

BIO - DATA

NAME & ADDRESS : Dr. J. P. Gupta
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DATE OF BIRTH : May 4, 1945 at Delhi, India

MARITAL STATUS : Male, Married

EDUCATION :

Name of University	College or Institution	Examination or Degree	Class or Division
I.I.T. Kanpur India	I.I.T. Kanpur	B. Tech. (Chemical Engineering, 1966)	1st Rank, 1st Division. Awards for Best Project & Best Outgoing Graduate in Chemical Engineering
University of Michigan, Ann Arbor, Michigan, U. S. A.	Horace H. Rackham Graduate School	Master of Science in Engineering (Chemical Engineering, 1967) Guide: Professor Stuart W. Churchill	A Grade (4/4)
University of Pennsylvania, Philadelphia, Pennsylvania, U. S. A.	Graduate School of Arts & Sciences	Ph. D. (Chemical Engineering, 1971) Guide: Professor Stuart W. Churchill	A Grade (4/4)

EMPLOYMENT:

Name of Employer (Institution, Firm etc.)	From/To	Position	Nature of Duties of Work
Universal Oil Products, Des Plaines, Illinois, USA	July 1967 - Aug. 1968	R&D Engineer	Operation of Pilot Plants for Petroleum Refinery Operations. To make changes therein as and When required
University of Pennsylvania, Chem. Eng. Dept., Philadelphia, Pennsylvania, USA	Sept. 1971- Dec. 1972	Lecturer	Teaching Chemical Kinetics & Unit Operations Lab., Set up a Bioengineering Laboratory
Indian Institute of Technology, Kanpur, India	Dec. 1972 - May 1982 June 1982 – Continuing Sept. 1995- Oct. 1998	Asst. Prof. Professor Head	Teaching and Research in Heat Transfer and Fluid Flow, Energy Conservation, Safety and Hazard Assessment, Hazardous Substance Management & Disposal
National Autonomous University of Mexico, Mexico City, Mexico	Feb. 1975 - June 1975	Visiting Professor	Evaluation of a project to manufacture food flavouring nucleotides from distillery yeast.
Larsen & Toubro, Bombay, India	June 1977 - July 1977	Consultant	Design of heat transfer equipment.
Joseph Oat Corp., Camden, New Jersey, U.S.A.	May-July 81	Consultant	Design of heat exchangers, thermal hydraulics of spent fuel storage system.
The University of Michigan, Ann Arbor MI, U. S. A.	Sept. 1982 - Aug. 1983	Visiting Professor	Teaching and research in transport phenomena.
PLAPIQUI, Bahia Blanca, Argentina	March 1983; and Sept.- Dec. 1983	Expert in Heat Transfer (UNIDO, Vienna appointee)	Teach advanced course, help set-up applied heat transfer research lab., guide formulation of computer programs.
TECHNION - Israel Institute of Technology Haifa	Was invited for Jan-June 1986. Could not accept for reasons beyond control	Lady Davis Visiting Professorship	Interact in research and teach a course in heat transfer.
Embassy of India Washington, D.C. USA	July 1988- Oct. 1991	Deputed by Govt. of India as Counsellor (Sc & Tech)	Keep track of latest R&D in areas of India's interest. Promote joint R&D projects in Sc. & Tech between India & USA

Name of Employer (Institution, Firm etc.)	From/To	Position	Nature of Duties of Work
EER Systems Corp; Vienna, Virginia, USA	Oct. 1993- July 1995	Sr. Scientist	Expand their activities in Environment, Health & Safety
Indian School of Mines, Dhanbad	March 2001	Director	Could not take up due commitment in UK
Loughborough University, U.K.	June 2001- June 2002	EPSRC Visiting Fellow	R&D on Inherently Safer Design Concepts
Texas A&M University, USA	June 2002- May 2003	Visiting Professor (Thereafter returned to I.I.T., Kanpur, India)	Research on Process Safety
Ecole des Mines d'Ales, France	May – June 2004	Visiting Professor	Research in Process Safety
Gujarat Energy Research & Management Institute, Gandhinagar Gujarat, India	May 2006- April-2007	Director General	To setup a Petroleum domain specific University
National Yunlin University of S&T, Yunlin county, Taiwan	July-Aug. 2006	Fellow Professor	Seminars and research

AWARDS:

- Hutchinson Medal-2002. Institution of Chemical Engineers (U.K.) (with Dr Edwards)
- Merit Scholarship, I.I.T. Kanpur, 1961-66
- Best Outgoing Student in Chemical Engineering, IIT Kanpur, 1966
- Best Project Award in Chemical Engineering, IIT Kanpur, 1966
- University Fellowship, The University of Michigan, Ann Arbor, 1966-67
- University Fellowship, The University of Pennsylvania, Philadelphia, 1968-70
- Yerger Memorial Fellowship, The University of Pennsylvania, Philadelphia, 1970-71
- Listed in Marquis' Who's Who in the World
- Nominated International Scientist of the Year (2001) by the International Biographical Centre, Cambridge, UK; listed under 'Leading Engineers of the World 2007'

LEADERSHIP POSITIONS/ADMINISTRATIVE EXPERIENCE:

- Director General, Gujarat Energy Research and Management Institute, Gandhinagar to setup a new university in oil & gas sector (May 2006 – April 2007).
- Member (nominated by the Hon'ble High Court of Madhya Pradesh), Technical Subcommittee of Task Force for Disposal of Waste at Union Carbide Bhopal Plant

- Member, U.G. Education Committee, Safety & Chemical Engineering Education, American Inst. Of Chemical Engineers, New York, 2002-2003
- Head, Department of Chemical Engineering, I.I.T. Kanpur (Sept. 1995 - Oct. 1998)
- Diplomat (Science & Technology), Embassy of India, Washington D.C. (July 1988 - Oct. 1991)
- India's Delegate to the United Nations' Inter-Governmental Meeting on the 10th Year Appraisal of the United Nations Council on Science and Technology for Development (1989)
- Member, Board of Governors, and Member, Finance Committee I.I.T. Kanpur, 1986-1987
- Visitor's (President of India's) Nominee on the Selection Committees in the Faculty of Engineering and Technology, Aligarh Muslim University, Aligarh (2001-2004)
- Council Member, Thapar Institute of Engineering and Technology, Patiala (200 -2004)
- Listed in Marquis Who's Who several times
- Fellow, The World Innovation Foundation, U.K.
- Member/ Convener of several departmental committees, off-and-on
- Member, I.I.T. Kanpur VIth Five - Year Plan Committee
- Secretary, Alumni Association, I.I.T. Kanpur (1978-80)
- Treasurer, Alumni Association, I.I.T. Kanpur (1976-78)
- President, Chemical Engineering Graduates' Association, The University of Pennsylvania, Philadelphia, (1969-70)
- Chairman, Chemical Process Safety Committee, IChE (2005)
- Member, National Chemical Committee, FICCI (2007-08)

DIPLOMATIC EXPERIENCE

Deputed by the Government of India as Counsellor (Science & Technology) at the Embassy of India, Washington D.C. from July 1988 to October 1991

The work basically was to increase scientific interaction between India and USA and to learn of the latest developments in areas of interest to India. To carry out these broad objectives, I interacted with numerous offices of the US Government, such as the Science Advisor to the President, State Department, Commerce Department, EPA, OSHA, NSF, NIH, NIST, NTIS, NOAA, USDA, US DOE, etc.; visited the various research labs such as those of AT&T, IBM, Monsanto, several universities, Brookhaven, Argonne, Oak Ridge, nuclear waste management site in Nevada, Underground nuclear test facilities, etc; participated in negotiations on science and technology joint programmes, attended many conferences on biotechnology, new materials, risk analysis, agriculture; attended U.S. Senate hearings on matters of importance to our science programmes, gave seminars on R&D in Science & Technology in India at various universities, UN and the World Bank, participated actively in the Science Diplomats Club that included Scientific Diplomats of all the embassies located in Washington. On all the above monthly reports were sent to DST and over 25 concerned institutions and organizations in India who really appreciated the inputs.

INDUSTRIAL EXPERIENCE

- (i) UOP Inc., Des Plaines, Illinois, USA (1967-68): This is the world's largest R&D Corporation in petroleum and petrochemicals related process development, licensed globally including to all plants in India. Both Reliance refineries are fully on UOP processes.
- (ii) Larsen & Toubro Ltd., Bombay (summer, 1977): L&T is well known for its superior engineering skills. They had invited as a consultant on heat exchanger design.
- (iii) Joseph Oat Corporation, Camden, N.J., USA (1981): A renowned company in the design of heat exchangers for nuclear power plants. They had invited as a consultant in this matter.
- (iv) EER Systems Corporation, Vienna, VA, USA (10/1993-7/1995): A well known company in energy, environment and communication field, I had worked with them in energy from waste and in related areas.
- (v) Districtwise Hazard Analysis for Bhopal, MP under Ministry of Environment & Forests, New Delhi: Visited all major companies.

TEACHING EXPERIENCE:

Taught undergraduate and graduate students at The University of Michigan, The University of Pennsylvania, Texas A & M University, The University of South (Argentina), National Yunlin University of Science & Technology Taiwan, and at the Indian Institute of Technology Kanpur. Courses taught include Heat Transfer, Heat Exchanger Design, Unit Operations, Fluid Mechanics, Biochemical Engineering, Biomedical Engineering, Chemical Kinetics, Unit Operations Laboratory, Energy Conservation, Chemical Plant Safety and Hazard Analysis, Inherently Safer Plant Design.

CURRENT RESEARCH INTERESTS:

Process Intensification, Petroleum E&P, Environment and Safety in Chemical Process Industry: Hazardous Substances Management, Hazardous Substance Transport Risk Assessment, Water Conservation and Recycling, Inherently Safer Design, Hazard Analysis.

SOFTWARE PREPARED

Under a project of MoEF, he had prepared software for Hazard Analysis. This included Mond Index, Dow Fire & Explosion Index, Dow Chemical Exposure Index, Fire Ball, Pool Fire analysis. These have helped many Indian industries achieve higher levels of safety.

EQUIPMENT DESIGNED

1. Spinning Disc Reactor (SDR): SDR is used to carry out reactions at a rate faster than currently feasible in industry. This reduces the size and cost of the equipment by an order of magnitude or more. It also makes reactions safer.

One such unit designed by us is currently under fabrication in the Chemical Engineering Workshop. This will cost probably 10% of an imported one, lowest cost of which is Rs. 55 lacs.

2. Calorimeter for testing for runaway reactions: When a chemical reaction runs away (produces more heat than can be removed), fire and explosion result causing a lot of damage and casualties. It is advisable to test for such operating conditions with samples of 10 ml in specially designed calorimeters. Since such imported units cost over 20 lacs at a minimum, most SME companies are unable to afford, thus unable to analyse for potential accidents. We have designed, fabricated and tested a unit successfully, jointly with Dr Sanjay Gupta. Its cost including software would be about Rs 3 lacs only. Many SMEs can afford to procure one.

MEMBER, EDITORIAL BOARD:

- International Journal of Oil, Gas and Coal Technology (2007 -)
- Journal of Loss Prevention in the Process Industries (2005 -)
- Trans. IChemE - Part B (Process Safety and Environment Protection) (2001 -)
- Indian Chemical Engineer (1976-77)
- Medical & Life Science Engineering (1976-82)
- Atomization & Spray Systems (1984-86)
- SQU Journal of Engineering (2002---

REFEREED RESEARCH PAPERS for:

- The AIChE Journal
- The International Journal of Heat and Mass Transfer
- Indian Chemical Engineer
- Indian Journal of Technology
- Transactions IChemE, Process Safety & Environmental Protection
- Journal of Loss Prevention in the Process Industries

SPONSORED PROJECTS:

- i. 'Study of Fouling of Heat Exchangers'. Department of Science and Technology, New Delhi, April 1980 to August 1982. Rs. 235,000/-.
- ii. 'Development of Software for Hazard Analysis', Ministry of Environment and Forests, New Delhi, 1993-96, Rs. 350,000.
- iii. 'Preparation of District-wise Hazard Analysis Plan for Bhopal, Ministry of Environment and Forests, New Delhi, 1997-99, Rs. 618,000 (World Bank Funds).
- iv. 'Design of Calorimeter for Screening Reactive Chemicals for Runaway Reactions', Dr. Arindam Bose Fund for Process Safety, 2004-06, Rs. 11,40,000

CONSULTANCY PROJECT:

Districtwise Hazard Survey of Major Accident Hazard Industries in Bhopal (M.P.) on behalf of the Ministry of Environment and Forests, Government of India. Bhopal is known the world over for the MIC release in the Union Carbide Factory on the night of December 3, 1984, resulting in the death of over 2000 and inflicting sufferings on several hundred thousand. I have carried out this survey listing the current scenario and suggesting improvements to be made for safety.

THESES SUPERVISED:

Ph. D.

N. Ramachandran, 'Heat Transfer in Mould Casting', (Co-guide: Dr. Y. Jaluria)

G. Narshimhan, 'On Transitional Breakage Probability of Droplets in Lean Liquid-Liquid Dispersions', (Co-guide: Dr. D. Ramakrishna)

Jo-Ming Tseng, 'Reaction Kinetics of MEKPO with Incompatible Chemicals'(Co-guide: C.M. Shu) National Yunlin University of Science & Technology, Taiwan

Lin, Y.M., 'Mitigating Consequences of Hazardous Gaseous Releases by Air Dilution (Co-guide: C. M. Shu) National Yunlin University of Science & Technology, Taiwan

M. Tech.

P. K. Goyal, 'Design & On-Line Computer Control of Fermentor', (This was first on-line control work based thesis at I. I. T. Kanpur).

K. Vijayaraghavan, 'Film Formation and Mass Transfer on a Vertically Rotating Disc Partially Immersed in a Pool of Liquid'.

R. Ravindranath, 'A Microprocessor-Based Modular Data Acquisition and Process Control System', (Electrical Engineering Department, Co-guide: Dr. V. Rajaraman).

T. K. Poddar, 'Isotherm-Migration Method in Phase Change Problems'

S. Srinivasan, 'Optimization of a Heat Exchanger Network'

S. Sivsankaran, 'Computer Programs for the Mechanical Design of Heat Exchangers'

T. K. Sinha, 'Study of Solidification in Cylindrical Annulus'

V. T. Selvan, 'Free Convection Over Vertical Cylinders' (This models nuclear spent fuel storage pools)

R. K. Mittal, 'Studies on Entrainment in Gas-Liquid Contactors and Boilers/Reboilers

S. Kakkar, 'Microcomputer Based On-line Control and Study of Bioreactor'

A.A. Desai, 'A Microcomputer Controlled Bioreactor: A Comparative Study of Control Scheme for the Control of Dissolved Oxygen in Molasses Fermentations'

S. Dutta, 'Computer Codes for the Thermal-Hydraulic Design and Vibration Analysis of Shell-and-tube Heat Exchangers, Condensers and Vertical Thermosiphon Reboilers'

B. Suresh Babu, 'Design of Incinerators for Hazardous Wastes'.

S. Pallati, 'Risk Analysis of Road Transportation of Hazardous Substances.'

B. Balakrishna Raju, 'Medical Waste Management in Kanpur: Survey, Recommendations and Design of Related Equipment.'

S. Bajpai, 'Security Systems for Process Plants and hazardous Substance Transport'.

N.Jain, 'Calculation of Fire Water Requirement for Tank Farm Fires to cool Adjacent Tanks'.

H. Pramod Warriar, 'Climate Control System for Individual Use in Adverse Conditions'.

M. Mittal 'Design of a calorie meter for testing runaway reactions', (co-guide: Dr Sanjay Gupta)

Ashwani Srivastava, 'Security of Chemical Plants', (co-guide: Dr. Nitin Kaistha)

Sarit Dutta, 'Correlations for Oil/Gas density under varying high temperatures and pressures', (continuing)

Kumar Malayaz , 'Design and testing of a Spinning Disc Reactor for process Intensification in diffusion controlled chemical reactions', (continuing)

Examined Ph. D Theses for Indian and Australian Universities. Also evaluated research projects and faculty performance for Universities in India, Malaysia, Nigeria and Oman.

PROFESSIONAL SOCIETIES:

- Life Fellow, Institution of Engineers (India)
- Life Member, Indian Institute of Chemical Engineers. Also Member of Executive Committee (1977-79, 1986-88)
- Life Member, Indian Society of Heat & Mass Transfer
- Life Member, National Safety Council, India
- Life Member, Loss Prevention Association of India
- Life Member, Indian Association for Environmental Management
- Life Member, Parental Society for Meaningful Education

- President, Institute for Liquid Atomization & Spray Systems - S.E. Asia (1983-86).
- Member, SACHE Committee of the American Institute of Chemical Engineers

SHORT COURSES

Conducted a one-day Workshop on Process Safety at Formosa Plastics Group, Mailiao Complex, Mailiao Village, Yunlin county, Taiwan, December, 2005

Conducted a full Master's level course on Inherently Safer Design at Helsinki University of Technology, Finland, May, 2002, March, 2004; May 2006; October 2007 (planned)

Delivered 2 full days of lectures in a short course on process safety organised for the Petroleum Department of Oman at the Sultan Qaboos University (SQU), Muscat, Oman, May 2001.

Delivered lectures for one day in a short course on Inherent Safety, Health and Environment at Loughborough University, U.K., March, 2002

Conducted short courses on 'Hazard Analysis in Chemical Industry' for practising engineers from industry, factory directorate, general insurance companies, etc. Over 450 have attended thus far (1997-2001) from all major companies and organizations in India and a couple from abroad.

Conducted a short course (Jointly with Dr. Sanjay Gupta) on 'Microcomputer Applications in Laboratory' for participants from industries, academics, R&D centres. Revised lecture notes have been published by the Instrument Society of America under the title 'PC Interfacing for Data Acquisition and Process Control'. 1989, 2nd ed: 1994.

Conducted short courses on 'Design and Operation of Heat Exchangers, Condensers and Reboilers, and Vibration Analysis' and 'Mechanical Design of Heat Exchangers' for industrial participants in India and Argentina. Tremendous response. Over 500 participants (1977 – 1985) from most large industries attended. Conducted these as in-plant courses also for Chemical, Petroleum and Fertilizer Industries.

BOOKS:

1. J. P. Gupta, 'Heat Exchanger Design - A Practical Look', Delhi: C. S. Enterprises, 383 pp. (1979).

It gives the methods of thermal design, optimization, fouling in heat exchangers, vibrations in heat exchangers, corrosion, quality control, solved problems on heat exchanger design, etc.

2. J. P. Gupta (ed.), 'Heat Exchanger Design - II' (Mechanical Design, Stress and Seismic Analysis, Corrosion & Cost Analysis), Delhi: C. S. Enterprises, 368 pp. (1979).
It gives the details on the mechanical design, stress analysis of horizontal and vertical support systems, earthquake analysis, thermal stresses in the system, corrosion and its prevention, costing of heat exchangers etc.

(The above 2 books were reviewed and/or listed in the Chemical Abstracts, Chemical Engineering, Chemical Engineering Times, Oil & Gas JI., Current Contents, etc. and sold Globally.)
3. J. P. Gupta, 'Computer Programs for Mechanical Design of Heat Exchangers and Pressure Vessels', Milwaukee, USA: A. E. T. Inc., 172 pp. (1984).

It gives FORTRAN listings of computer programs to design various types of Heads, Flanges, Expansion Joints, Nozzles, Shells, & Tubesheets. Several solved examples in both British & S. I. Units are provided.
4. J. P. Gupta, 'Fundamentals of Heat Exchanger and Pressure Vessel Technology, New York : Hemisphere Publishing Corp. (ISBN-0-89116-344-1). Springer-Verlag (FRG) marketed it outside North America. Released in 1986. 612 pp. This book was also adopted by the McGraw Hill Book Club and Macmillan Book Club. Reprinted 1990.
5. Sanjay Gupta and J.P. Gupta (eds.), 'PC Interfacing for Data Acquisition and Process Control'. Published by the Instrument Society of America, Research Triangle Park, N.C., USA, 1989, 2nd revised edition: 1994.
6. J.P. Gupta, 'Family Safety', Ratna Sagar Pvt. Ltd., New Delhi (1995).

CONFERENCE ORGANISED:

Organised a conference on the 20th Anniversary of the Bhopal Gas Tragedy: 'International Conference on the Bhopal Gas Tragedy and its Effects on Process Safety', December 1- 3, 2004, I.I.T., Kanpur. It was attended by delegates from 26 countries. An exhibition of photos of the tragedy by the famous photographer Mr. Raghu Rai was held. Videos on the Bhopal tragedy and the current situation there were screened. A group of 35 participants travelled to Bhopal to see the Union Carbide plant that caused the tragedy. They visited the hospital where most autopsies were done and viscera are kept. An international group was formed to work to alleviate the current situation in Bhopal. There was a lot of coverage in the press and visual media. Further details are available at the web page www.iitk.ac.in/che/jpg/bhopal2.htm

CONFERENCES ATTENDED:

In most, papers were presented and/or sessions chaired.:

1. ASME Annual Meeting, Washington, 1971
2. Indian Institute of Chemical Engineers 23rd Annual Conference, Coimbatore, 1973
3. 4th Symposium of Biomedical Society of India, New Delhi, 1974
4. 26th International Congress on Physiology, New Delhi, 1974
5. 5th Symposium of Biomedical Society of India, Kanpur, 1975
6. Winter School on Physiological Fluid Dynamics, New Delhi, 1975
7. Indian Institute of Chemical Engineers 26th Annual Conference, Waltair, 1976
8. International Solar Energy Conference, New Delhi, 1977
9. International Conference on Heat and Mass Transfer in Buildings, Dubrovnik, Yugoslavia, 1977 (Organised by the International Centre for Heat and Mass Transfers, Belgrade)
10. First International Conference on Liquid Atomization & Spray Systems, Tokyo, 1978
11. 2nd International Conference on Bioconversions, New Delhi, 1980
12. International Conference on Advancement in Heat Exchangers, Dubrovnik, Yugoslavia 1981 (Organised by the International Centre for Heat and Mass Transfer, Belgrade)
13. 2nd International Conference on Liquid Atomization & Spray Systems, Madison, Wisconsin, USA 1982
14. VII All Union National Heat & Mass Transfer Conference, Minsk, USSR, 1984
15. Indian Institute of Chemical Engineers 37th Annual Conference, New Delhi, 1984
16. 10th Canadian Congress of Applied Mechanics, London, Ontario, Canada, 1985
17. Fourth Asian and Pacific Confederation of Chemical Engineering, Singapore, May 1987
18. UNESCO-SEFI International Symposium on Innovative Methods in Technological Education, Orsay, France, September 1987
19. AEESEA Regional Conference on Engineering Education in a World of Rapid Technology and Economic Change, Kuala Lumpur, Malaysia, June 1988
20. The Fourth World Conference on Continuing Engineering Education, Beijing, China, May 1989.
21. XIII World Congress on Occupational Safety and Health, New Delhi, April 1993.
22. Pollution Control: 97 - International Conference and Exhibition, Bangkok, November 1997.
23. Thirteenth International Conference on Hazardous and Municipal Waste Management, Philadelphia, November 1997.
24. 'Australian Disaster Conference: Preventing Disasters in the 21st Century', Canberra, Nov. 1-3, 1999.
25. 'Second International Conference on Basic Sciences and Advanced Technologies', Assiyut, Egypt, November, 2000.
26. 'Workshop on Inherently Safer Design', Loughborough Univ., UK, Nov., 2001.
27. '6th Process Intensification Network Conference', Cambridge University, UK, Nov., 2001.
28. International ESMG (European Safety Management Group) Symposium 2002, October 8- 10, 2002, Nurnberg, Germany.

29. Mary Kay O'Connor Process Safety Center 2002 Symposium 'Beyond Regulatory Compliance, Making Safety Second Nature', College Station, Texas, October 29-30, 2002.
30. International ESMG (European Safety Management Group) Symposium 2004, March 16 - 18, 2004, Nurnberg, Germany.
31. Hazard XVIII, Institution of Chemical Engineers (U.K.), Manchester, November 23 - 25, 2004
32. Annual Conference of the Indian Institute of Chemical Engineers, Mumbai, December 27-30, 2004
33. 'International Conference on the Bhopal Gas Tragedy and its Effects on Process Safety', December 1- 3, 2004, I.I.T., Kanpur
34. Kuwait Oil and Gas Conference and Exhibition, Kuwait City, March 7 - 9, 2005
35. 'Jordan International Chemical Engineering Conference - V', Amman, Jordan, September 12-15, 2005
36. 'International Conference on Toxicology, Environmental & Occupational Health', I.T.R.C., Lucknow, November 14-17, 2005
37. Japan society of Safety Engineers, Annual Meeting, Okayama University, Okayama, Japan, November 24-25, 2005: Invited Plenary Lecture.
38. 'National Conference on Latest Developments in Oil and Gas Sectors', Institution of Engineers (India), Delhi State Chapter, Sept. 2006
39. 'International Workshop on Dangerous Goods Management and Emergency Response,' Taiwan, October 2006
40. First Joint Symposium of Industry - Academy, Gyeongju, Korea, Dec. 2006
41. World Congress on Safety of Oil and Gas Industry 2007, April, 2007, Gyeongju, South Korea
42. 2007 International Seminar against Disaster, Yecheon City, Korea, July, 2007. Planned till 2007 end:
43. Seventh IIASA - DPRI Forum on Integrated Disaster Risk Management, Stresa, Lake Maggoire, Italy, September 19-21, 2007
44. 2007 4th International Conference on Environmental Disaster and Emergency Response, October 2, 2007, Douliou, Taiwan.
45. Mary Kay O'Connor Process Safety Center 2007 Symposium 'Beyond Regulatory Compliance, Making Safety Second Nature', College Station, Texas, USA, October, 2007.
46. Gas & Oil Exposition & Conference, Oct. 31-Nov. 2, 2007, New Delhi.
47. National Conference on Frontiers in Chemical Engineering, IIT Guwahati, December 12-14, 2007

SEMINARS DELIVERED (Alphabetical list):

1. American Society of Safety Engineers Kuwait Chapter, Kuwait, 2005
2. Bhabha Atomic Research Centre, Bombay, 1978
3. Cheng Shiu University, Kaohsiung, Taiwan, 2007
4. China Petroleum Corporation, Taiwan, 2006
5. Cochin Refineries Ltd., Ambalamugal, Kerala, 1979
6. Disaster Management Institute, Bhopal 1996
7. Ecole des Mines d'Ales, France, 2004

8. ETH, Zurich, Switzerland, 2004
9. FACT Engineering and Design Organization, Udyogamandal, Kerala, 1980
10. Formosa Plastics Group, Mailiao Village, Yunlin county, Taiwan, 2005
11. Gujarat Narmada Valley Fertilizer Co., Bharuch, 1985
12. Gujarat State Fertilizers Corp., Baroda, 1979
13. Gujarat State Petroleum Corp., Gandhinagar, 2007
14. Health & Safety Executive, U.K. Government, Bootle, U.K., 2002
15. Hung Kuang University, Taichung, Taiwan, 2006
16. Indian Farmers Fertilizer Coop., Allahabad, 1985
17. Indian Inst. of Chemical Engrs., KREC Surathkal, 1997
18. Institute of Occupational Safety and Health, Taipei, Taiwan, 2005
19. Institution of Engineers (India), Delhi State Chapter 'Sir P.C. Roy Memorial Lecture, 2006
20. Institution of Engineers (India) Qatar Chapter, Chief Guest lecture on Engineers' Day, 2006
21. INTEC, Santa Fe, Argentina 1983
22. Japan Society of Safety Engineers, Tokyo 2005
23. Karnataka Regional Engineering College, Surathkal 1997
24. Kuwait Institute of Scientific Research, Kuwait 2005
25. Loughborough University, Loughborough, U.K. 2002
26. National Cheng Kung University, Tainan, Taiwan (2006)
27. National University of Singapore, Singapore 1998
28. National Yunlin University of Science and Technology, Taiwan, 2005
29. Osaka University, Osaka, Japan, 1972
30. Regional Labour Institute, Kanpur, 1996
31. Renusagar Thermal Power Plant, Renusagar, 1985
32. Research Institute of Safety Engineering, Tokyo, 2005
33. Southern Petrochemical Industries Corp., Tuticorin, Tamil Nadu 1979
34. Stevens Institute of Technology, Hoboken, NJ, USA, 1989
35. Taiwan Environmental Protection Agency, Taipei, 2005
36. Tata Chemicals Ltd., Mithapur, Gujarat, 1984
37. Tata Research Design and Development Organization, Pune 1983
38. University of Michigan, Ann Arbor, MI, USA, 1991
39. Universidad Nacional del Sur, Bahia Blanca, Argentina, 1992
40. U.N. Centre for Science & Technology for Development, New York 1989
41. York University, York, U.K. 2001
42. The World Bank, Washington D.C., USA, 1991
43. Numerous National Safety Council Programmes in Kanpur and New Delhi

LIST OF PAPERS (Jai P. Gupta)

Papers in Bioengineering/Biomedical Engineering

(Published/presented)

1. J. P. Gupta, 'Biological transport phenomena and biomedical engineering', Syllabi and Practicals in Chemical Engineering Subjects, I. I. T. Madras, 1973.

2. R. Barrios, J.P. Gupta, M. Weibel and A. E. Humphrey, 'Action of free and immobilized pectinesterase on pectin', 26th Annual Meeting, IChE, Coimbatore (1973).
3. R. Nagarajan and J.P. Gupta, 'Design and construction of a heart-lung machine', Fourth Biomedical Engineering Symposium, I. I. T. Delhi, 1974.
4. K. Vijayaraghavan and J.P. Gupta, 'Rotating disc type heart-lung machine', Seminar on Instrumentation in Biomedical Engineering, The Instrument Society of India, Hyderabad, 1975.
5. J.P. Gupta, 'Oxygen diffusion in flowing blood', Invited Lecture, International Winter School on Physiological Fluid Dynamics, I. I. T. Delhi, 1975.
6. K. Vijayaraghavan and J.P. Gupta, 'Rotating disc blood oxygenator: Preliminary observations on film formation', Medical and Life Sciences Engineering, 1, 60-63 (1975).
7. J.P. Gupta, 'Heart-lung machine', Science Reporter, 12, 533-536 (1975).
8. J. P. Gupta, 'Artificial kidney machine', Science Reporter, 12, 213-215 (1975).
9. J. P. Gupta, 'El rinon artificial', Naturaliza (Spanish), 6(5), 217 (1975).
10. J. P. Gupta, 'Biomedical Engineering at I. I. T. Kanpur', Ind. J. Tech. Education, 4(2), 49-53 (1976).
11. P. K. Goel and J. P. Gupta, 'Computer control of fermentors', Indian Chemical Engineer, 18(3), 3-5 (1976).
12. R. Mohan and J P. Gupta, 'Blood viscosity in health and disease', Medical & Life Sciences Engineering, 2(1), 38-46 (1976).
13. J. P. Gupta, 'Viscometric correlations for fluid models representing blood', Medical & Life Sciences Engineering, 2(3), 48-58 (1976).
14. K. Vijayraghavan and J. P. Gupta, 'High efficiency rotating disc blood oxygenator', Medex-75 Congress, Switzerland (June 1976), Proceedings, pp 255-256.
15. K. Vijayraghavan and J. P. Gupta, 'An improved rotating disc blood oxygenator', Proc. 30th Annual Conf. on Engineering in Medicine & Biology, Los Angeles, November 1977. Proceeding p. 257.
16. P.K. Goel and J. P. Gupta, 'Computer control of fermentors II: Control of temperature and pH', Trans. Indian Inst. of Chemical Engineers, 19(3), 1-3 (1977).

17. K. Vijayaraghavan and J.P. Gupta, 'An increased efficiency rotating disc blood oxygenator', 6th Int. Biophysics Congress, Kyoto, Japan (1978). Abstracts page 159.

(Due to lack of cooperation in research from the local medical college, work in biomedical engineering was halted in the mid Seventies).

Papers in Transport Phenomena, Process Safety, others (Published/presented):

18. J. P. Gupta and S. W. Churchill, 'Heat and moisture transfer in wet sand during freezing', Environmental and Geophysical Heat Transfer, HTD-Vol. 4, 99-105, A. S. M. E., New York (1971). Presented at the ASME Winter Annual Meeting, Dec. 1971, Washington, D. C. and published in the above volume.
19. J. P. Gupta and S. W. Churchill, 'A model for the migration of moisture during the freezing of wet sand', Chemical Engineering Prog. Symp. Ser. No. 131, 69, 192-197(1973). Presented at the National Heat Transfer Conf., Denver, Colorado, August 1972.
20. J. P. Gupta, 'An approximate method for calculating the freezing outside spheres and cylinders', Chemical Engineering Science, 28, 1629-1633 (1973).
21. J. P. Gupta and S. W. Churchill, 'Diffusion of water under subfreezing temperature', A. S. C. E., Jl. Geotechnical Engineering Division, 102, No. GT 2, 185-187 (1976).
22. K. Vijayaraghavan and J.P. Gupta, 'Film formation on a vertical rotating disc partially dipped in a liquid bath', 29th IChE Conference, Visakhapatnam, December 1976.
23. J.P. Gupta, 'Heat exchanger design: The stream analysis method', Chem. Eng. World, 12(4), 33-35 (1977).
24. J.P. Gupta, 'Heat exchanger design: II - The leakage and bypass streams', Chem. Eng. World, 12(7), 55-58 (1977).
25. J. P. Gupta, 'Vibration in a shell and tube heat exchanger', Chem. Age of India, 28, 701-702 (1977).
26. J. P. Gupta and S. W. Churchill, 'Moisture transfer in porous medium under a temperature gradient' in 'Heat Transfer in Buildings', Washington: Hemisphere Publishing Company (1978). Presented at 'International Seminar on Heat and Mass Transfer in Buildings', Dubrovnik, Yugoslavia, August 1977, organised by the Int. Centre for Heat and Mass Transfer, Belgrade.
27. J. P. Gupta and S. W. Churchill, 'Approximations of conduction with freezing or melting', Int. J. Heat Mass Transfer, 202, 2151-2153 (1977).
28. G. Narsimhan, D. Ramakrishna and J. P. Gupta, 'On the transitional breakage probability of droplets in agitated liquid-liquid dispersions,' Invited talk,

- Engineering Foundation Mixing Conference, Ringe, N. H., U. S. A. (August, 1977).
29. D. Gupta and J.P. Gupta, 'Heat conduction with phase change - Use of Isotherm Migration Method', 30th Annual Session of IChE, Chandigarh (1977).
 30. J.P. Gupta, 'Fouling of heat exchanger surfaces', Chem. Age of India, 29(1), 33-39 (1978).
 31. J.P. Gupta, 'Heat exchanger design capabilities: A survey', Chem. Age of India, 29(5), 345-349 (1978).
 32. S. W. Churchill and J.P. Gupta, 'The effective power dependence of the heat transfer coefficient for fully developed turbulent convection in a tube', Industrial and Eng. Chem. Process Des. and Dev., 17, 351-354 (1978).
 33. K. Vijayaraghavan, R. Mohan and J.P. Gupta, 'Disintegration of a liquid film by a vertically rotating disk', Presented at the First Int. Conf. on Liquid Atomization and Spray Systems, Tokyo, August 1978 (Chem. Abs. 92, 438415 (1980)).
 34. G. Narasimhan, D. Ramakrishna and J.P. Gupta, 'A model for transitional breakage probability of droplets in agitated lean liquid-liquid dispersions', Chemical Engineering Science, 34, 257-265 (1979).
 35. G. Narasimhan, D. Ramakrishna and J.P. Gupta, 'Analysis of droplets distributions in stirred liquid-liquid dispersions', Presented at 87th National Meeting, AIChE, Boston (August 1979).
 36. T. K. Poddar and J.P. Gupta, 'Use of isotherm migration method with unequal temperature intervals in heat conduction problems involving solidification/melting'. Presented at the 32nd IChE Conference, Bombay (1979).
 37. D. Gupta, V. N. Shukla and J.P. Gupta, 'Isotherm migration method in planer phase change of a semi-infinite slab with constant temperature boundary condition', Transactions, Indian Inst. Chem. Engrs., 22(1), 47 (1980).
 38. G. Narasimhan, D. Ramakrishna and J.P. Gupta, 'Analysis of droplets distribution in lean, liquid-liquid dispersions', AIChE J., 26(6), 991-1000 (1980).
 39. N. Ramachandran, Y. Jaluria and J.P. Gupta, 'Thermal and fluid flow effects in unidirectional solidification', Letters in Heat & Mass Transfer, 8(1), 69-77 (1981).
 40. J.P. Gupta and K. P. Singh, 'Transient swelling of liquid level during pool boiling in emergency condenser', Letters in Heat & Mass Transfer, 8(1), 25-33 (1981).

41. Neera Tandon and J.P. Gupta, 'Experiments on transient swelling during pool boiling', Letters in Heat & Mass Transfer, 8(3), 247-251 (1981).
42. S.Sivasankaran and J.P. Gupta, 'Computer program for tubesheet design', Hydrocarbon Processing, 60(11), 273-276 (1981).
43. N.Ramachandran, Y. Jaluria and J.P. Gupta, 'Two-dimensional solidification with natural convection in the melt and convective and radiative boundary conditions', Numerical Heat Transfer, 4, 469-484 (1981).
44. K. Vijayaraghavan and J.P. Gupta, 'Thickness of a film formed on a vertically rotating disc partially immersed in a Newtonian liquid', Indus. Engg. Chem. Fundamentals, 21(4), 333-336 (1982).
45. N.Ramachandran, J.P. Gupta and Y. Jaluria, 'Thermal and fluid flow effects during solidification in a rectangular enclosure', Int. J. Heat Mass Transfer, 25(2), 187-194 (1982).
46. N.Ramachandran, J.P. Gupta and Y. Jaluria, 'Experiments on solidification with natural convection in 2-dimensions', Int. J. Heat Mass Transfer, 25, 595-596 (1982).
47. S.Sivasankaran and J.P. Gupta, 'Computer program for flange design', Hydrocarbon Processing, 61(6), 122-124 (1982).
48. A. Sharma, D. Garg and J.P. Gupta, 'Further experiments on transient swelling during pool boiling', Letters in Heat & Mass Transfer, 9(3), 221-226 (1982).
49. T. K. Sinha and J.P. Gupta, 'Studies on solidification in an annulus', Int. J. Heat Mass Transfer, 25(11), 1771-1773 (1982).
50. A. Sharma, D. Garg and J.P. Gupta, 'Solidification fouling of paraffin wax from hydrocarbon', Letters in Heat & Mass Transfer, 9(3), 209-219 (1982).
51. A. Sharma, D. Garg and J.P. Gupta, 'Effects of shear stress and concentration on solidification fouling', Letters in Heat & Mass Transfer, 9, 371-375 (1982).
52. A.Sharma and J.P. Gupta, 'A case of energy conservation in petroleum refineries', Chemical Age of India, 34(9), 517-525 (1983).
53. S.Sivasankaran and J.P. Gupta, 'Computer program for nozzle design', Hydrocarbon Processing, 62(5), 99-103 (1983).
54. S.Sivasankaran and J.P. Gupta, 'Computer program for pressure vessel head design', Hydrocarbon Processing, 62(8), 67-69 (1983).
55. S.Sivasankaran and J.P.Gupta, 'Computer program for flanged and flued expansion joint design and analysis', Hydrocarbon Processing, 62(12), 93-96 (1983).

56. V. T. Selvan and J.P. Gupta, 'On free convection cooling of nuclear spent fuel rods', Presented at the All Union Heat & Mass Transfer Conference, Minsk, USSR, May 1984.
57. V. T. Selvan and J.P. Gupta, 'Free convection heat transfer from a vertical cylindrical tube bundle', 10th Canadian Congress of Applied Mechanics, London, Ontario, Canada, June 1985.
58. K. Vijayaraghavan and J.P. Gupta, 'Mass transfer in a rotating disc oxygenator', Int. J. Heat Mass Transfer, 29(5), 809-811 (1986).
59. S. Reginald and J.P. Gupta, 'A note on 1-2 heat exchanger trouble shooting', International Communication in Heat and Mass Transfer, 13(2), 235-243 (1986).
60. K. P. Singh, A. I. Soler and J. P. Gupta, 'A method for computing the maximum water temperature in a fuel pool containing spent nuclear fuel', Heat Transfer Engineering, 7(1-2), 72-82 (1986).
61. S. Kakkar, A. Desai, J.P. Gupta, K. Ranganathan and S. Gupta, 'A personal-computer (pc) controlled bioreactor', National Symp. on Instrumentation, Hyderabad, India (October 1986). Organised by the Instrument Society of India, Bangalore. Published in J. Instrument Society of India, 18(1), 69-76 (1988).
62. S.Kakkar, J.P. Gupta and S. Gupta, 'Microcomputer control of fermentation systems', Fourth APCChE Congress (Asian Pacific Confederation of Chemical Engineering), Singapore, (May 1987).
63. J.P. Gupta, **Invited UNESCO Keynote Lecture** on 'Innovative Education for Industry and Professions' in 'UNESCO-SEFI International Symposium on Innovative Methods in Technological Education', Orsay, France, September 1987. Proceedings, pp. 520-526.
64. J.P. Gupta, 'Chemical Plant Safety and Hazard Assessment - A Course to Chemical Engineering Students', Industrial Safety Chronicle, 18(1), 18-25 (1988).
65. J.P. Gupta, 'Teaching of a Course on Safety, Hazard Assessment and Disaster Management in Chemical Industries to Engineering Students', Presented at the AEESEA Regional Conference on Engineering Education in a World of Rapid Technology and Economic Change, Kuala Lumpur, Malaysia, June-1988. Proceedings, pp. 204-209. UNESCO Sponsored.
66. J.P. Gupta, 'Management of the Indian Institutes of Technology : Problems and Perspectives', Presented at the AEESEA Regional Conference on Engineering Education in a World of Rapid Technology and Economic Change, Kuala Lumpur, Malaysia, June-1988. Proceedings, pp. 95-97. UNESCO Sponsored.

67. J. P. Gupta, 'A Chemical Plant Safety and Hazard Analysis Course', Chemical Engineering Education, 23(3) 194-196(1989).
68. J.P.Gupta, 'Different Facets of CEE (Continuing Engineering Education) and the Need of Corresponding Resources and Methodologies for them, (alongwith problems faced by Developing Countries in CEE and their suggested Solutions), Presented at The Fourth World Conference on Continuing Engineering Education', Beijing, China, May 1989, Sponsored by UNESCO.

Between 1988 and 1991 I was deputed by the Govt. of India as a Diplomat (Counsellor for Science & Technology) at the Embassy of India, Washington D.C. Hence publications ceased in this period. Brief note on this diplomatic position has been given earlier.

69. J.P. Gupta, 'Sources of Data and Information on Chemical Plant Safety', Invited talk at the Seminar on the topic organized by the National Safety Council, U.P. Chapter, RLI, Kanpur, February 1992.
70. J.P. Gupta, 'Inculcating Safe Habits at a Young Age', Presented at XIII World Congress on Occupational Safety and Health, April 1993, New Delhi.

Between 1993 and 1995 I was a Sr. Scientist at the EER System Corp., Vienna, Virginia, USA to gain international industrial/business experience. Hence publications ceased in this period.

71. J.P. Gupta, 'Application of DOW's Fire and Explosion Index Hazard Classification Guide to Process Plants in the Developing Countries', J. Loss Prev. Process Ind., 10(1), 7-15 (1997).
72. B. Suresh Babu and J.P. Gupta, 'Incineration and Incinerator Design Concept: Part 1 - Incineration', Chemical Industry Digest, 10(3), 87-94 (Sept. 1997).
73. B. Suresh Babu and J.P. Gupta, 'Waste Characterization and Treatment', Chemical Business, 11(3), 39-42 (Oct. 1997).
74. J. P. Gupta, 'Financing of Environment Related Activities in India', Presented at the Pollution Control '97 - International Conference and Exhibition, Nov. 12-14, 1997, Bangkok, Thailand.
75. J.P. Gupta and I. Chandrasekhran, 'Hazardous and Municipal Solid Waste Management in India: A Perspective', presented at the Thirteenth International Conference on Hazardous and Municipal Waste Management, Nov. 16-19, 1997, Philadelphia.
76. J.P. Gupta, 'Risk Analysis', Invited talk at the Workshop on 'Safety Report' organized by the National Safety Council, U.P. Chapter, Landmark Hotel, Kanpur, India, Feb. 1998, Slight variations delivered at 3 more similar workshops.

77. J. P. Gupta, 'Industrial Development and Environment Protection: Positive Effects of Legislation', Environmental Strategies for the 21st Century : An Asia-Pacific Conference, 8-10 April, 1998, Singapore.
78. B. Suresh Babu and J.P. Gupta, 'Incineration and Incinerator Design Concept : Part 2-Incinerator Design', Chemical Business, 11(2),(June 1998).
79. B. Suresh Babu and J.P. Gupta, 'A New Hazardous Waste Index', J. Hazardous Materials, A67, 1-7 (1999).
80. J.P. Gupta, 'Industrial Safety Database: Creation and Uses', Invited talk at the 'Safety and Health – Challenges in the next Millennium', Taj Mahal Hotel, Lucknow, India, July 1999.
81. J.P. Gupta, "Inherently Safer Design - a Course for Science and Engineering Students', Green Chemistry, Royal Society of Chemistry, 1(5), G144-G147 (Oct., 1999).
82. J.P. Gupta, 'Bhopal Gas Tragedy: Could it have happened in a developed country,' Presented at the Australian Disaster Conference 1999 - Disaster Prevention for the 21st Century, Canberra, Nov. 1-3, 1999. Abstract published in Conference Proceedings. Abbreviated version published in 'Engineer – Australia', Magazine of Institution of Engineers, Australia, Feb. 2000.
83. J.P. Gupta, 'Inherently Safer Design,' Green Chemistry Network Newsletter, Univ. of York, U.K., Issue 2, 9-10 (July 1999).
84. J. P. Gupta, 'An Untouchable Record', Letter, Chemical Engineering Progress, 95(10), 1999.
85. J. P. Gupta, 'A Course on Inherently Safer Design,' J. Loss Prevention in the Process Industries, 13(1), 63-66 (2000).
86. J. P. Gupta, 'Inherently Safer Approach - from Basic Research to Applied Technology', Invited Keynote Lecture delivered at the Second International Conference on Basic Sciences and Advanced Technology, Assiut, Egypt, Nov. 5-8, 2000.
87. J. P. Gupta, 'Inherently Safer Design', Letter, Chemical Engineering Progress, 96(4), p.8, 10 (2000).
88. J.P. Gupta and D.W. Edwards,' A Survey on Inherently Safer Design', Letter, Trans. IChemE, Part B, 79, 315 (2001).
89. J.P. Gupta and D.W. Edwards,' Inherently Safer Design – A Survey', Workshop on Inherently Safer Design, Loughborough University, UK, Nov. 14, 2001.

90. J.P. Gupta and D.W. Edwards, 'Inherently Safer Design - Current Status', 6th Process Intensification Network Meeting, Cambridge University, UK, Nov. 27, 2001.
91. J.P. Gupta, 'Comments on the Royal Commission on Long Term Effects of Chemicals in the Environment', Royal Academy of Engineering, London, Nov. 2001.
92. J. P. Gupta, 'Bhopal Gas Tragedy - Could it have happened in a Developed Country', *J. Loss Prevention in the Process Industry*, 15, 1- 4 (2002).
93. J. P. Gupta, 'The Water Business', *Letter, Down to Earth*, Vol. 10 (16), 2 (2002).
94. J. P. Gupta and D. W. Edwards, 'Inherently Safer Design: Current Status and Future Implementation', Invited paper, in 'Process Safety and Industrial Explosion Protection', Proceedings of the International ESMG (European Safety Management Group) Symposium 2002, October 8- 10, 2002, Nurnberg, Germany.
95. J. P. Gupta and D.W. Edwards, 'Inherently Safer Design – Present and Future', *Trans. IChemE, Process Safety and Environmental Protection*, Vol. 80 (B), 115-125 (2002). Winner of the Hutchinson Medal of the IChemE, U. K.
96. J.P. Gupta and D. W. Edwards, 'Some thoughts on measuring Inherent Safety', Proceedings of the Mary Kay O'Connor Process Safety Center 2002 Symposium 'Beyond Regulatory Compliance, Making Safety Second Nature', College Station, Texas, October 29-30, 2002.
97. N. Keren, H.H. West, W.J. Rogers, J.P.Gupta, M.S. Mannan , 'Use of Failure rate and Human Error Databases to Develop Safety Matrices and Performance Measurement Systems", Proceedings of the Mary Kay O'Connor Process Safety Center 2002 Symposium ' Beyond Regulatory Compliance, Making Safety Second Nature', College Station, Texas, October 29-30, 2002.
98. J.P.Gupta, G. Khemani and M.S. Mannan, 'Calculation of Fire & Explosion Index (F&EI) Value for the Dow Guide taking credit for the Loss Control Measures', *Journal of Loss Prevention in the Process Industries*, Vol. 16 (4), 235-241 (2003)
99. J.P. Gupta, 'Old dogs can learn new tricks', *Centerline* (the Newsletter of the Mary Kay O'Connor Process Safety Center), Vol. 7 (1), 1 and 15-19 (Spring 2003) http://psc.tamu.edu/publications/news_letter/SP03.pdf
100. J.P. Gupta, D.C. Hendershot and M.S. Mannan, 'Real Cost of Process Safety – a Clear Case for Inherent Safety', *Trans IChemE (U.K.) Process Safety and Environmental Protection*, Vol. 81 (B), Vol. 81 (B), 406-413 (November, 2003)
101. M. S. Mannan, W.J. Rogers, J. T. Baldwin, J.P.Gupta, Y. Wang, S.R.Saraf, and K. Krishna, 'Hydroxylamine Production: Will a QRA Help You Decide', *Reliability Engineering and System Safety*, Vol. 81 (2), 215-224 (August, 2003).

102. J.P.Gupta and D.W. Edwards, 'A simple graphical method for measuring inherent safety', *Journal of Hazardous Materials*, Vol. 104 (issues 1-3), 15-30 (Nov. 2003).
103. J. P. Gupta, 'Bhopal: ...Eighteen, going on Nineteen and Fading?', Invited Guest Editorial, *Trans. IChemE (U.K.), Process Safety and Environmental Protection*, Vol. 81 (B), 227-228, (July, 2003).
104. N. Keren, H.H. West, W.J. Rogers, J.P. Gupta, M.S. Mannan , 'Use of failure rate databases and process safety performance measurements to improve process safety', *Journal of Hazardous Materials*, Vol. 104, 75-93 (2003).
105. J. P. Gupta, '20 years after Bhopal – Effects on Process Safety', *Proceedings of Process Safety and Industrial Explosion Protection, Session 1, International ESMG Symposium 2004, Nurnberg, Germany, March 16-18, 2004.*
106. J.P. Gupta, 'Inherent Safety Measurement Indices', *Proceedings of Process Safety and Industrial Explosion Protection, Session 4, International ESMG Symposium 2004, Nurnberg, Germany, March 16-18, 2004.*
107. J.P. Gupta, 'Bhopal: No Silver Lining', *Environmental Health Perspective*, Vol. 112 (14), A-541 (October 2004)
108. J.P. Gupta, 'Bhopal and the Global Movement on Process Safety', *Hazard XVIII, Institution of Chemical Engineers (U.K.), Manchester, November 23 – 25, 2004*
109. J.P. Gupta and D.C. Hendershot, 'Inherently Safer Design', Chapter published in the 3rd Edition of F P Lees' *Loss Prevention in the Process Industries* Chief Editor: M. Sam Mannan, Butterworth-Heinemann, London, 2005.
110. J.P. Gupta, Guest Editorial, *Journal of Loss Prevention in the Process Industries* , Vol . 18 (4-6), 195 - 196, 2005
111. S. Bajpai and J.P. Gupta, 'Securing Oil and Gas Infrastructure', *Kuwait Oil and Gas Conference and Infrastructure, Kuwait city, March 7 – 9, 2005*
112. S. Bajpai and J.P. Gupta, 'Protecting Chemical Plants from Terrorist Attacks', *Chemical Weekly, Volume L (34), 209 – 213, 2005*
113. J.P. Gupta, 'Mitigating Consequences of Hazardous Gaseous Releases by Air Dilution – A Concept', *Journal of Loss Prevention in the Process Industries*, Vol. 18 (4-6), 502 – 505, 2005
114. J.P. Gupta, 'Bhopal Gas Tragedy and the Global Movement on Process Safety', *Fifth International Chemical Engineering Conference, Amman, Jordan, September 12-15, 2005*
115. S. Bajpai and J.P. Gupta, 'Site Security for Chemical Process Industry', *Journal of Loss Prevention in the Process Industries*, Vol. 18 (4-6), 301-309, 2005

116. J.P. Gupta, ' Land Use Planning in India', Journal of Hazardous Materials (Elsevier), 130 (3), 300 – 306, 2006
117. J.P. Gupta, ' Manpower needs of Oil & Gas Industries - Role of Educational Institutions', P.C. Ray Memorial Lecture, 22nd National Seminar, Institution of Engineers (I) Delhi chapter, New Delhi, September 2006
118. J.P. Gupta ' Role of Engineers in Natural Disaster Mitigation and Management', Institution of Engineers (I) Qatar Chapter, Doha, September 2006
119. J.P. Gupta ' Chemical Emergency Management', Invited Lecture at International Workshop on Dangerous Goods Management and Emergency Response,' organised by Taiwan Major Industrial Accident Prevention Association, Taiwan, October, 2006
120. J. M. Tseng, C. M. Shu, J. P. Gupta and Y. F. Lin,' Evaluation and Modelling Runaway Reaction on Methyl Ethyl Ketone Peroxide Mixed with Nitric Acid', submitted to I&EC Research
121. S. Bajpai and J. P. Gupta, "Security Risk Assessment Techniques for Chemical Process Industries", 56th Canadian Chemical Engineering Conference held at Sherbrooke, Quebec, Canada, October, 2006.]
122. J.P. Gupta 'Inherently Safer Design: Concepts and Applications', Invited Lecture at First Joint Symposium of Industry – Academy, Gyeongju, Korea, Dec. 2006
123. Nitesh Jain and J. P. Gupta, "Water Requirements in Tank Farm Fire', Journal of Petroleum Science and Engineering, 55(1-2), 167 – 173 (2007)
124. S. Bajpai and J.P. Gupta, 'Securing Oil and Gas Infrastructure', Journal of Petroleum Science and Engineering, 55(1-2), 174 – 186 (2007)
125. J.P. Gupta and Ashwani Srivastava 'New Methodologies for Security Risk Assessment of Oil & Gas Industry', World Congress on Safety of Oil and Gas Industry 2007, April, 2007, Gyeongju, South Korea
126. M. Mittal, S. Gupta, S. Saraf & J.P. Gupta 'Design, Control, and Testing of an Affordable Calorimeter for Screening Reactivity Hazard', Accepted for presentation at the Mary Kay O'Connor Process Safety Center 2007 Symposium 'Beyond Regulatory Compliance, Making Safety Second Nature', College Station, Texas, USA, October, 2007.
127. S. Bajpai and J.P. Gupta, "Terror-proofing Chemical Process Industries', accepted for publication in Process Safety and Environmental Protection (Trans. IChemE, U.K.)
128. J.P. Gupta," Human Errors and Process Industry Accidents", 2007 International Seminar against Disaster, Yecheon City, Korea, July, 2007

129. J.P. Gupta, "Bhopal Gas Tragedy and its Impact on Process Safety Worldwide", Invited lecture, Seventh IASA - DPRI Forum on Integrated Disaster Risk Management, Stresa, Lake Maggoire, Italy, September 19-21, 2007
130. J.P. Gupta, "Human Factors and Chemical Industry Accidents", Keynote Address, 2007 4th International Conference on Environmental Disaster and Emergency Response, October 2, 2007, Douliou, Taiwan.
131. J.P. Gupta, "Assessment of Security Risks in the Oil and Gas Industry", Gas & Oil Exposition & Conference, Oct. 31-Nov. 2, 2007, New Delhi
132. J.P. Gupta, "Safety in Petroleum and Petrochemical Industry", Invited lecture, National Conference on Frontiers in Chemical Engineering, IIT Guwahati, December 12-14, 2007
133. M. Mittal, S. Gupta, S. Saraf and J.P. Gupta, "Design & Testing of a Cost-Effective Calorimeter for Screening Reactivity Hazards" Submitted to Journal of Loss Prevention in the Process Industries
134. S-Y Cheng, J-M Tseng, S-Y Lin, J.P. Gupta, C-M Shu, 'Runaway Reaction on tert-Butyl Peroxybenzoate by DSC Tests', North American Thermal Analysis Society 35th Annual Conference, Michigan State University, Lansing, MI, USA (25-29 August 2007)