August 1999

Principal Investigator, Reliability, Boeing Co.

June 1995 - December 1995

Principal Investigator, *Reliability Improvement for Air-to-Ground Communication System*, AT&T Wireless, Seattle, WA

July 1994 - May 1996

Co-Principal Investigator, *The Manufacturing Engineering Education Partnership*, a coalition of Penn State, University of Washington, University of Puerto Rico and Sandia National Laboratories, ARPA/NSF

January 1993 - August 1993

Principal Investigator, *Concurrent Engineering Using Robust Design*, Graduate School Fund, University of Washington

September 1992 - December 1992

Reliability Physics and Failure Analysis, *Supercollider Project*, High Energy Physics, University of Washington.

September 1991 - August 1992

Principal Investigator, *Quality Assurance and Implementation of Current Methods*, Oklahoma Center for Integrated Design and Manufacturing - Computer Integrated Manufacturing (OCIDM-CIM), Oklahoma Center for Applied Science and Technology (OCAST)

August 1990 - August 1991

Principal Investigator, *Quality Assurance*, Oklahoma Center for Integrated Design and Manufacturing - Computer Aided Manufacturing (OCIDM-CAM), Oklahoma Center for Applied Science and Technology ((OCAST)

June 1988 - August 1989

Principal Investigator, *Quality Management*, General Motors Technical Center, Michigan

April 1987 - September 1989

Principal Investigator, *Quality Engineering - Development and Implementation*,
American Supplier Institute, Dearborn, Michigan

September 1987 - August 1988

DeVlieg Foundation Faculty Scholar Award for *Design and Quality Optimization to
Improve Manufacturability*

September 1987 - August 1989

Principal Investigator, *Quality Engineering*, General Motors Technical Center, Michigan

November 1986 - August 1989

Principal Investigator, *Design Reliability and Quality Optimization to Improve
Manufacturability*, Institute for Manufacturing Research, Wayne State University,
Detroit, Michigan

July 1981 - October 1982

Research Investigator, *An Analysis of Total System Costs Related to Bus Garage and
Network Configuration*, Urban Mass Transportation Administration, Washington, D.C.

July 1980 - August 1981

Research Investigator, *A Methodology for Locating and Sizing Transit Fixed Facilities
and the Detroit Case Study*, Urban Mass Transportation Administration, Washington,
D.C.

July 1979 - March 1980

Co-Principal Investigator, *A Methodology for Estimating Mission Reliability*, U.S. Army
Tank Automotive Command, Warren, MI

September 1975 - August 1976

Principal Investigator, *Design and Management of Reliability Programs*, Chevrolet
Motor Division, General Motors Corporation, Warren, MI

September 1974 - August 1975

Principal Investigator, *Reliability Optimization and Trade-Off Analysis*, Chevrolet Motor
Division, General Motors Corporation, Warren, MI

April 1973 - 1974

Principal Investigator, *Design by Reliability*, Chevrolet Engineering Center, Warren, MI

April 1972 - December 1972

Co-Principal Investigator, *Reliability Engineering as Applied to Product Design and
Development*, Chevrolet Engineering Center, Warren, MI

April 1972 - January 1973

Co-Principal Investigator, *Validation of Stimulus-Response Relations for Vehicular
Traffic by Optimization Theory Based on Data Gathered by Aerial Photogrammetric
Methods*, National Science Foundation, GU 3471, Grant-in Aid, Wayne State University,
Detroit, Michigan.

COURSES TAUGHT AT VARIOUS UNIVERSITIES

A) Wayne State University, Detroit, Michigan (1970 - 1989)

- Operations Research (UG)
- Linear Programming (G)
- Optimization Methods (G)
- Dynamic Programming (G)
- Systems Engineering (UG)

- Reliability in Design (G)
 - Reliability in Design (G)
 - Design of Experiments (UG & G)
 - Statistical Quality Control (G)
 - Engineering Statistics (UG)
- B) University of Oklahoma, Norman, Oklahoma (1989-1992)**
- Engineering Experimental Design (UG & G)
 - Design of Quality Assurance Systems (UG & G)
- C) University of Washington, Seattle, Washington (1992 - Cont.)**
- Probability and Statistics for Engineers (UG) (ENGR 315)
 - Statistical Quality Control (UG) (INDE 421)
 - Regression Analysis and Design of Experiments (UG) (INDE 316)
 - Reliability Engineering and System Safety (UG) (INDE 426)
 - Quality Control in Manufacturing (G) (INDE 521)
 - Reliability in Product Design and Testing (G) (INDE 526)
 - Robust Design and Quality Engineering (G) (INDE 524)
- D) CHAIR - DOCTORAL DISSERTATION**
- Major advisor of the following students:

1. Dr. S. I. Taraman	(1974)	Director, Ford Motor Company [old info]
2. Dr. K. Mirkhani	(1977)	Manager, EDS [old info]
3. Dr. J.C. Hudson	(1981)	Professor, GMI [Deceased]
4. Dr. C.P. Hwang	(1983)	Air Force, Taiwan
5. Dr. G. Chen	(1990)	Associate Professor, Morgan State University
6. Dr. M. Kang	(1992)	Colonel, Air Force, Korea
7. Dr. R. Boedigheimer	(1992)	Professor, Air Force Academy
8. Dr. B.R. Cho	(1994)	Associate Professor, Clemson University
9. Dr. R. D. Brunelle	(1998)	Writer
10. Dr. Qianmei Feng	(2005)	Assistant Professor, University of Houston, Texas
11. Dr. Sarintip Satitsatian	(2006)	Business Executive, Thailand
12. Dr. Yung-Wen Liu	(2007)	Assistant Professor, University of Michigan, Dearborn, Michigan

Present Doctoral Students: Carlos Solorio [Ex 2010], Lihui Shi [Ex2011], Zhaojun (Steven) Li [Ex 2012].

SPECIAL COURSES

Reliability in Product Design and Testing

Designed, developed and taught this one-week course over 25 times from 1976-1991, and also co-taught this course several times with Dr. L. R. Lamberson.

Reliability Engineering: Measurement, Improvement and Management

Designed, developed and taught this one-week course several times from 1985-cont.

System Safety and Reliability Analysis

Designed, developed and co-teach, with Dave Haasl, this two-week course every year, 1993, and September 1995 (special course for Federal Aviation Administration [FAA] for Aircraft certification). This course is offered through the Engineering Professional Programs, College of Engineering, University of Washington.

Integrated Quality Management System, Elements of Six Sigma, 2 Day course, co-taught twice through the College of Engineering, Hong Kong University of Science and Technology, Hong Kong, 2000.

Reliability Engineering: Design, Testing and Management, , 3 Day course, through the College of Engineering, Hong Kong University of Science and Technology, Hong Kong, 2000.

Organizational Training

Designed, developed and taught 3 to 5-day courses for several organizations. The course titles were:

- a) Statistical Thinking
- b) Quality Improvement through Quality Circles
- c) Quality Engineering (Taguchi Methods)
- d) Advanced Quality Engineering
- e) Quality Loss Function
- f) Quality Function Deployment (QFD)
- g) Total Quality Management (TQM)
- h) Design for Six Sigma

PUBLICATIONS

BOOKS

1. Kapur, K.C. and Lamberson, L.R., **Reliability in Engineering Design**, John Wiley & Sons, New York, NY 1977, 586 pages 19th Printing. Also translated in Russian, MIR Publishing of Moscow, Russia.
2. Kapur, K.C., *Reliability* (engineering), the McGraw-Hill **Encyclopedia of Science and Technology**, 8th Edition, 1994.
3. Kapur, K. C., *Reliability, Availability, and Maintainability*, the McGraw-Hill **Encyclopedia of Science and Technology**, 9th Edition, *McGraw Hill, NY, May 2001*.
4. Kapur, K.C. and Lamberson, L.R. *Reliability*, a Chapter in **Mechanical Design Handbook**, edited by Harold A. Rothbart, McGraw-Hill, 1996, pp. 8.1-8.23.
5. Kapur, K.C., *Techniques for Estimating Reliability at Design State*, a Chapter in **Handbook of Reliability Engineering and Management**, edited by W. Grant Ireson and Clyde F. Coombs, McGraw-Hill, 1988, pp. 18.1 - 18.34. 2nd Edition, Edited by Ireson, Coombs and Yates, pp. 24-1 – 24-23, 1996.
6. Kapur, K.C., *Mathematical and Statistical Methods and Models in Reliability and Life Studies*, a chapter in **Handbook of Reliability Engineering and Management**, edited by W. Grant Ireson and Clyde F. Coombs, McGraw-Hill, 1988, pp. 19.1 - 19.48. 2nd Edition, Edited by Ireson, Coombs and Yates, pp. 25-1 – 25.47, 1996.
7. Kapur, K. C., *Reliability and Maintainability*, a Chapter in the **Handbook of Industrial Engineering**, Third Edition, edited by Gavriel Salvendy, John & Sons, 2001.
8. Kapur, K.C. *Reliability Engineering*, a chapter in **Probability and Its Engineering Applications** by David H. Evans, Marcel Dekker, Inc., N.Y., 1992, pp. 415 - 474.

9. Kapur, K.C., *Quality Engineering and Tolerance Design*, a chapter in **Concurrent Engineering: Automation, Tools and Techniques**, edited by Andrew Kusiak, John Wiley & Sons, N.Y., 1992, pp. 287-306.
10. Kapur, K. C. and Feng, Qianmei, *Statistical Methods for Process/Product Improvement*. a chapter for the forthcoming **Handbook of Engineering Statistics**, Springer Verlag, 2006.
11. Feng, Q. and Kapur, K. C., *Quality Control*, a major chapter in the **Operations Research and Management Science Handbook**, Ed. By A. Ravindran, 904pp, ISBN: 978-0-8493-9721-9, CRC Press, Taylor and Francis, 2008.
12. Feng, Q. and Kapur, K. C., *Quality Control*, a major chapter in the **Operations Research Applications**, Ed. By A. Ravindran, 384 pp, ISBN: 978-1-4200-9186-1, CRC Press, Taylor and Francis, 2008.
13. Liu, Y. and Kapur, K. C. "New Models and Measures for Reliability for Multistate Systems" A chapter in the Handbook, **Handbook of Perform ability Engineering**, K. B. Misra, Ed., Springer_Verlag, London, ISBN 978-1-84800-130-5, 2008, pp 431-446.
14. Feng, Q. and Kapur, K. C., "Quality Engineering: Control, Design and Optimization" A chapter in the handbook, **Handbook of Perform ability Engineering**, K. B. Misra, Ed., Springer_Verlag, London, ISBN 978-1-84800-130-5, 2008, pp171-187.

BOOK REVIEWS

1. Kapur, K. C., *Mathematical Models for System Reliability* by Benjamin Epstein and Ishay Weissman, CRC Press, Florida, 2008, *Quality Technology*, Vol. 41, No. 2, April 2009.
2. Kapur, K. C., *Risk Modeling, Assessment, and Management*, 3rd edition by Yacov Haimes, John Wiley, 2009, *Quality Technology*, Vol. 42, No. 2, April 2010.

REFEREED JOURNAL PUBLICATIONS

1. Kapur, K.C., "Mathematical Models of Optimization for Multi-Objective Transportation Systems," *International Journal of Socio-Economic Planning Science*, Vol. 1, No. 4, Dec. 1970, pp. 451-567.
2. Kapur, K.C. and VanSlyke, R.M., "Cutting Plane Algorithms and State Space Constrained Linear Optimal Control Systems," *Journal of Computer and Systems Science*, Vol. IV, No. 4, Dec. 1970, pp. 570-605.
3. Kapur, K.C., "An Algorithm for Linear Optimal Control Systems with State Space Constraints," *International Journal of Control*, Vol. 14, No. 5, 1971, pp. 873-879.
4. Kapur, K.C., "Vehicle Following Behavior by Calculus of Variation," *International Journal of Transportation Research*, Vol. 5, No. 2, June 1971, pp. 69-73.
5. Kapur, K.C. "Development of Vehicle Following Behavior for Automated Vehicle Systems," *Journal of Vehicle System Dynamics*, Vol. 6, 1972, pp. 225-236.
6. Kapur, K.C. and Beckman, J.J., "Duality and Transportation Analysis," *International Journal of Transportation Research*, Vol. 6, 1972, pp. 2-16.
7. Beckman, M. J. and Kapur, K.C., "Conjugate Duality: Some Applications to Economic Theory," *Journal of Economic Theory*, Vol. 5, No. 2, 1973, pp. 16-31.
8. Kapur, K.C., "On Cut-Off Optimization Techniques in Infinite Dimensional Spaces and Applications," *Journal of Optimization Theory and Applications*, Vol. 2, No. 1, 1973, pp. 16-31.

9. Kapur, K.C., "On Project Cost-Duration Analysis Problem with Quadratic and Convex Cost Function," *Theory of Scheduling and Its Application*, Springer-Verlag, 1973, pp. 324-358.
10. Belenson, S.M. and Kapur, K.C., "An Algorithm for Multi-Criterion Linear Programming with Example," *Operational Research Quarterly*, Vol. 24, 1973, pp. 65-77.
11. Kapur, K.C., "Vehicular Traffic Dynamics for Automated Vehicle Systems by Optimization Theory," **Optimization & Design**, Prentice Hall 1973.
12. Kapur, K.C., "On Max-Min Problems," *Naval Research Logistics Quarterly*, Vol. 24, No. 4, 1973, pp. 639-644.
13. Kapur, K.C., "An Algorithm for Project Cost-Duration Analysis Problem with Quadratic and Convex Cost Functions," *Transactions of American Institute of Industrial Engineers*, Vol. 5, No. 4, 1973, pp. 314-322.
14. Sahney, V.K. and Kapur, K.C., "An Optimization Model for Labor Limited Scheduling Under a Round Robin Policy," *International Journal of Production Research*, Vol. 12, No. 3, 1974, pp. 377-390.
15. Taraman, S. and Kapur, K.C., "Optimization Considerations in Design Reliability by Stress-Strength Interference Theory," *Transactions of the Institute of Electrical and Electronic Engineers on Reliability*, Vol. R-24, No. 2, June 1975, pp. 136-138.
16. Kapur, K.C., "Reliability Bounds in Probabilistic Design," *Transactions of the Institute of Industrial Engineers*, Vol. 7, No. 2, June 1975, pp. 185-192.
17. Kapur, K.C., "Optimization in Design by Reliability," *Transactions of the Institute of Industrial Engineers*, Vol. 7, No. 2, June 1975, pp. 185-192.
18. Haase, R., Kapur, K.C. and Lamberson, L.R., "Applications of Reliability Growth Models during Light Truck Design and Development," *Society of Automotive Engineers (SAE) Transactions*, September 1979, pp. 1105-1113.
19. Kapur, K.C., "On Surrogate Linear Programming," *Transactions of American Institute of Industrial Engineers*, Vol. 10, No. 2, June 1978, pp. 214-216.
20. Schmitz, K.H., Lamberson, L.R. and Kapur, K.C., "Operating Characteristic Curves for Minimum Life Hypotheses Testing for the Exponential Distribution," *Technometrics*, Vol. 21, No. 4, Nov. 1979, pp. 539-547.
21. Kapur, K.C. and Lamberson, L.R., "Optimum Test Design Strategies," *Microelectronics and Reliability*, Vol. 20, Nos. 1/2, May 1980, pp. 75-82.
22. Maze, T.J., Kapur, K.C., et al., "Proposed Approach to Determine Optimal Number, Size and Location of Bus Garage Additions," *Transportation Research Record*, No. 798, National Academy of Sciences, January 1981, pp. 11-18.
23. Hudson, J.C. and Kapur, K.C., "Reliability Theory for Multistate Systems with Multistate Components," *Microelectronics and Reliability*, Vol. 22, No. 1, January 1982, pp. 1-7.
24. Neff, J. and Kapur, K.C., "Methodology for R & M Comparison of Foreign and U.S. Military Trucks," *Proceedings of the 1982 Annual Reliability and Maintainability Symposium*, Los Angeles, CA, January 1982, pp. 398-403.
25. Maze, T.H., Kapur, K.C., et al., "A General Purpose Solution Methodology For The Bus Garage Location Problem," *Transportation Research Record*, No. 877, Urban Public Transportation Planning Issue, National Academy of Sciences, Washington, D.C., 1982, pp. 20-22.

26. Hudson, J.C. and Kapur, K.C., "Reliability Analysis of Multistate Systems with Multistate Components," *Transactions of Institute of Industrial Engineers*, Vol. 15, No. 2, June 1983, pp. 127-135.
27. Hudson, J.C. and Kapur, K.C., "Modules in Coherent Multistate Systems," *Institute of Electrical and Electronics Engineers, Transactions on Reliability*, Vol. R-32, No. 2, June 1983, pp. 183-185.
28. Hudson, J.C. and Kapur, K.C., "Reliability Bounds for Multistate Systems with Multi-State Components," *Operations Research*, Vol. 33, No. 1, January-February 1985, pp. 15-160.
29. Kapur, K.C., "Quality Evaluation Systems for Reliability," *Reliability Review*, Vol. 6, No. 2, June 1986.
30. Kapur, K.C., "Optimal Reliability Demonstration for Binomial Testing Situation," *Reliability Engineering*, an International Journal, Vol. 19, No. 2, 1987, pp. 103-112.
31. Kapur K.C. and Chen, G., "Signal-to-Noise Ratio Development in Quality Engineering," *Quality and Reliability Engineering*, an International Journal, Vol. 4, 1988, pp. 133-141.
32. Kapur, K.C., "An Approach for Development of Specifications for Quality Improvement," *Quality Engineering*, Vol. 1, No. 1, 1988-89, pp. 63-78.
33. Shao, J. and Kapur, K.C., "Multilevel Modular Decomposition for Multistate Systems," *Proceedings of Annual Reliability and Maintainability Symposium*, January 1989, pp. 102-107.
34. Kapur, K.C., Raman, S. and Pulat, P.S., "Methodology for Tolerance Design Using Quality Loss Function," *Computer and Industrial Engineering*, Vol. 19, Nos. 1-4, 1990, pp. 254-257.
35. Kang, M., Kapur, K.C. and Pulat, P.S., "Interactive Partitioning Criteria Set Method for Multiple Objective Linear Programming Procedure," *Computers and Operations Research*, Vol. 20, No. 4, 1993, pp. 435-446.
36. Boedigheimer, R. and Kapur, K.C., "Involving the Customer in the Development and Evaluation of Multistate Reliability Models," *Proceedings of the 39th Annual Reliability and Maintainability Symposium*, Atlanta, Georgia, January, 1993.
37. Kapur, K.C. and Cho, B.R., "Economic Design and Development of Specifications," *Quality Engineering*, Vol. 6, No. 3, 1994, pp. 401-417.
38. Boedigheimer, R. and Kapur, K.C., "Customer Driven Reliability Models for Multistate Coherent Systems," *IEEE Transactions on Reliability*, Vol. 43, No. 1, March 1994, pp. 46-50.
39. Kapur, K.C., "Robust Design, Manufacturing and Concurrent Engineering," *Journal of Design and Manufacturing*, Vol. 4, No. 1, 1994, pp. 31-39.
40. Chen, G. and Kapur, K.C., "Tolerance Design by Break-Even Analysis for Reducing Variation and Cost," *International Journal of Reliability, Quality and Safety Engineering*, Vol. 1, No. 4, December 1994, pp. 445-457.
41. Cho, B.R. and Kapur, K.C., "Economic Design of the Specification Region for Multiple Quality Characteristics," *Transactions of Institute of Industrial Engineers*, Vol. 28, 1996, pp. 237-248.
42. Bare, J., Kapur, K.C. and Zabinsky, Z., "Optimization Methods for Tolerance Design Using A First-Order Approximation for the System Variance," *Engineering Design and Automation Journal*, Vol. 2, No. 3, 1996, pp. 203-214.

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8. “On Project Cost Curves with Quadratic and Convex Cost Function,” Invited Presentation, Theory of Scheduling Symposium, North Carolina State University, May 1972, Sponsored by Office Naval Research.
9. “Optimal Vehicle Following Considerations for Automated Transportation Systems,” Joint National Meeting of ORSA, TIMS, and AIIE, Atlantic City, New Jersey, November 1972.

10. "Applications of Conjugate Duality in Networks and Economic Theory," National Science Foundation Regional Conference on Conjugate Duality, Johns Hopkins University, June 1973.
11. "Optimization in Engineering Design for Reliability," Conference on Optimization and Engineering Design by Office of Naval Research and ORSA-TIMS, Miami Beach, Florida, 1976
12. "Probabilistic Engineering Design and Optimization," Joint National Meeting on ORSA-TIMS, Las Vegas, Nevada, November 1975.
13. "An Algorithm of Parametric Minimal Solution for Networks with Convex Cost," Joint National Meeting of ORSA-TIMS, Miami, Beach, Florida, November 1976.
14. "Reliability in Engineering Design and Testing," series of invited lectures for three weeks at Chung-Shan Institute of Science and Technology, Taiwan, July-August 1977.
15. "Applications of Reliability Growth Models to Light Truck Design and Development," (with R. Haase and L.R. Lamberson) SAE Congress, Detroit, Michigan, March 1978.
16. "Reliability Optimization With Failure Cost," (with Harris and Lamberson) AIIE National Meeting, Toronto, May 1978 (Published in the Proceedings).
17. "Analysis of Failure Data With Suspended Items," (with Handy and Lamberson) ASQC National Meeting, Chicago, Illinois, May 1978 (Published in the Proceedings).
18. "Reliability in Product Design," Annual Reliability Forum, Bendix Corporation, Southfield, Michigan, October 23, 1979 (Published in the Proceedings).
19. "Optimum Test Design Strategies," Canadian Reliability Symposium, Toronto, May 16-17, 1980 (Published in the Proceedings).
20. "Proposed Approach to Determine Optimal Number, Size and Location of Bus Garage Additions," (with T.M. Maze, et al.), Transportation Research Board Meeting, Washington, D.C., January 1981.
21. "Reliability Theory for Multistate System with Multistate Components," (with J.C. Hudson), Society of Reliability Engineers Meeting, Ottawa, Canada, April 1981.
22. "Multistate Systems with Multistate Components and Their Reliability Computations," (with J.C. Hudson), Annual Conference of American Institute of Industrial Engineers, Detroit, Michigan, May 1981 (Published in Proceedings).
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24. "A Methodology for R & M Comparisons of Foreign and U.S. Military Truck," Annual Reliability and Maintainability Symposium, Los Angeles, CA, January 1982 (Published in the Proceedings).
25. "A General Purpose Solution Methodology of the Bus Location Problem," (with T. M. Maze et al.), the 1982 Transportation Research Board Meeting, Washington, D.C., January 1982 (Published in the Proceedings/ Record).
26. "Quality and Productivity Improvement," Invited Presentation, Welded Steel Tube Institute, August 1984.
27. "Never Ending Improvement in Quality," Invited Presentation, Milwaukee Chapter of American Society for Quality Control, September 1984.
28. "Quality Engineering and Taguchi Methods," Invited Guest Speaker, Supplier's forum, Cleveland Section of American Society for Quality Control, Cleveland, September 1985.

29. "Design of Experiments - Taguchi Methods," Invited Presentation, Ann Arbor Section, American Society for Quality Control, March 1986.
30. "Quality Loss Function and Inspection," TMI Conference on Innovations in Quality, Detroit, Michigan, September 21-24, 1987 (Published in the Proceedings).
31. "Economic Design of Specifications Based on Taguchi's Concept of Quality Loss Function," (with C.J. Wang), American Society of Mechanical Engineers, Annual Meeting, Boston, Massachusetts, December 13-18, 1987 (Published in the Proceedings).
32. "Product and Process Design Optimization by Design of Experiments Using Taguchi Methods," Invited Presentation, Society of Automotive Engineers Earth Moving Conference, Peoria, Illinois, April 1988 (Published by SAE).
33. "Taguchi and Life Data," Invited Presentation, American Society for Quality Control, Automotive Division, Annual Quality and Reliability Workshop, Novi, Michigan, June 1988.
34. "Recent Development in Quality Engineering," a series of four lectures at various companies and a university, invited by National Research Council, Taiwan, ROC, August 1988.
35. "Optimum Specification Using Quality Loss Function," Concepts in Quality, Symposium and Exposition, Pittsburgh, Pennsylvania, November 15-17, 1988 (Published in the Proceedings).
36. "Introduction to Reliability," Invited Presentation, American Society for Quality Control, Automotive Division Conference, March 1989.
37. "Methodology for Tolerance Design Using Quality Loss Function," (with Raman and Pulat), Computers and Industrial Engineering Conference, Orlando, Florida, March 1990.
38. "Reliability in Product Design and Testing," one week invited seminar, Goodyear Research and Development Center, Luxembourg, June 18-22, 1990 and also at ITESM, Centro de Calidad, Technological Institute, Monterey, Mexico, July 2-6, 1990.
39. "Simultaneous Engineering and Robust Design," Seminar at GM Technical Center, Manufacturing Development and Advanced Engineering Staff, Warren, Michigan, February 21, 1991.
40. "Interactive Partitioning Algorithm for Multiple Objective Linear Programming" (with M. Kang and S. Pulat), TIMS/ORSA Joint Meeting, Nashville, Tennessee, May 12-15, 1991.
41. "Quality Improvement through Robust Design," 1991 International Industrial Engineering Conference, Detroit, Michigan, May 20-22, 1991.
42. "Systems Engineering Approach for Quality Improvement," Invited Presentation, XIV Systems Engineering Meeting, Santiago, Chile, July 8-12, 1991.
43. "Quality Engineering and Tolerance Design," Session Chair and Invited Presentation, TIMS - XXX - SOBRAPO XXIII Joint International Conference, Rio De Janeiro, Brazil, July 15 -17, 1991.
44. "Tolerance Design Based on Variance Reduction and Economic Optimization" (with G. Chen), ORSA/TIMS Joint National Meeting, Anaheim, California, November 3-6, 1991.
45. "Product and Process Design Optimization: Nonlinear Programming vs. Design of Experiments," Seminar at GM Technical Center, CPC Engineering, Warren Michigan, October 14, 1991.

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47. "Reliability: Robustness Over Time," First IE Research Conference, Chicago, Illinois, May 20-21, 1992.
48. "Optimization Design of Dynamic Systems by Quality Engineering" (with G. Chen), IASTED International Conference on Reliability, Quality Control and Risk Assessment, Washington, D.C., November 1992.
49. "Involving the Customer in the Development and Evaluation of Multistate Reliability Models" (with Ralph Boedigheimer), the 39th Annual Reliability and Maintainability Symposium, Atlanta, Georgia, January 26-28, 1993.
50. "Applications of Customer Driven Reliability Models" (with Ralph Boedigheimer), Industrial Engineering Research Conference, Los Angeles, California, May 26-27, 1993.
51. "Reducing Variation and Quality Cost for Tolerance Design" (with B.R. Cho), Second Industrial Engineering Research Conference, Los Angeles, California, May 26-27, 1993.
52. "Optimal Design of Specifications for On-Line Quality Control with Multiple Characteristics" (with B.R. Cho), ORSA/TIMS Joint Meeting, Phoenix, Arizona, November 1-3, 1993.
53. "Quality Evaluation by Quadratic Loss Function" (with B.R. Cho and T.B. Trafalis), Quality Leadership Symposium, Oklahoma City, Oklahoma, April 19-20, 1994.
54. "Design Optimization for Robustness in Static and Dynamic Systems" (with B.R. Cho and G. Chen), Third Industrial Engineering Research Conference, Atlanta, Georgia, May 18-19, 1994.
55. "Design Optimization to Achieve Robustness for Static and Dynamic Systems" (with B.R. Cho and G. Chen), the Third IASTED International Conference, Washington, D.C., October 1994.
56. "Robust Design and Manufacturing," An invited tutorial at the ORSA/TIMS Joint Meeting, Detroit, Michigan, October 23-26, 1994.
57. "Reliability Engineering," Invited lecture, Society of Reliability Engineers, Michigan, November 16, 1994.
58. "Reliability Engineering and Robust Design," Invited speaker at the special Ford Conference on Reliability and Robust Design, Dearborn, Michigan, November 17-18, 1994.
59. "Reliability Evaluations for Multistate Systems" (with Ralph Boedigheimer), invited paper at the INFORMS National Meeting, Los Angeles, California, April 23-26, 1995.
60. "Concurrent Engineering-Design and Implementation," Invited series of lectures at Production Research center, Lucky Goldstar (LG) Group, Seoul, Korea, June 28-30, 1995.
61. "Recent Developments in Quality and Reliability Engineering," a series of eight invited lectures at China Aero Technology Establishment, Aviation Industries of China, July 5-13, 1995.
62. "Customer Driven Reliability: Models, Testing and Improvement" (with Kai Yang), Invited speaker at Ford (FAO) Robustness Reliability Symposium, Dearborn, Michigan, October 9-10, 1995.

63. "Quality Improvement by RSM Modeling for Robust Design" (with B.R. Cho and M.D. Phillips), 5th Industrial Engineering Research Conference, Minneapolis, Minnesota, May 18-20, 1996.
64. "Integrated Product Testing: Methods and Management," International Test and Evaluation Association (ITEA) Annual Symposium, Seattle, Washington, October 14-18, 1996.
65. "Customer-Centered Reliability Methodology" (with Russell D. Brunelle), the *Annual Reliability and Maintainability Symposium*, Philadelphia, PA, Jan. 13-15, 1997.
66. "Customer-Driven Reliability: Integration of Quality Function Deployment and Robust Design" (with Kai Yang) the *Annual Reliability and Maintainability Symposium*, Philadelphia, PA, Jan. 13-15, 1997.
67. "An Integrated Customer-Focused Research for Quality and Reliability," National Science Foundation (NSF-USA) and Foundation for Research Development (FRD-South Africa) Manufacturing Collaboration Workshop, March 19, 1997.
68. "An Integrated Customer-Focused Approach for Quality and Reliability," Invited Keynote Speech, Second International Conference on Quality and Reliability, Sept. 1-3, 1997, Hong Kong.
69. "Customer Driven Reliability: Measures and System Models" invited seminar, College of Engineering, University of Michigan, Ann Arbor, April 11, 1997.
70. "Robust Design and Quality of Reliability," an invited lecture, Quality Exchange, Boeing Quality Engineering, May 21-22, 1998.
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74. "Integrated System for Quality and Reliability," 9th World Congress on Total Quality, Bombay, India, Jan. 8-10, 1999.
75. "Integrated Reliability System: Engineering and Management," Invited lecture at National Taiwan University of Science and Technology, Taipei, Taiwan, March 15, 1999.
76. "Customer Centered Reliability Measures with Multistate and Continuum Models," Invited lecture at Chung-Yuan Christian University, Chung-Li, Taiwan, March 16, 1999.
77. "Integrated System for Quality and Reliability," Invited Lecture at Chung Shan Institute of Science and Technology, March 17, 1999.
78. "An Integrated and Distributed Process for Reliability," Invited Keynote Speech, 4th International Conference on Reliability, Maintainability and Safety, Shanghai, China, May 18 – 21, 1999.
79. "Integrated and Distributed Process for Reliability – Recent Developments," Invited Keynote Speech, 5th ISSAT International Conference on Reliability and Quality in Design, Las Vegas, Nev., Aug 11 – 13, 1999.

80. "Reliability Process for Robustness Over Time," Tutorial, Fifth ISSAT International Conference on Reliability and Quality in Design, Las Vegas, NV, Aug. 11 – 13, 1999.
81. "Integrated Quality Management System and Elements of Six Sigma" an invited tutorial, IEEE Engineering Management Society International Conference, Singapore, Nov 12-15, 2000.
82. Kapur, K. C., "Have the New Tools & Increasing Reliance on ISO Certification Helped or Hurt Reliability of Our Products?" *Invited Speech*, Advisory Board Panel, RAMS- The International Symposium on Product Quality & Integrity, Jan 22-25, 2001, Philadelphia, PA.
83. Safety in the Context of Integrated and Distributed Reliability," System Safety Society, Seattle, WA, Feb. 2001
84. "Principle-Centered Quality" Tutorial, 7th ISSAT Conference on Reliability and Quality in Design, Washington DC, August 8-10, 2001.
85. Invited Speaker, "Principle-Centered Quality and Productivity", Invited Lecture, IEEE Systems, Man, and Cybernetics Conference, October 7-10, 2001, Tucson, AZ.
86. Invited Series of Seminars, Six Sigma – Advanced Quality Management system, invited series of seminars for over 100 professionals, Chinese Quality Control Association and Aviation Industries of China, Nov 20-23, 2001.
87. Invited Advisory Board Panel Presentation, "The Future of Reliability Engineering as a Profession", the Annual Reliability and Maintainability Symposium, Jan 28-31, 2002, Seattle, WA.
88. Invited Speaker, "Six Sigma Quality Management" Northern Jiaotong University, Beijing, China, June 13-14, 2002.
89. Invited Video Nuggets, Video Interviews for NASA's Process Based Mission Assurance (PBMA) Knowledge Management system, April 2002.
90. Panel Presentation "Safety and Human Factors for Agricultural Ladders" Western Regional Agricultural Health and Safety conference, Coeur's D`Alene, Sep 15-18, 2002.
91. Invited Presentation, "Emerging Technology- What We Know, What We Don't Know", Advisory Board Panel, Reliability and Maintainability Symposium, Tampa, Florida, Jan 27-30, 2003.
92. "Reliability: Design, Engineering, Testing, and Management", Four Hour Tutorial, Proceedings of the Annual Symposium on Reliability and Maintainability, Tampa, Florida, Jan 27-30, 2003
93. Invited Presentation, "Six Sigma" Hong Kong Society for Quality, Hong Kong, March 25, 2003.
94. Invited Presentation, "Optimization Strategies for DFSS", Hong Kong University of Science and Technology, Hong Kong, March 26, 2003
95. Invited Presentation, "Six Sigma Process and Optimization", the University of Hong Kong, Hong Kong, March 29, 2003
96. Invited Tutorial, "Principle Centered Quality and Productivity", IERC and IIE Annual Conference, May 18-20, 2003.
97. "Models and Applications for Multi-state Network Reliability" (with Sarintip Satitsatian), Annual Conference of the Canadian Operational Research Society, Vancouver, Canada, June 2-4, 2003.

98. "Some Optimization and Modeling Strategies for DFSS (Design for Six sigma)" (with Qianmei Feng), Annual Conference of the Canadian Operational Research Society, Vancouver, Canada, June 2-4, 2003.
99. "Multi-state Reliability Model for the Evaluation of Supply Chain Networks" (with Sarintip Satitsatian), International conference on Manufacturing Excellence, Melbourne, Australia, Oct 13-15, 2003.
100. "Six Sigma and Quality Improvement" (with Qianmei Feng), INFORMS, Atlanta, Georgia, Oct. 19-22, 2003.
101. "Multi-state Network Reliability and Infrastructure Applications" (with Sarintip Satitsatian), INFORMS, Atlanta, Georgia, Oct. 19-22, 2003.
102. "Six Sigma Strategies for Process Improvement", Executive and Research Group, Department of Radiology, UW Medical Center, Oct 28, 2003.
103. "Reliability: Design, Engineering, Testing, and Management", *Invited Tutorial*, Annual Symposium on Reliability and Maintainability, Los Angeles, Jan 26-29, 2004.
104. "Reliability in Fast Changing Society" *Invited Address for the Advisory Board Panel*, Annual Symposium on Reliability and Maintainability, Los Angeles, Jan 26-29, 2004.
105. "Reliability: New Trends and Directions" *Invited Seminar*, Korean Institute for Standards and Conformance, Government of South Korea, Seoul, Feb 26, 2004.
106. "Fault Tree Analysis" Global Hawk System Safety, Northrop Grumman Integrated Systems, San Diego, CA, Feb 22-25, 2004.
107. "Analysis and Optimization Models for Design for the Six Sigma Process", *Invited Seminar*, Department of Industrial and Management Systems Engineering and the Institute on Black Life, April 19, 2004.
108. "Integrated Design and Optimization Models for Six Sigma Process", The 2nd World Conference on POM and 15th Annual POM Conference, Cancun, Mexico, April 30-May 3, 2004.
109. "Process Adjustment: Review and Discussion of Some Optimization Strategies" with Yung-Wen Liu, Industrial Engineering Research Conference and IIE Annual Conference, Houston, Texas, May 15-19, 2004.
110. "Optimization Models for the Analysis and Improvement Phases of DFSS (Design for Six Sigma), with Qianmei Feng, Industrial Engineering Research Conference and IIE Annual Conference, Houston, Texas, May 15-19, 2004.
111. "Development of Variance Transmission Equation for the Six Sigma Process" [with Q. Feng], Presented at INFORMS Annual conference, Denver, CO, Oct 24-27, 2004.
112. "Generalized Models for Multistate Network Reliability and Applications" [with S. Satitsatian], Presented at INFORMS Annual conference, Denver, CO, Oct 24-27, 2004.
113. "Reliability: Design, Engineering, Testing, and Management", Invited Tutorial at the Annual Symposium on Reliability and Maintainability, Virginia, Jan 24-27, 2005.
114. "Media Center and PC Reliability", [with Talal Batrouny] Invited Presentation, Microsoft WinHEC Conference, Seattle, April 25-27, 2005.
115. "Customer-Centered Measures for Multi-state Reliability and Their Applications" [with Liu, Y.], IERC and IIE Annual Conference, Atlanta, Georgia, May 14-18, 2005.

116. "An Algorithm for Multistate Network Reliability Bounds and Its Applications" [with S. Satitsatian], 4th International Conference on Quality and Reliability, Beijing, August 9-11, 2005.
117. "Economic Development of Specifications for 100% Inspection," [with Q. Feng] INFORMS Annual Conference, San Francisco, CA, November 13-16, 2005.
118. "Design Reliability" *Invited Paper, International Conference on Maintenance*, Finland, Nov 1-2, 2005.
119. "Reliability Process " *Invited Tutorial, International Conference on Maintenance*, Finland, Nov 1-2, 2005.
120. "Reliability: Design, Engineering, Testing, and Management", Invited Tutorial at the Annual Symposium on Reliability and Maintainability, Newport Beach, CA, Jan 23-26, 2006.
121. "Tolerance Optimization through Variance Transmission Equations" (with Q. Feng) INFORMS, Hong Kong, June 2006.
122. "...Optimum Specifications..." (with Q. Feng) , IERC, Orlando, May 2006.
123. "Customer-centered reliability for Multi-State Systems" (with Yung-wen Liu), IERC, Orlando, May 2006.
124. "R&M in Global Markets" Invited presentation as a panelist as part of the Advisory Board, *Annual Symposium on Reliability and Maintainability*, Orlando, FL, Jan 22-25, 2007.
125. "Principle-Centered Quality and Productivity" Invited Dinner Speaker, ASQ Seattle Section, April 12, 2007.
126. "Role of Reliability Engineering in IE" an invited tutorial at the IERC, May 20-23, 2007.
127. "Multi-state Repairable Systems" (with Yung-wen Liu), IERC, May 20-23, 2007.
128. "The Choice of Optimal Time Points to Repair Aged Multi-state Systems" (with Yung-wen Liu), 7th International Conference on Reliability, Maintainability and Safety, Beijing, China, August 2007.
129. "Integration of Reliability, Maintainability and Safety with Design for Six Sigma" 7th International Conference on Reliability, Maintainability and Safety, Beijing, China, August 2007.
130. "Perspectives on Robustness" INFORMS, Seattle, Nov. 4-7, 2007.
131. "New Directions in Reliability Research and Education" INFORMS, Seattle, Nov. 4-7, 2007.
132. "Integration of New Customer-Centered Reliability Measures with Design of Reliability Process" Invited Lecture, Daimler Reliability Symposium, Stuttgart University, Stuttgart, Germany, July 2008.
133. "Reliability Design and Engineering: Measurement, Improvement and Management", invited tutorial, Daimler Corporation, Stuttgart, Germany, July 2008.
134. "New Developments in Customer-Centered Multi-State Reliability with Network and Infrastructure Applications" Invited Presentation, Department of Industrial Engineering and Manufacturing Management, City University of Hong Kong, August 27, 2008.
135. "Advances in Customer-Centered Multi-State Reliability and Infrastructure Applications" Invited Seminar, Department of Industrial Management, National Taiwan University of Science and Technology, Taipei, Taiwan, October 20, 2008.

136. "Development and Integration of Principle-Centered Quality & Productivity" Invited Seminar, Shan Christian University, Taiwan, Oct 21, 2008.
137. "Principled Integration of Reliability with Design for Six Sigma [DFSS]" Invited Tutorial, Asian International Workshop on Advanced Reliability Modeling, Taichung, Taiwan, Oct. 23-25, 2008.
138. "Principle-Centered Quality Improvement and Management" Tianjin University, July 19, 2009.
139. "New Directions and Trends in Reliability, Maintainability and Supportability" Keynote Speech, International conference on Reliability, Maintainability and Supportability, Chengdu, China, July 21-24, 2009.
140. "Guiding Principles and Trends for Prognostics and System Health(quality) Management" Keynote Speech, IEEE, Prognostics and System Health Management Conference, Macau, China, Jan 12-14, 2010
141. "Integration of Reliability, Maintainability and Safety with Design for Six Sigma" Invited lecture, Department of Operations Management, University of Macau, Jan 15, 2010.
142. "Prognostics and System Health Management", Invited Lecture, *2010 Modeling and Analysis of Safety and Risk in Complex Systems*, Saint-Petersburg, Russian, July 6 - 10, 2010.
143. "Advances & Trends in Industrial Engineering" Department of Industrial Engineering, Nankai University, TEDA, Tianjin, China, Sep 27, 2010.
144. "New Directions and Trends in Reliability & Maintainability" Invited Lecture, School of Reliability and Systems Engineering, Beihang University, Beijing, China, Sep 21, 2010.
145. "Trends and Directions for Robust Quality Engineering & Applications" Department of Mechanical Engineering, Beijing Jiaotong University, Beijing, China, Oct 20, 2010.
146. "Integration of Quality & Reliability with Design for Six Sigma [DFSS]" Department of Mechanical Engineering, Beijing Jiaotong University, Beijing, China, Oct 26, 2010.
147. "New Directions and Trends in Reliability and Maintainability Design and Engineering" Department of Industrial Engineering, Tsinghua University, Nov 2, 2010.
148. "Guiding Principles and Trends for Prognostics and System Health(Quality) Management" Invited Lecture, School of Reliability and Systems Engineering, Beihang University, Beijing, China, Nov 4, 2010.

PROFESSIONAL SERVICE [Some Recent Examples]

Reviewer for Research related Activities and NSF

- NSF Grantees Conference, panelist for proposal reviews, Jan 2001
- NSF – Panelist for the review of proposals for Science and Technology Centers; Proposals for Operations Research and Production System Program, 1998.
- NSF - CAREER Award Review Panel, January, 1997.
- NSF - Committee of Visitors to Review Operations Research and Production System Program in the NSF Division of Design, Manufacture, and Industrial Innovation, September 10-11, 1996.

Reviewer for

- Proposals for University Research Committee, City University of Hong Kong, Hong Kong, 1998-cont.
- University Grants Council, Hong Kong, 1999-2004

- Doctoral Thesis External Reviewer, National University of Singapore, 2004-06.

Conferences – Advisory Boards

- Advisory Board, Quality, Statistics and Reliability Division, INFORMS, 1998 – 2001.
- International Program Committee – 6th ISSAT Conference on Reliability and Quality in Design, August 9-11, 2000, Orlando, Florida [ISSAT – The International Society of Science and Applied Technologies]
- International Program Committee – 7th ISSAT Conference on Reliability and Quality in Design, Washington, DC, August 8-10, 2001
- International Program Committee, 8th ISSAT International Conference on Reliability and Quality in Design, Anaheim, CA, August 7-9, 2002
- Advisory Board, Reliability and Maintainability Symposium, Annual symposium (2001-cont.)
- Advisory Committee, International Conference, IEEE Engineering Management Society, Singapore, Nov 12-15, 2000
- Chair, Advisory Board, Quality, Statistics and Reliability Section of INFORMS 2002.
- Advisory Committee, 4th International Conference on Quality and Reliability, Beijing, August 2005.
- Advisory Committee, 5th International Conference on Quality and Reliability, Beijing, August 2007.

EDITORIAL BOARDS/REVIEWS

Editorial board

- IIE Transactions – Quality and Reliability Engineering (2000-cont.)
- Department Editor, On-Line Quality Engineering Department, *Transactions of Institute of Associate Editor, IEEE Transactions on Reliability* (1998-99)
- Editorial Board, *Quality Engineering* (1994-Cont.)
- Advisory Editor, International Journal of Quality Technology & Quantitative Management, 2002-cont.
- Editorial Board, International Journal of Six Sigma and Competitive Advantage, 2004 – cont.
- Editorial Board, International Journal of Performability Engineering, 2005-cont.
- Editorial Board, International Journal of Productivity and Quality Management, 2005-cont.

Other Universities

- External Examiner – Department of Manufacturing Engineering and Engineering Management, City University of Hong Kong, 1997- 2003
- External Examiner – Department of Industrial and Systems Engineering, Hong Kong Polytechnic University, Hong Kong, 2005
- Faculty External Evaluation – King Fahd University of Petroleum & Minerals, Saudi Arabia, 2001
- Visiting Professor, Department of Industrial Engineering and Engineering Management, Hong Kong University of Science & Technology, 2000 during my sabbatical leave.
- .University Grants Council, Hong Kong, 2001-cont.
- Reviewer for Board of Regents, State of *Louisiana*, 2003

- External Examiner, Hong Kong Polytechnic University, Department of Industrial and Systems Engineering, 2005.
- External examiner for doctoral dissertation, Indian Institute of Technology, Kharagpur, 2006.
- External examiner for doctoral dissertation, Department of Mechanical Engineering, University of Alberta, 2007.

PROFESSIONAL SOCIETIES

Chair, Edwards Award Medal Committee, American Society for Quality, 2003-2006.
Member, Edwards Award Medal Committee, American Society for Quality, 1998-2002.

Member, Deming Award Medal Committee, American Society for Quality, 2003-cont.

President, Division of Quality Control and Reliability Engineering, IIE, 2006 – 2007.

Member, Best Paper for Golomski Award, RAMS Symposium, IIE and QCRE 2004-08.

Member, Committee to select the Fellows of the Institute of Industrial Engineers, 2006-08.

In addition, I have held several positions such as President of IIE Chapter and other leadership posts with different chapters of IIE, INFORMS and other societies during the last thirty years of my professional career.