

ANNEXURE

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~NTRE FOR ROBOTICS

:a) papers presented at Conference Workshop etc. But)Vot Published in proceedings. NUL

Seminar Presented: Title, Organization Date

"Applications of Robotics in Automation', Institute of Electrical & Telecommunication Engineering, Dec. 1997. Presented by S. Sen.

Conference Attended Outside IIT Kanpur .

ler Activities «(luring 1. 4.1997 to 31.3.1998)

Technology Developed .. Name of Technology Product, Ready for Transfer
Further Development needed.

Radio Controlled Micro-Robots for Educational and Entertainment (toy)
applications, Ready for transfer.

Voice Control of Tele-operated Robots. Ready for transfer.

Remote Voice-actuation of Electrical Electronic and Robotic devices using a
standard 2-wire. telephone receiver and a PC. Ready, for transfer.

4. Individual Password operated secure office/laboratory access system with date time, and user identity log. Can also be used as an employee time keeper/attendance log without the lock. Ready for transfer.

5. Braille Printer with PC interface. Some improvements needed.

(B) Software Developed .. Title of the Software, Ready for Transfer. Further Development Needed.

NIL

(C) Industry visited visit to other Institute for research Industry/Institute Name, Purpose, Period.

1. *RDCIS (SA III) Ranchi To finalise Project agreement on "On-line inspection of surface defects on flat products", 22-23rd Jan. 1998. visit by Mr. Sen & Dr. Amitabha Mukerjee.*

2. *Bokaro Steel Plant for project work on project entitled 'On-line inspection of surface defects on flat products', 24-25th Feb. 1998. visit by hft. S. Sen & Amitabha Mukerjee.*

(D) Patents, Title patents No. NIL

(E) Awards and Honours (Title, Awarded by,)

1. *Dr. Amitabha Mukherjee selected to the Editorial Board, Journal of Spatial Cognition and Computation Kluwer Academic Publishers.*

2. *Dr. Amitabha Mukherjee : Joint Editor, Special Issue of Journal on Image and Vision Computing Elsevier, (with ~ Buxton of U. Sussex).*

(F) Continuing Education Activities

(G) Participation in High Level Industry Academia Interaction Programmeduring Summer:

NIL

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- ~7. Real Time Monitoring of Laser Plasma Plume for Thin Film Deposition, Proc. National laser Symposium, PRL, Ahmedabad, Dec. 10-12 (1997), A. Mishra, A. Mitra and R.K. Thareja.
8. Laser Produced Carbon Plasma in Inhomogeneous Magnetic Field, Proc. National laser Symposium, PRL, Ahmedabad, Dec.10-12 (1997), A. Neogi and R. K. Thareja.
9. Pulsed Laser Deposition of Carbon Films, Proc. of 25th Anniversary IEEE International Conference on Plasma Science and Technology, North Carolina, USA, June 1-4, 1998, R.K. Thareja, A. Neogi and A. Mishra.

PAPERS PRESENTED AT CONFERENCE WORKSHOPS ETC. BUT NOT PUBLISHED IN PROCEEDINGS

ADVANCED CENTRE FOR MATERIALS SCIENCES

Synthesis of BSO using a CO₂ laser, MRSI Symposium, IIT Madras, 1998, Bansi Lal and K. V.Rao.

DEPARTMENT OF AEROSPACE ENGINEERING

"Passive Three-Axis Satellite Pointing Stability through Tether", Astrodynamics Symposium of the 48th International Astronautical Congress, Torina, Italy, October 6-10, 1997, Krishna Kumar and K.D. Kumar.

"Finite Element Computation of Unsteady Viscous Transonic Flows past Airfoils", 48th Annual General Meeting, Thiruvananthapuram, India (1997), S. Mittal.

3 "Finite Element Computation of Large Ram Air Parachutes". National Symposium on Parachute and Lighter - Than-Air Para. India (1997), S. Mittal and T.E. Tezhavar

4. "Suppression of Vortex Shedding using Control Cylinder", 11th Asian Congress of Fluid Mechanics, Chennai (Madras), India, (1997), S. Mittal and A. Raghuvanshi.
5. "Unsteady Transonic Flow Past an Aerofoil in a Channel", 7th Asian Congress of Fluid Mechanics, Chennai (Madras), India (1997), S. Mittal.
6. "Flow Induced Vibration of Single and Multiple Cylinders", 7th Asian Congress of Fluid Mechanics, Chennai (Madras), India (1997), V. Kumar, and S. Mittal.
7. "Numerical Simulation of Flow Past Rotating and Translating Circular Cylinder", Proceedings of the 7th Asian Congress of Fluid Mechanics, Chennai (Madras), India, (1997), S. Mittal and M.T. Nair, and T.K. Sengupta.
8. «Pseudo-Direct Simulation/CSC Schemes in Fluid Dynamics - a View Point, RANS, LES & DNS Workshop, USc, Bangalore, 11-12, Nov. 1997, T.K. Sengupta & M.T. Nair.

CENTRE FOR LASER TECHNOLOGY

1. R K Thareja : (a) Pulsed Laser Deposition of (Al, C) thin films, Alabama A&M University, Normal, Alabama (USA), June 19, 1998. (b) Laser Ablated Plasma in Ambient Atmosphere, Princeton University, NJ, USA June 25, 1998.
2. Anjan K Ghosh: "FIBER OPTIC SENSORS", HAL Lucknow, Jan 19, 1998.

DEPARTMENT OF CHEMICAL ENGINEERING

1. '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, J.P. Gupta and I. Chandrasekharan.
2. Viscosity of the Reaction Mixture during Bulk Polymerization of Methyl Methacrylate, paper presented at Advanced in Chemical Reaction Engineering, Banaras Hindu University, Varanasi, March 7-9, 1997 ; R.B. Mankar, S.K. Gupta and D.N. Saraf.
3. Advanced Control in Chemical Process Industries, Keynote lecture at National Seminar on Modeling, Optimization and Control in Process Industry, BITS, Pilani, April 4, 1997 ; D.N. Saraf
4. Long Range Forces in Thin Liquid Films on Wettable Substrates. 2nd International Conference on Wetting and Self Organization, Munich, 1998, Reiter G., Casali A., David M.-O., Sharma A., Khanna R, and Auroy P.

Two Dimensional Dispersions: Pattern Formation in Thin Films. International Conference on Disperse Systems, Indian Society for Surface Science & Technology, Jadavpur University, 1998, Sharma A, Khanna R. and Reiter G.

'Dewetting of Evaporating Water Films: Role of Hydrophobic Interaction. International Conference on Disperse Systems, Indian Society for Surface Science & Technology, Jadavpur University, 1998, Padmakar AS., Kargupta K. and Sharma A

'Stefan-Maxwell approach to Tray Efficiencies for Multicomponent Systems', Department of Chemical Engineering, University of Sains Malaysia, Kanpur, Cawangan Perak Malaysia, June 1997. (D.P. Rao)

'Stefan-Maxwell approach to Tray Efficiencies for Multicomponent Systems', Dept. of Chemical Engineering, Universiti Kebangsaan, Selangor, Malaysia, June 1997. (D.P. Rao)

'Self Organization in Thin Films', Rice University (February 1997). (A Sharma).

). 'Pattern Formation in Thin Films', University of Houston (February 1997) (A Sharma).

'Stability and Morphology of Thin Films', Illinois Institute of Technology (March 1997) (A Sharma).

!). 'Pattern Formation in Thin Films', Cleveland State University (March 1997). (A Sharma).

'Cornea- Tear Film Interactions', University of Texas Southwestern Medical Center at Dallas (February 1997). (A Sharma).

DEPARTMENT OF CHEMISTRY

Dynamics of dipolar liquids combined in cavity by: S. Senapati and A. Chandra, Discussion Meeting of Ultra fast chemical phenomena, held in IISc, Bangalore during March 1-6, 1998.

New hypervalent silicon compounds from rice husks ash and a novel hiant wheel assembly of ferrocenes on a tin drum., V. Chandrasekhar, Invited lecture at the International Symposium on metallo organic chemistry at the dawn of the twenty first century, March 16-18, 1998, Jaipur (University of Rajasthan).

Acyclic and cyclic multi-site coordination systems built from P-N motifs., V. Chandrasekhar, Invited lecture, National Seminar on metallo organics, Feb. 20-21, 1998, Madras (IIT Madras).

Non-metal Motifs in Inorganic Rings and Polymers: Front multiple metal recognition heterocycles to ion-conducting polymers., V. Chandrasekhar,

Invited lecture: National Symposium on Metallo organic chemistry, Sept. 20-28, 1997, Dept. Of Chemistry, University of Gorakhpur.

5. Synthesis and reactions of ferrocenyl tertiary amines with tetrachlorodiphosphotriazene., N. Dastagiri Reddy and A.J. Elias., Paper presented at the National Seminar on metallo organics, held at Indian Institute of Technology, Madras, Chennai from Feb. 20-21, 1998.
6. Novel reactions of cyclophosphotriazenes and cyclophosphotriazenes. A.J. Elias, N.D. Reddy and T.V.V. Ramakrishna., Symposium on Modern Trends in Inorganic Chemistry held at IIT Kanpur from Dec. 4-6, 1997.
7. A novel approach to amino substitution reactions of cyclophosphotriazenes., A.J. Elias, N.D. Reddy and T.V.V. Ramakrishna., presented at the Symposium on Modern Trends in Main Group Chemistry held at IIT Delhi, April 1997.
8. Recent research trends of Nanocrystalline Magnetic Phases, N.S. Gajbhiye Indian Institute of Science, Bangalore, Department of Inorganic and Physical Chemistry, July 23, 1997.
9. Chemical synthesis of inorganic materials, N.S. Gajbhiye. Gorakhpur University, Dept. Of Chemistry, April 10, 1998.
10. National symposium on New concept in organic synthesis, Department of Chemistry, Bahasahev Ambedkar Marathwada University, Aurangabad March 20-21, 1998, N.S. Gajbhiye.
11. National Symposium on Organic synthesis, Department of Chemistry Gurunank Deo University, Amritsar, April 29, 1998., Dr. H. Ila.
12. Attended and chaired a session in Royal Society Symposium on Recent Trends in Organic Synthesis, at Department of Organic Chemistry, Indian Association for the Cultivation of Science, Calcutta, Dec. 3-4, 1997., Dr. H. Ila.
13. Gave invited lecture at Department of Chemistry, Indian Institute of Technology, Bombay, Oct. 9, 1997, Dr. H. Ila.
14. Polyaniline supported cobalt catalysed combinatorial synthesis of small organic molecules as potent mV-I protease inhibitors., I. Iqbal, T. Punniyamurthy and S. Rajesh., presented at Symposium on Recent Trends in Bioorganic and Organic Chemistry at IACS, Calcutta organised by Royal Society of Chemistry during Dec. 3-4, 1997.
15. Structure based design and synthesis of novel lead molecules as potential HIV-I protease inhibitors., A. De, Prabhakaran, E.N., J.P. Nandi, S. Rajesh, S. Sharma, S. Ghosh and J. Iqbal., presented at National Seminar on perspectives in interfacial areas of chemistry and biology at Delhi University during Jan. 20-22, 1998.

- S. Polymer supported cobalt catalysed synthesis of peptide isosteres as potential enzyme inhibitors., J. Iqbal, I. Punniyamurthy, J.P. Nandi and S. Sharma., presented at National Symposium on Newer concepts in organic synthesis at Babasaheb Ambedkar Marathwada University, Aurangabad during March 20-21, 1998.

New drug discovery via combinatorial synthesis of library of small organic molecules., J. Iqbal and T. Punniyamurthy., presented at Winter School on Organometallic chemistry at Gulbarga University during Dec. 15-20, 1997.

- ;. Modern Trends in Inorganic Chemistry, Department of Chemistry, IIT Kanpur, Dec. 4-6, 1997.

Recent advances in metallic films, Symposium on Inorganic Materials, July 11th, IISc Bangalore (1997), S. Sundar Manoharan.

~PARTMENT OF CIVILENGINEERING

Shaban, M.A. and Dikshit, O., 1997, Classification of high resolution digital satellite imagery, National Remote Sensing Symposium for Natural Resources with special emphasis on Infrastructure Development, November 26-28, National Remote Sensing Agency, Hyderabad.

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

inars given:

M. Agrawal: The Complexity of Satisfiability Problem for Probabilistic OBDDs, Tuebingen, Germany, July, 1997.

P. Gupta: An Efficient Selection Algorithm on Pyramid, Yorktown Heights, IBM, USA, July 16, 1997.

P. Gupta: A Selection Algorithm for X+Y on Mesh, Wayne State University, USA, *JU116, 1997.*

P. Jalote: In pursuit of quality, Int. Conf. on Software Engg. (CONSEG), Dec 1997, Chennai.

P. Jalote: Managing Software Quality, CSI annual conference, Ahmedabad, Feb 1998.

D. Sanghi: Workshop on Internet: Concepts & Trends, Directorate of IT, Rajasthan Govt., Jaipur, September, 1997. Title: Components of Internet.

D. Sanghi: Workshop on Internet: Concepts & Trends, Directorate of IT, Rajasthan Govt., Jaipur, September, 1997. Title: Future of Internet.

- Z: D. 5 (Information Software Development Ltd., Bangalore, October, 1997. Invited to give a lecture in their Distinguished Lecture Series. Title: IPv6: Introduction, Recent Advances, and Research at IIT Kanpur.
28. D. Sanghi: Center for Artificial Intelligence and Research (CAIR), Bangalore, October, 1997. Title: IPv6: Introduction, Recent Advances, and Research at IIT Kanpur.
29. D. Sanghi: Weapons & Electronics Systems Engg. Establishment (WESEE), New Delhi, November, 1997. Title: Firewalls and Network Security.
30. D. Sanghi: Military College of Telecommunication Engineering (MeTE), Mhow, January, 1998. Title: Setting up an Intranet.
31. D. Sanghi: Indian Institute of Technology (IIT), Bombay, February, 1998. Title: IPv6: A Tutorial.
32. D. Sanghi: Railway Staff College, Vadodra, February, 1998. Title: Recent Trends in Information Technology.
33. D. Sanghi: D. E. Shaw India Software Ltd., Hyderabad, March, 1998. Title: IPv6: A Tutorial.

General Articles:

34. P. Jalote: The importance of preserving IITs, Economic Times, Apr 1, 1997.
35. P. Jalote: Software industry is abetting brain drain, Economic Times, June 24, 1997.
36. P. Jalote: Manpower shortages still plague the industry, Economic Times, Feb, 1998.

DEPARTMENT OF HUMAN AND SOCIAL SCIENCES

1. "Towards a Core Grammar of Indian Language" (with B.N. Patnaik) presented at the Seminar on Core Grammar, Organised Jointly by CIIL (Mysore) and IIALS (Bhubaneswar) held at Bhubaneswar during 18-20, October, 1997. Dr. A. M. Raina.
2. "Structural Reforms and Their Impact on Employment Generation in India: An Input-Output Approach", 39th Annual Conference of the Indian Society of Labour Economics, Kerala University, Trivandrum, Jan. 2-4, 1998 (with S.P. Sharma) Dr. K.K. Saxena.
3. "A Reply to Kripke's Qualia Argument" in the National Seminar on The Concept of Mind, Organized by Vismad Nad, Ludhiana (21-23, November, 1997). DLC.A. Tomy.
4. "Appreciating Poetry". In Literature for Enjoyment. Co-ordinated the programme for CCWP, IIT Kanpur, March 28, 1998. Dr.G. Neelakantan.

Budget Deficits inflationary in India", TIES Annual Meeting at alore, 27-30 March 1998., Dr.S. Sinha.

of HSS in Technical Education", Paper presented in National Conference on Integrating Humanistic Values & Social Concerns with Technical Education Programme, H.S.S. Dept. Roorkee University, 3-5, Nov. , Dr.A.K.Sharma.

Primary Development Organization (VDO) in Civil Society: Limits of Regional Particularism", International Seminar on Gandhi and the Twenty Century, Wardha, 1-4 Feb. 1998, Institute of Gandhian Studies Gointly (Chailendra Dwivedi); Dr. AK. Sharma.

should there be something when there be nothing", Paper presented in a workshop on Creativity in the Arts & Sciences, IIT Kanpur, Dr.S.K.

asan.

What is a poem?' Workshop on Poetry Appreciation, Centre for Creative Arts & Publication, (CCWP), IIT Kanpur, Dr.S.K. Srinivasan.

Role of Rural Infrastructure Development under the New Pachayat Raj n. 80th Annual Conference of (Amrit Jubilee) of the Indian Economic Association, Osmania University, Hyderabad, Dec. 27-29, 1997. Dr. B. Rath. Social Economy and its Gender Bias in the labour market. 39th Annual Inter Economics Conference, Kerala University, Thiruvananthapuram, Dec. 2-4, 1998. Dr. B. Rath.

Ecological Linkages of the proposed Gopalpur Steel Plant, Berhampur University, March 28, 1998. Dr. B. Rath.

RECENT ADVANCEMENTS IN INDUSTRIAL AND MANAGEMENT ENGINEERING

International Trade, Total Quality Management and Standardization, World Trade Day Convention, Bureau of Indian Standards, Kanpur, October 16, Ashok K Mittal.

RECENT ADVANCEMENTS IN MATHEMATICS

Existence of solutions to integro-differential and integro-functional differential equations, Silver Jubilee Conference of Orissa Mathematical Society, Jan. 23-25, 1998, D. Bahuguna, R.P. Singh and R.K. Shukla.

Recent studies in ferrofluid lubrication- A Review Symposium on Recent Advances in Science and Technology of Magnetic Fluids, Bharuch, 1997, Ashok Chandra, Prawal Sinha and D.K. Verma.

Bayesian likelihood estimation of mean under exchangeable exponential with a single outlier, International Biometric Society - Golden Jubilee Celebrations and the Fourth Conference of the International Biometric Society, Deptt. Of Mathematics, IIT Kanpur, Nov. 7-8, 1997, P.c. Joshi.

International Seminar on "On Recent Trends in Geometry, Operator Theory and Complex Dynamics", University of Jammu, Feb., 2-22, 1998, Invited lecture on "Complex bursts and bifurcations in the dynamics of one parameter family of analytic functions", G.P. Kapoor,

5. Estimating the true probability of correct selection: Two exponential distributions, International Conference on Statistical Inference, Combinatorics and Related-Areas, Banaras Hindu University, December 18-21, 1997, N. Mishra, S.K. Shanna and AN. Gill.
6. Submodular and bisubmodular functions having nonzero values on empty sets, 16th International Symposium on Mathematical Programming, Lausanne, Switzerland, 24_29th Aug., 1997, S. Rajesh and Prabha Sharm\.
7. A linear bound on stalling in the network simplex algorithm, 16th lot. Symposium on Mathematical Programming, Lausanne, Switzerland, 24-29th Aug., 1997, P.T. Sokkalingam and Prabha Sharma.
8. A note on a exact test and confidence interval for competition and overlap effects, Golden Jubilee Celebrations and the Fourth Conference of the International Biometric Society, Department of Mathematics, IIT Kanpur, Nov. 7-8, 1997, G.K. Shukla and C.S.v. Subrahmanyam.
9. National Conferfence on Mathematical Modelling of Ecological and Environmental Systems, Department of Mathematics, Jadavpur University, Calcutta, March 26-27, 1998, Modelling the depletion of dissolved oxygen due to pollutnon in a water body., G.K. Shukla, A.K. Misra and B. Dubey.
10. Modelling the survival two completing species by a hazardous action of one species in the habitat, *ibid.*, 1.8. Shukla and A Agarwal.
11. Effects of two cooperating populations on depletion of a forestry resources, *ibid.*, 1.8. Shukla, B. Dubey and A Shukla (paper Nos. 9-11 are likely to be published).
12. Korovkin approximation theory in harmonic analysis, Annual Conference on Vigyan Parishan of India, HBTI, Kanpur, October 24-26, 1997, To be published by Vigyan Parishad ofIndia, U.B. Tewari.
13. Seminars on Philo mphy of Science: Congnitive, Historical and Educational Perspective, Indiar Institute of Technology, Bombay, Feb. 18-22, 1998., M. Banerjee.
14. Improving on equivariant estimators, Department of Statistics, Punjab University, Chandisarh, March 1998, Neeraj Misra.
15. Estimation of order restricted exponential means, Department of Statistics, Punjab University, Chandigarh, March 1998, Neeraj Misra.
16. Stability of analysis of population models with diffusion, National Conference on Mathematical Modelling of Ecological and Environmental Systems, Department of Mathematics, Jadavpur University, Calcutta, March 26-27, 1998,1.8. Shukla.

Mathematical modelling of mucus transport in the lung, School of Mathematics and Applied Sciences, Jiwaji University, Gwalior, February 10th, 1998, IB. Shukla.

DEPARTMENT OF MATERIALS AND METALLURGICAL ENGINEERING

Hydrogen embrittlement of iron aluminides, Universite' de Paris-Sud, Laboratoire de Metallurgie Structurale, Orsay, France, 8 Sept. 1997., R Balasubramaniam

On wettability of stainless steel at 1000 C and above 28th A WS Int. Brazing and Soldering conference Los Angles, April 1997., N.K. Batra.

Weld simulation and numerical modelling of HSLA steels, 78th Annual A WS convention Los Angles, USA, April 1997., N.K. Batra.

DEPARTMENT OF MECHANICAL ENGINEERING

G. Biswas, A.K. Saha and K. Muralidhar, Invited Lecture on Large Eddy Simulation of Turbulence Workshop on RANS, LES and DNS, Dept of Aerospace Engineering, India Institute of Science, Bangalore, Nov. 11-12. 1997.

Mukerjee, Amitabha, 1998, Distributed tele-operation using gestures Robotics 98, Third ASCE specialty Conference on robotics for challenging environments, Albuquerque, April 29-30, 1998.

Mukerjee, Amitabha, Kshitij Gupta, Siddharth Nauliyal, Mukesh P. Singh and Neelkanth Mishra, 1997 Conceptual Description of Visual Scenes from Linguistic Models ICCV-98 Workshop on Conceptual Description of Images, January 1998.

Mukerjee, Amitabha, Debabrata Dash, Amit, Binny S. Gill, and Mukesh p. Singh, 1997 Looking beyond the mouse: Gesture Based internet Games SouthEast Asian Regional Computer Conference SEARCC-97, New Delhi Dec. 35, 1997.

Jain, Nilesh, and Mukerjee, Amitabha, Featureless Process Planning AIMDR97, Warangal, p. 125-130, (2nd Best paper Award)

Jan, Rahul, Giridhar Rajaran, and Amitabha Mukerjee, 1997 STRIKER: A vision based robot that learns reactive behaviours for scoring goals proceedings MIROSOT 97, AIST, Korea, June 1-5, 1997, p. 135-139.

Mali, Amol D., and Mukerjee, Amitabha, Mali, Cycles in Agent models of Intelligence, Proceedings ISORA-98, ed. G.Parker, Alaska, Oct. 1997.

Gupta, Atul; and Amitabha Mukerjee 1998 Modelling Shape uncertainty for grasp robustness, Proceedings ISIRS 98, ed M. Vidyasagar, Bangalore, Jan. 10-13, 1998.

9. Gupta, Shami Chakrabarty, Partha and Amitabha Mukerjee 19~
Microscopic simulation of venicular traffic on congested roads, ProceedinJ
ISIRS-98, ed M. Vidyasagar, Banaglore, Jan. 10-13, 1998
10. Jain, Rahul, Girdhar Rajaram, Sripada Subramaniam, Abhishek Ra~ Sumana
Gupta and Amitabha Mukerjee, 1998, A robot that learns to pI soccer
Proceedings ISIRS-98, ed, M. Vidyasagar, Bangalore, Jan. 10-1 1998
11. Mukerjee, Amitabha, and Dash, Sambit 1998, Off-site teleoperation usir
gestures, Proceedings

DEPARTMENT OF PHYSICS

1. *Non-equilibrium Statistical Mechanics of Disordered Systems*, Invited Talk, DAE
Solid State Physics Symposium, Cochi, 1997, D. Chowdhuri.
2. *Finite Field Dependence BRS Transformations and axial Gauges*, Theoretic;
Physics Tod,I): Trends and Perspectives, Indain Association for Cultivation (Science, April 22-24, 1998, S.D. Joglekar.
3. *71Kht-binding molecular dynamics simulations*, Workshop in Response FunctioJ
in Metals and Alloys, Dhaka, March 13-20, 1998, R. Prasad.
4. *Color Transparency and nuclear Filtering*, YKIS'97, Kyoto, Japan, Dec. 1: 1997,1.
Samuelson.
5. *Thermal behaviour of the Doppler-free spectrum of Sodium*, National Lase
Symposium held at Physical Research Laboratory, Ahmedabad, Dec. 10-12 199:
KK Sharma.
6. *Size Dependence of the Luminescence Peak Position in Silicon Nanocrystalite*.
American Physical Society Conference, Los Angeles, USA, March 1998, , Ranjan,
Vijay A. Singh and G.C. John.
7. *Analysis of Hydrogen in jJiamondlike Carbon Films Using Infrared Spectroscop:'*
9th AGM, Materials Research Society ofIndia, IIT Madras, February 11-13 1991 M.
Malhotra and Satyendra Kumar.
8. *Turbidity Spectroscopy of Cardiolipin Vesicle Suspension*, 42nd Annual Meetin of
Biophysical Societ.y, Kansas City, USA, Feb. 22-26 1998, T.K. Khan, R.t\! Hallen,
R. Behera, V. Saxena, J. John, S. Kumar and P. Gupta-Bhaya.

Seminars Presented:

1. *Discrete QCD and the Lined Dipole Chain Model for DIS*, CTS, I.I.Sc
Bangalore, July 1997. 1. Samuelson
2. *Oscillating D-String from IIB Matrix Theory*, (i) At Abdus Salam Intemationc
Center For Theoretical Physics (AS ICTP) Trieste, Italy, June 1998; (ii) A European
Organization for Nuclear Research (CERN), Geneva, Switzerland, Jul 1998. Gautam
Sengupta.
3. *Pulsed Laser Deposition of (Al, C) Thin Films*, Ahabama A&M Universit~ Normal,
Alabama (USA), June 19, 1998. R.K Thareja.
4. *Laser Ablated Plasma in Ambient Atmosphere*, Princeton University, NJ, USA June
25, 1998. R.K Thareja.

CONFERENCE ATTENDED OUTSIDE IIT KANPUR

ADVANCED CENTRE FOR MATERIALS SCIENCES

1. Single crystal fibres and their applications, Invited (K. V. Rao) lecture at the National Seminar on Perspectives in Solid State Materials, Osmania University, Hyderabad, 1998.

DEPARTMENT OF AEROSPACE ENGINEERING

1. 13th National Convention of Aerospace Engineers H.A.L. Nasik, Dec. 16-17, 1997, Presided over the Inaugural Session and Chaired the first plenary session. (Dr.N.G.R. Iyengar)
 2. 49th AGM of the Aeronautical Society of India, Bombay, Jan.6-7, 1998, Chairman of one Technical Session, presented a contributed paper. (Dr.N.G.R. Iyengar)
 3. 7th National Seminar on Aerospace Structures, Bangalore 13-14 Aug. 1997, Member, National Seminar Committee, invited speaker. (Dr.N.G.R. Iyengar)
 4. 48th International Astronautical Congress, Torino, Italy October 6-10, 1997, as :
 - *Member of an International Committee on Space and Natural Disaster Reduction Committee in its deliberations. (Dr.KJishna Kumar)
 - a session rapporteur of a session.
 - A presenter of the contributed paper.
- Confederation of European Aerospace Societies (CEAS) International Forum on Aeroelasticity and Structural Dynamics, Rome, Italy, June 17-20, 1997.(Dr.S. Venkatesan)
- 7th NASAS, Bangalore, India, Aug. 13-14, 1997.(DrC. Venkatesan)
- AIANAAS Astrodynamics Specialist Conference, Sun Valley, Idaho, USA, August 4-7, 1997 (presented contributed paper). (Dr.Ashish Tewari)
- ACFM, IIT Madras, 8-12 Dec. 1997, Presented five papers. (Dr.T.K. Sengupta)
- The 49th AGM of the Aeronautical Society of India, Mumbai, Jan. 16-17, 1998, presented contributed paper. (Dr. S.C. Raisinghani)

ENTRE FOR LASER TECHNOLOGY

R K Thareja : 25th Anniversary IEEE International Conference Plasma Science and Technology, June 1-4, 1998, North Carolina State, USA.
 Anjan K Ghosh: "Symposium on Wavelength Multiplexing", Dept. ofEECE, IIT Kharagpur, Jan 1998.

DEPARTMENT OF CHEMICAL ENGINEERING

1. Pollution Control 97, Bangkok, Nov. 12-14, 1997, contributed paper (Gupta)
2. 13th Int. Solid Waste Management Conf., Philadelphia, Nov.16-19, 1997 (Gupta)
3. Thirteenth National Symposium on Catalysis, April 2-4, 1997, Silver Jubilee Symposium of Catalysis Society of India, Dehradun, India. Co-Chairman session on "Theoretical & Photocatalysis" (Goutam Deo)
4. 2nd Pacific *Rim* Conference on Rheology, Melbourne, 1997. (a) Sei Chairman (b) Presented a Paper. (R.P. Chhabra).
5. 3rd ISHMT-ASMe Heat and Mass Transfer Conf., I.I.T. Kanpur, Dec 2~1997 (R.P. Chhabra).
6. IChE Annual Conference CHEMCON-97 (M.S. Rao) IIT Delhi, Dec. 14- 18, 1997 - contributed paper. (M. S. Rao)
7. Chief Guest at the Environment Day Function on June 5, 1997 organised by Institution of Engineers Kanpur Chapter at Institution of Engineers Building Kanpur. Gave Seminar on "For Life on Earth". (A.B.L. Agarwal)
8. Chairman, Parallel Technical Seminars, 'Computational Fluid and Mass Separation Techniques', (December 17), Golden Jubilee IChE Congress, Delhi, December 14-18, 1997. (P.K. Bhattacharya).
9. Chairman, Technical Session XII, Novel Separation Techniques-2 (Dec 18), Golden Jubilee IChE Congress, IIT Delhi, Dec. 14-18, 1997. (Bhattacharya)

DEPARTMENT OF CHEMISTRY

1. Invited talk or. : Dynamics of dipolar liquids near solid surfaces, 'Discussion Meeting of Ufast Chemical Phenomena', held in IISc, Bangalore, M 1-6, 1998., Dr. A. Chandra.
2. Novel Macromolecules of biological relevance, Conference on "Metallo-organic Chemistry", at Gorakhpur University, Gorakhpur, Sept. 26-28, 1997, Dr. ~ Chandra Sekhar .
3. Conference on Metallo-organic Chemistry at IIT Madras, Feb. 21-22, 1997 (Invited talk: Expanded porphyrins and their metal derivatives).
4. University of Hyderabad, March 3-5, 1998, Invited talk: Expanded porphyrin

5. International 'conference of metal-organic chemistry at Department of Chemistry, Jaipur, University of Rajasthan, Invited talk.: Metal and anion receptors based on Expanded Porphyrin", March 16-18, 1998.
6. Proceedings of Trombay Symposium on Radiation and Photochemistry, Trombay. Jan. 14th and 19th, 1998., An Excited State Intramolecular Proton Transfer Process followed by Twisting in 2-(2'-Aminophenyl) benzimidazole: Experimental and Theoretical Studies., S. Santra and S.K. Dogra.
7. Solvatochromism of 2-(4'-N, N-di-methyl aminophenyl) benzoxazole: ATICT Emitting Molecules, G. Krishnamoorthy and S.K. Dogra.
8. International Symposium on Ferrites in Aisa'97; Ferrites: The Science and Technology to New Horizons (IUMRS-ICA-97). Makuhari, Chiba, Japan, Sept. 16-18, 1997, presented papers on Magnetism of Nanophasic Materials, $COFe_2O_4$, $SrFe_{12}O_{19}$ and Fe_3N , Dr.N.S. Gajbhiye.
9. Eleventh National Symposium and Workshop on Thermal Analysis, Chemistry Department, Jammu University, Jammu, March 3-5, 1998, Chairman for the Technical Session and awarded cash prize of RS.5,000/- for the best paper contribution.
10. Golden Jubilee Conference on nonlinear dynamics and computational physics, PRL, Ahmedabad, Nov. 18-22, 1997, Invited Paper, Dr.N. Sathyamurthy.

XII International Conference on Computers in Chemical Research and Education, Univ. Poona, Pune, Jan. 5-9, 1998 - Invited.

Frontiers in Chemistry, Banaras Hindu University, Varanasi, Jan. 30-31, 1998- Invited.

International Discussion meeting on intense laser fields and their interaction with matter, Goe, Feb. 17-19, 1998 - Invited.

International Discussion Meeting on Ultrafast Chemical Phenomena, IISc Bangalore, March 2-6, 1998 - Invited.

Panelist in discussion on "Materials for Frontier Energy", March 13th 1998, Loyola College, Madras 600 034.

DEPARTMENT OF CIVIL ENGINEERING

ICORG-97, June 18-21, Hyderabad, Contributed paper by Dr. O. Dikshit.

National Remote Sensing Symposium for Natural Resources with special emphasis on Infrastructure Development, Nov. 26-28, 1997, National Remote Sensing Agency, Hyderabad, Contributed paper by Dr. O. Dikshit.

3. Vi site Lyon (France) from Aug. 17-22, 1997, to present a paper at 14th Conference on tructural Mechanics in Reactor Technology. Details of this paper are given-in the list of publications as above by Dr. Vinay K. Gupta.

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

By	Conference	Venue	Dates	Participation as
S. K. Aggarwal	22 nd Annual Software Engineering Workshop	Maryland, USA	Dec 1997	Presented a contributed paper
V. Agrawal	12 th JEEI~ Conference 011 Computational C~ll~xi'l..	University of Ulm, Germany	JUL 24-27, 1997	Presented a contributed paper
M. Agrawal	11 Conference on FST&TCS	IIT KharakfJUr	Dec 18-20, 1997	Chaired a Session
S. Biswas	International Workshop on Molecular Computins..	Mangalia	Aug 1997	Presented a contributed paper
D. Gupta	PRFTS'97	Taipai, Taiwan	Dec, 1997	Presented a contributed paper
	World	Caracas, Venezuela	July 7-12, 1997	Presented two contributed papers and chaired a session
P. Jalote	CONSEG'97	Chennai, India	Dec 1997	Gave an invited
P. Jalote	Annual CSI Conference	Ahemedabad, India	Feb, 1998	Gave an invited
D. Sanghi	ADCOMP'97	Chennai, India	Dec 1997	Presented a contribute paper
D. Sanghi	SEARCC'97	New Delhi, India	Dec 1997	Presented an invited paper
S. Saxena	ADCOMP'97	Chennai, India	Dec, 1997	Presented a contribute paper
S. Saxena	HIPC'97	Bangalore, India	Dec, 1997	Presented a contribute paper

DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

Recent Advances in Quantitative Methods, Indian Statistical Institute, Bangalore, March 1998, Invited to Present a paper: "Portfolio Diversification and Corporate Performance". Chairman of one session; panelist on Round Table Discussion. (Dr.T.V.S. Rammohan Rao)

The Indian Econometric Society, Mangalore, March 1998, A Paper: "Market Fundamentals, Policy Announcements, and Stock Price Movements" was accepted for presentation. (Dr. T.Y.S. Rammohan Rao).

National Seminar on Literary & Cultural Criticism in India~ Indian Institute of Advanced Study, Shimla, Nov. 4-6, 1997, Presented an invited paper entitled, "Criticism & The Cunning of Reason". (Bijoy H. Boruah).

National Seminar on the Concept of Mind, VISMAD NAD, Ludhiana, November 21-23, 1997. Presented an invited paper on "Consciousness and Subjectivity". (Dr.B.H. Boruah).

"A Systems Approach to Training" (Army Training Command, Shimla), MHOW (M.P), Military College of Telecommunication Engg. Sept. 1997 (invited paper) (Dr. Lilavati Krishnan).

"Culture and Social Psychology", Delhi University, Dept. Of Psychology, Dec. 1997. (invited paper) (Dr. L. Krishnan).

"Motivation and Morale" School of Armoured Warfare (SAW), Ahmednagar (Maharashtra) January 1998, (invited talk) (Dr. L. Krishnan).

The Seminar on 'Dreamless Sleep' organized by ICPR., Lucknow, Nov. 1997 (Dr. C.A. Tomy).

Seminar on Philosophy of Science: Cognitive, Historical and Educational Perspectives", organized under the joint auspices of ICPR, IIT Bombay, and HBCSE (TIFR). (Dr.C.A. Tomy).

"Subverting Patriarchy: The short stories of Alice Munro". In Poetics and Politics of the Contemporary Short Story. Academic Staff College, Univ. Of Rajasthan, Jaipur, 7-8 November, 1997. (Dr.G. Neelakanthan)

"Some Observations on Globalization and Technical Education in India". National Conference on Integrating Humanistic Values and Social Concerns with Technical Education. University of Roorkee. October 1997 (Dr.B.N. Patnaik).

"A Comparative Study of a Fragment of Bengali and Oriya Lexicons". Workshop on 'Shared Features of Eastern Indo-Aryan Languages'. Central Institute of Indian Languages (Regional Centre at Bhubaneswar) Dec. 3-5, 1997. Chaired a session and Gave a valedictory address (Dr. B.N. Patnaik) .

13. "The Mahalaxmi Myths in Orissa". National Seminar on Indian Folklore. Delhi niver-6ity, Delhi, February 1-3, 1998. (Dr.B.N. Patnaik)
14. Towards a Core Grammar of Indian Languages". Seminar on 'Core Grammer". Indian Institute of Applied Language Sciences and Central Institute of Indian Languages, Mysore, October 18-20, 1997. (with Achla M. Raina) (Dr.B.N. Patnaik).
15. "A Quantitative and a Non-Quantitative Approach to Resolve Reflexives and Pronouns in MaILyalam". National Seminar on Methods in Quantitative Linguistics. Indian Statistical Institute, Calcutta, March 3 and 4, 1998. (Dr.B.N. Patnaik)
16. Attended the Annual Convention of the National Academy of Psychology (India) at the Centre for Advanced Studies in Psychology, Utkal University, Bhubaneshwar, and Chaired a Symposium on Organizational Behaviour in India. (Dr A.K. Sinha).
17. 80th Annual Conference (Amrit Jubilee) of the Indian Economic Association at Osmania University, Hyderabad, Dec. 27-29, 1997. (Dr.B.Rath).
18. 39th Anllal Labour Economic Conference, Kerala University, Thiruvananthapuram, January 2-4, 1997. (Dr. B. Rath).
19. Workshop on IPR Education in India, National Law School, Bangalore, November 24-26, 1997.

DEPARTMETN OF INDUSTRIAL AND MANAGEMENT ENGINEERING

1. APORS, Melboume, Australia, November 30- Dec~mber 4, 1997, Session chaired, Ashok K Mittal.
2. Quality Circles FOIUm of India, Kanpur Chapter, Session Chaired, November 1997, Ashok K Mittal.
3. Institute of Engineers, (India), Kanpur Chapter, Total Quality Management, October 1997, Ashok K Mittal
4. Hindustan Aeronautics Limited, Kanpur, Total Quality Management, October 1997, Ashok K M ittal.
5. Thread India, Kanpur, Total Quality Management, October 1997, Ashok K Mittal.
6. Quality and Prl)ductivity Council, Luck now, Competitiveness Through Quality, October 1997, T.P. Bagchi.
7. Tata Locomotive and Engineering Co. Limited, Lucknow, Quality and the New Engineering Employee, October 1997, T.P. Bagchi.

DEPARTMENT OF MATHEMATICS

Joint Mathematics Meeting # 930 at Baltimore, U.S.A., Jan. '7-10, 1998, Presented the paper "Some results on NQR codes" by M.C. Bhandari, Manish K. Gupta and Arbind Lal.

Symposium on "Recent Trends in Science & Technology of Magnetic Fluids", Bharuch (Gujarat), Oct. 16-18, 1997, Chaired a session, Peeyush Chandra.

Conference on Fifty Years of Indian Mathematics, Institute of Mathematical Sciences, Chennai, 1997, Coordinator for Panel Discussion on Mathematics Research as a Career in India, Shobha Madan.

Sixth Discussion Meeting on Harmonic Analysis, Indian Statistical Institute, Calcutta, January 1998, Shobha Madan.

Conference in Algebra and Geometry, Kodaikanal, March 23-26, 1998, Participant, Alok Kumar Maloo.

Finite element simulations and physiological flows, University of Utah, Saltlake City, U.S.A., 12th January 1998, B.V. Rathish Kumar.

Element by element parallel FEM computations and CFD, University of Wisconsin¹, Milwaukee, USA, 12th January 1998, B.Y. Rathish Kumar.

FEA of flows, National Conference on Numerical Schemes and Qualitative Properties of Solutions of PES and Wavelet Analysis, Utkal University, Bhubaneswar, 1998, B.V. Rathish Kumar.

16th Int. Symposium on Mathematical Programming, Lausanne, Switzerland, 24-29th August 1997, presented invited and contributed papers, P. Sharma.

Third national conference on Mathematical Modelling of Ecological and Environmental Systems, Department of Mathematics, Jadavpur University, Calcutta, March 26-27, 1998, Chaired a session, presented papers, Gave a talk, IB.Shukla.

National Symposium on Emerging Areas of Applicable Mathematics, Department of Mathematics, Jadavpur University, Calcutta, March 28-29, 1998, Gave a talk, J.B Shukla.

Discussion Meeting on Harmonic Analysis, Indian Statistical Institute, Calcutta, Jan. 22-24, 1998. U.B. Tewari.

Annual Conference of the Orissa Mathematical Society, Utkal University, Bhubaneswar., Jan. 22-25, 1998, presented an one hour talk, V. Raghavendra.

DEPARTMENT OF MATERIALS AND METALLURGICAL ENGINEERING

1. 46th Indian Foundry Congress, IIT Delhi, February 20-22, 1998, V. Bansal.
2. NMD/ATM of IIM, November 1997, Jamshedpur, N.K. Batra.
3. 2nd European Oxygen Steelmaking Congress, Tarovoto, Italy, Oct. 1997.
4. Recent advances in Metallurgical processes, Bangalore, June, 1997, B. Dec.
5. Quality Challenges in continuous casting of steel, Ranchi, April 1997., D. Mazumdar.
6. National Seminar on Application of Texture in Materials Science Research, Hyderabad, (NASAT-97) 4-5 Dec. 1999, V.S.R. Murthy.
7. National Seminar on Surface Engineering at Jaipur, Sept. 5-6, 1997, Organized by the Institution of Engineers (India), Rajasthan State Centre, Jaipur., R. Narayan.
8. Seminar on Advances in Chemical Reaction Engineering at Chemical Engineering Dept., Banaras Hindu University, March 5-7, 1997., KN. Rai.

DEPARTMENT OF PHYSICS

1. International Conference on the Physics of Semiconductor Devices, Delhi. Dec 16-20 1997 and delivered an invited talk on *Electronic and Optical Devices of Semiconductor Nano-structures*. Vijay A. Singh.
2. 9th AGM, Materials Research Society of India, IIT Madras, February 11-13 1998 Satyendra Kumar.
3. National Workshop on String Theory at Institute of Physics, Bhubaneswar, March 4-9 1998. Gautam Sengupta.
4. 25th Anniversary IEEE International Conference on Plasma Science and Technology, June 1-4, 1998, North Carolina, USA. R.K. Thareja.

OTHER ACTIVITIES

(a) Technology Developed:

DEPARTMENT OF CHEMICAL ENGINEERING

1. Online Optimization of Atmospheric Crude Distillation Unit in a Petroleum Refinery. Technology is getting ready for transfer. (D.N. Saraf).
2. Software Sensors for Estimating Product Properties during Crude Switch in Petroleum Refinery. Technology is getting ready for transfer. (D.N. Saraf).

PARTMENT OF COMPUTER SCIENCE & ENGINEERING

Dr. M. Agrawal: Developed a new Private-Key cryptosystem to enhance the security of storage and communication for the Indian Navy.

Software Developed:

:PARTMENT OF CHEMICAL ENGINEERING

HAZOP (Hazard & Operability Study) - JP. Gupta

Simulator For Liquid-Liquid Extraction - A. Khanna

Dynamic Modeling and Advanced Control of an Amine Treatment Plant. This is ready for transfer. (D.N. Saraf)

Software developed for DG Process Control Course in Collaboration with Mr. Medhani Dhawan and Mr. Swapnil Gupta. (R. Ravi)

Modeling and Simulation of Separation Processes Version 1 Complete. Version 2 :>eing developed along with Interface. (A. Kannan)

~AR'fMENT OF COMPUTER SCIENCE & ENGINEERING

Dr. M. Agrawal: Software under development for a package incorporating the flew Private-Key Cryptosystem developed for Indian Navy.

Dr. R. M. K. Sinha and Dr. A Jain: Machine translation software developed under DOE project jointly with ERDC.

)ARTMENT OII' PHYSICS

Three software packages developed on Mechanics. They are ready for Transfer.
V.A. Singh

ndustry visited:

DEPARTMENT OF AEROSPACE ENGINEERING

Participated as a design reviewer for die INSAT II -D Satellite prior to its ~h.

FTRE FOR LASER TECHNOLOGY

Anjan K Ghosh: (a) HAL Lucknow, possible proj(~ct on Optical Sensors, 1 day, Jan 1998. (b) Industrial Electronics, Kanpur on Optical Sensors, 1 day, March 1998.

DEPARTMENT OF CHEMICAL ENGINEERING

- (a) BPCL, Bombay, Mahul Refinery - for project negotiations (A. Khanna)
- (b) VAM Organics, New Delhi, Corporate Office - for project negotiations (A. Khanna)
- (c) University of Colorado at Boulder, and NIST, Boulder, U.S.A. for scientific interaction, June 22-27, 1997 (RP. Singh).
- (d) Pulp and Paper Industry in Rae Bareilly. (A. Kannan)

DEPARTMENT OF CIVIL ENGINEERING

- 1. Visited Atomic Power Project Site at Kaiga (Karnataka) during December 18-21, 1997 as the Principal Investigator of the ongoing Research Project in the area of Reactor Containment Structures Sponsored by the Atomic Energy Regulatory Board, India by Dr. S.K. Chakrabarti.
- 2. Organized a self-sponsored short course on "Aseismic Design of Structures - Random Vibration Approach", at Taj Residency, Bangalore from May 20-22, 1997. This course was attended by 24 participants from various private, semi-government and government organizations by Dr. Vinay K. Gupta.

DEPARTMENT OF MATHEMATICS

- 1. Department of Mathematics, N.C.S.U., Raleigh, NC, USA. December 15-January 31, 1998, M.C. Bhandari.
- 2. Visited CDAC, Pune with my graduate student 'Satyendra Tomar to work on Parallel Computing, Pravir Utt.
- 3. Department of Statistics, Punjab University, Chandigarh, Academic interaction, March 2-8, 1998, Neeraj Misra.

DEPARTMENT OF MECHANICAL ENGINEERING

- 1. Tata Research, Design, and Development Centre (TRDDC), Pune to give seminar on genetic algorithms Oct. 8-9, 1997. (Dr.K. Deb).
- 2. National Remote Sensing Agency, Hyderabad to give a seminar on genetic algorithms, May 1st, 1998.

DEPARTMENT OF PHYSICS

- 1. Visiting Scientist in High Energy Physics Group, at Abdus Salam International Centre for Theoretical Physics (AS ICTP), Trieste, Italy, May 15 to June 15, 1998. Gautam Sengupta.
- 2. Visiting Scientist in Theory Division, European Organization for Nuclear Research (CERN), Geneva, Switzerland, June 16 to July 15 1998. Gautam Sengupta.

DEPARTMENT OF CHEMISTRY

Magnetoresistance in CrO₂-polymer composites, European Patent (accepted: Pat. No. awaited).

Awards and Honours:

DEPARTMENT OF AEROSPACE ENGINEERING

Elected Vice -President of Aeronautical Society of India for the year 1998.

Suchit Kumar Ghosh Memorial Medal for 1996-97, awarded on 10.1.1998 by the Institution of Engineers (India).

DEPARTMENT OF CHEMICAL ENGINEERING

OAE, Young Scientist Research Award. (Goutam Oeo)

Editorial Board Member - "Journal of Environment & Pollution", Technoscience Pub., Jaipur (p.K. Bhattacharya).

AICTE Career Award for Young Teachers, 1998. (A. Kannan)

DEPARTMENT OF CHEMISTRY

Fellow of the Indian Academy of Sciences (Bangalore), Or.P.K. Bharadwaj.

Ajit Memorial Lecture, 1997 (IACS, Calcutta), Or.PX. Bharadwaj.

Ani I Kumar Bose Memorial Award of Indian National Science Academy, 1997, (Dr. A. Chandra).

Member of Chemistry and Chemical Technology Committee of HRDG of CSIR, Dr. H. Ila.

Member of PAC (Organic) DST (1998-2001), Dr.H. Ila.

Member of Research Council Committee, RRL. Jorhat, Dr.H. Da.

INSA Young Scientist, 1997, Dr.F.A. Khan.

Associate of the Indian Academy of Sciences, 1997-2000, Dr.F.A. Khan. Advisory Board of Journal of Frontier Energy, a new journal published by Jesuit Colleges - Tamilnadu, Dr.S. Sundermanoharan.

DEPARTMENT OF CIVIL ENGINEERING

Dr. Vinay K. Gupta has been awarded "INAE Young Engineer Award, 1997" awarded by Indian National Academy of Engineering.

Dr. Ramesh P Singh has been awarded Indian National Remote Sensing Award, 1997 awarded by Indian Society of Remote Sensing.

Dr. T. Gangadharaiah has been awarded, "Sicjotrasen Award"~ awarded by Institution of Engineers (India).

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

- ~ Dr. M. Agrawal was a Programme Committee member for the I? FST&TC Conference held in Kharagpur, Dec 1997.
- ., Dr. S. Ganguly was a Programme Committee member for the Conference in Ve~ Large Data-Bases (VLDB'97).
- ~ Dr. A. Jain was a Programme Committee member for International Conference on Advance Computing, ADCOMP'97.
- ~ Dr. A. Jain was a Programme Committee member for the 11th International Conference on VLSI Design, VLSI'98.
- ~ Dr. S. Saxena was a Programme Committee member for ADCOMP'97.

DEPARTMENT OF MATHEMATICS

1. Distinguished Services Award, Awarded by Vijnana Parishad of India, 7th National Conference, October 24-26, 1997, HBTI, Kanpur, S.K. Gupta, J.B. Shukla, U.B. Tewari.

DEPARTMENT OF MATERIALS AND METALLURGICAL ENGINEERING

1. Elected Fellow of the Institute of Materials, London, R.K. Dube.
2. Delivered Prof N.P. Gandhi Memorial Lecture 1997 at the invitation of Indian Institute of Metals, and BHUMET Golden Jubilee Trust, BHU., A. Ghosh.
3. Re-invited by the Alexander von Humboldt Foundation in Germany for a visit of German academic and research institutions between May-July, 1997., R.K. Ray.
4. Elected a Member of the International Committee on Textures of Materials (ICOTOM), R.K. Ray.

DEPARTMENT OF MECHANICAL ENGINEERING

1. Best Paper Award' The Aerospace Engineering Division Medal 1997-98 of the Institute of Engineers for the paper entitled Application of a Multigrid Method for Flows Behind Bluff Bodies in a channel.
2. Recipient of the certificate of Merit by the Institution of Engineers (India) for the paper entitled "Numerical Simulation of Thermal Erosion during EDM Process" published in 1996.
3. Chairman, Workshop on Conceptual Description of Visual Images, ICCV-97, Bombay 97. (Dr. A. Mukherjee).
4. Organising Committee, AAAI Workshop on Language and Space, Rhode Island, July 1997 (Dr. A. Mukherjee).
5. Advisor, International Joint Team, World Micro-Robot Soccer Competition MIROSOT,97, KAIST, Korea June 1997. (Dr.a. Mukherjee).
6. Associate Editor, FIRA Newsletter Published by the Micro-robot Soccer Competition MIROSOT, Korean Institute of Advanced Technology (since 7/97) Dr. A. Mukherjee).

DEPARTMENT OF PHYSICS

Fellow of National Academy of Sciences, India, elected In 1997, A.K. Majumdar.

) Continuing Education Activities

DEPARTMENT OF AEROSPACE ENGINEERING

Short course on Helicopter Technology, October 15-18, 1997. Organized by the department, attended by participants from industry and research organizations. (Dr.N.G.R. Iyengar)

Organised a short course on "Helicopter Technology" at IIT Kanpur during 15-18 October 1997 (41 participants from Army, Navy, Air Force, HAL, NAI, ADE, DRDO Labs Registered for the course. The course was highly appreciated by the participants and the feedback was to extend the duration of the course to a week or 10 days). (Dr.C.Venkatesan)

Mathematical Modelling and Computational Methods, QIP, Bhubanesware 10-22, 1997, 40 from Academic, Also act as a Joint Coordinator of this Short term course. (Dr. D.P. Mishra)

Model Curriculum Development for Aerospace Engineering, sponsored by AICTE. (S. Mittal)

Short course on Helicopter Technology, IIT Kanpur, 15-18 October 1997, No. Attended approx. 40. (Dr. T.K. Sengupta)

Short term course on Helicopter Technology, IIT Kanpur, 15-18, October 1997, No. Attended approx. 40.

DEPARTMENT OF CHEMICAL ENGINEERING

Self-sponsored Hazard Analysis in Chemical Industry

1. Sept. 23-26, 1997 IIT Bombay. 67 attended, all industries (J.P. Gupta)
2. Feb. 10-13, 1998, CLRI, Madras, 34, all industries. (JP. Gupta)

DEPARTMENT OF CHEMISTRY

Modern Trends in Inorg. Chemistry, National Symposium, Convened Dec. 46, 1997.

DEPARTMENT OF CIVIL ENGINEERING

"Prestressed Concrete Construction" a short course for the Engineers (about 30) of Mis Engineers India Ltd. New Delhi during Dec. 15-20, 1997 by Dr. S.K. Chakrabarti.

2. Organized and conducted the self sponsored course, "Seismic Design of Reinforced Concrete Buildings' (Dr.S.K. Jain and Dr.C.v.R. Murty):

Kanpur in May 1997 (Civil Wing of Dept. Of Telecom; 15 persons);
 Madras in July 1997 (L&T ECC Construction Group: 31 persons);
 Kathmandu in Dec. 1997 (for Nepalese Engineers; 25 persons)

3. Jointly conducted with Hilti India Pvt. Ltd., a One-Day Seminar on Earthquake Resistant constructions (IITK) and Latest Tools, Tech. And Applications for Construction (Hilti Team) (March 4, 1998 about 120 persons participated in the Seminar) - Dr.S.K. Jain.

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

The department developed a significant part of the courseware used by the IBM in their countrywide training for software professionals - called the IBM-ACE programme. The department also undertook training for IBM-ACE teachers, and other industries, e.g., Cadence, D ESHA etc. The details are as follows:

Name of the course	Coordinator	Type	Place	Dates	Number of attendees
Cadence Induction Training Programme	S. K. Aggarwal		IIT Kanpur	Jun-Jul. 1997	25
IBM-ACE Teachers training programme	S. Jain		IIT Kanpur	Sep, 1997	50
Training programme for Oracle	D. Sanghi		Oracle, Bangalore	Jan, 1998	25
Training programme for D E Shaw	D. Sanghi and T. V. Prabhakar		D.E.Shaw, Hyderabad	Feb, 1998	25
Training programme for Cadence	R. Moona		Noida	Feb, 1998	30

Besides these departmental initiatives, individual faculty members also conducted courses for the industry

Name of the course	Coordinator	Type	Place	Dates	Number of attendees
Emerging Trends in LAN/WAN Communication	D. Sanghi		Annual, CSI Convention, Ahmedabad	November, 1997	150
Computer Networks	D. Sanghi	OIP	IIT Kanpur	Nov, 1997	50

DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

1. Organised and coordinated a *QrP*, IIT Kanpur sponsored short course on Effective Professional Communication; target audience - 25 teachers from Engineering Colleges all over the country; held at IIT Kanpur during 6-11 July 1997. (Dr. Achla Misri Raina)

2. Developed a computational Lexicon for the tribal language in India, Project sponsored by DORD, IIT Kanpur. (Dr. Achla Misri Raina)
3. Coordinator (with Prof. B.N. Patnaik), Seminar on "Creativity in the Arts & Sciences", Organized by CCWP, IIT Kanpur, 14-15 Feb. 1998.

DEPARTMENT OF INDUSTRIAL AND MANAGEMENT ENGINEERING

1. Course on . Small Industrial Enterprise Management, March 18-August 4, 1997, IIT Kanpur, AP. Sinha and R. Varman.
2. Course on Marketing of Products and Services, July 6-11, 1997, Tribhuvan University, Kathmandu, AP. Sinha.
3. Course on Accounting and Economics for Engineers/Managers, July 13-18, 1997, Tribhuvan University, Kathmandu, AP. Sinha.
4. Course on Marketing of Service Industry, November 8-11, 1997, IIT Kanpur, AP. Sinha.
5. Course on Total Quality Management in Manufacturing, August 1, 1997-March 31, 1998, LML (Industrial Electronics Unit), Kanpur, T.P. Bagchi.

DEPARTMENT OF MATERIALS AND METALLURGICAL ENGINEERING

1. Modelling of modern steelmaking processes oriented to Industrial and R&D engineers (Sept. 8th -12th, 1997) (Joint Convenor: B. Deo), D. Mazumdar.
-) Corrosion and Its Control, Nov. 19-22, 1997, Sponsored by SIDBI, R. Narayan.

DEPARTMENT OF MECHANICAL ENGINEERING

QIP Summer School on "Advanced Machining Processes", IIT Kanpur, July 1-26, 1997

DEPARTMENT OF PHYSICS

Taught a new course, PHY 684 (Physics and the Mind) in the second semester, Tulsi Dass.

Participation in High Level Industry Academia

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Professor P. Jalote spent the whole of last year as Vice President (Quality) at Infosys Technologies Ltd., Bangalore.

N. Rama Rao Chair was established in the department through a donation from Mr. N. R. Narayana Murthy, Chairman & Managing Director of Infosys

Technogtes Ltd., Bangalore. The aim of the Chair is to promote excellence in Computer Science research. Chair funding also supports eminent short-term visitors, workshops, schools etc.

3. Cadence India Ltd. has set up a Cadence Research Centre at the department. Drs. R. Mocna, S. K. Aggarwal, and D. Gupta are acting as the long-term consultants to the centre.