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R.M. Singru

71. Study of Na20:-Si02 -Fe~Oa-Y20a glass by Mossbauer and EPR spectroscopy (J.Mater. Science 17, 1687, 1982)  
Akhilesh Prasad, D. Bahadur, R.M. Singru and D. Chakravorty

D. Bahadur, D. Chakravorty, Akhilesh Prasad & R. M. Singru

A. A. Manuel, R. Sachot, P. Descounts, M. Peter, R.M. Singru and A.K. Singh

74. Exact Solution of Schrödinger's equation for a Particle in a Tetrahedral Box (J Ournal of Physics, A15, 2131, (1982)  
H. S. Mani, H.R. Krishnamurthy, H.C. Verma

H. S. Mani, J anardan P. Singh

J. K. Battacharjee, R. A. Ferrell

A. K. N~am,A. K. M~umdu
78. Deviations from Curie-Weiss Law in AuMn and AgMn Spin Glasses (Solid State Commun. 45, 907, 1983)
   A.K. Majumdar, V. Destreich & D. Weschenfelder
79. Proof of the T5f2-term in the Magnetization of Fe(BC) Metallic Glasses
   (Phys. Rev. May 1983)
   A.K. Majumdar, V. Gestreich, D. Weschenfelder and F.E. Luborsky
80. Transition from Anti-ferromagnetism to Field-induced Ferromagnetism in FeNiCr Alloys
   (Europhysics Conference on Solid State Physics, Manchester, U.K., March 22-25, 1982)
   A. K. Majumdar, P. V. Blanckenhagen
81. Spin-Waves in FeBC Ternary Metallic Glasses
   (Ibid)
   A.K. Majumdar, V. Oestreich, D. Weschenfelder and F. E. Luborsky .
82. Correlation between Magnetoresistance and Magnetization in AgMn and AuMn Spin-Glasses (Internal Report IC/82/147, International Center for Theoretical Physics, Miramare-Trieste, Italy, Aug. 1982)
   A. K. Majumdar
83. Study of Magnetic Alloys
   (Presented at Symp. of Indian Cryogenic Council, Dec. 1982)
   R. K. Ray
84. Dislocation Dipoles and Loops in Magnesium Oxide Crystals (Phil. Mag. A 1982, Vol. 46, No.4, 641-651)
   G. K. Rao, A. S. Parasnis
85. Teaching of Polarization of Electromagnetic Waves
   (Proc. UNESCO Conf. Bangi, Malaysia, 1982)
   A. S. Parasnis
86. Teaching of Diffraction and Image Formation
   (Proc. UNESCO Conf. Bangi, Malaysia, 1982) -
   A. K. Gupta & A. S. Parasnis
87. Spin Structure of Baryon Fragmentation Functions
   (Phys. Letters 115B, 313, 1982)
   R. Ramachandran, R. P. Bajpai

88. Hadron Polarisation in e+, e- Annihilation
   (Phys. Rev. D to be published)
   R. Ramachandran, H. S. Mani

89. Spin Structure of Nucleons
   (Pramana, to be published)
   R. Ramachandran

90. Structure of Magnetization Studies of Ti-substituted
    Ni$_{0.5}$Zn$_{0.5}$ Ferrite (J. Appl. Phys., 53, 2272, 1982)
    D. C. Khan, M. Mishra, A. R. Das

91. Mossbauer and Magnetization Studies of
    Nd$_3$Fe$_3$ Alloys (Proc. Ind. Acad. SC., 1982)
    N. V. Nair, D. C. Khan

92. Absorption Studies of K$_2$O-KBr-B$_2$O$_3$ Glasses
    A. Mookerjee, D. S. Srivastava, S. C. Sen

93. Photolumineence Studies of K$_2$O-KBr-B$_2$O$_3$ Glasses
    A. Mookerjee, D. S. Srivastava, S. C. Sen

94. Transverse Magneto-resistance and Hall Resistivity in
    Cd and Its Dilute Alloys
    (Pre print IC/82/112 ICTP, Trieste, Italy)
    O. P. Katyal, K. M. Khanna

95. Microscopic Description of the Onset of Large
    Deformation in the Zirconium Region
    (Phys. Letts. 1198, 257, 1982)
    S. K. Khosa, P. N. Tripathi, S. K. Sharma

96. Yrast Bands in Light Nuclci and the effective Inter-
    actions in 3=0, 2 States (Phys. Rev. 26, 2706, 1982)
    S. K. Sharma, V. Pottahare, V. K. B. Kota

97. Characteristics Debye Temperature of Ammonium
    Fluberyllate (NH$_4$HBeF$_6$ (Acta Cryst. A38, 388, 1982)
    Anita Garg, R. C. Srivastava
98. **Electric Field Gradient and Its Temperature Variation at l11Cd Nuclei in Hafnium Metal**
   
   L. Hermans, M. Rots, G. N. Rao,
   R. Conessement, M. Cogneau

   
   J." S. Goela, R. K. Thareja

100. **Cooling or Heating of Gases through Energy Transfer Using Lasers** (Optics Commun. 42, 417, 1982)
    
    J. S. Goela, R. K. Thareja

101. **Experimental Investigation of Self-generated Magnetic Fields in ICF Targets** (B.A.R.C. Proceedings)
    
    R. K. Thareja

**COMPUTER SCIENCE PROGRAMME**

1. **The Method of successive updated iterated defect corrections and its applications to second kind Volterra Integral Equations**
   (BIT, Bind 22, Heffe No.3, 1982)
   
   D. D. Sathiaraj and R. Sankar

2. **Statistical Design Verification**
   (12th Int. Symp. on Fault Tolerant Computing (FTCS-12), Santa Monica, June 1982)
   
   S. C. Seth with V. D. Agrawal

3. **Characterizing the LSI Yield Equation from the Chip-test Data** (The 1982 Int. Conf. on Calc. a Syst (ICCC), Sept. Oct. 1982)
   
   S. C. Seth with V. D. Agrawal

   
   S. C. Seth with T. C. Hsiao

5. **An Algorithm to Decide Feasibility of Linear Integer Constraints occurring in Decision Tables**
   
   S. Bisvyas & V. Rajaraman
6. Algorithm specification with Test Action Separation S. Biswas & V. Rajaraman

INDUSTRIAL AND MANAGEMENT ENGINEERING PROGRAMME

1. A Convex Polytope of Diameter one

2. An Extension of Edge Covering Problem
   S. Agarwal, A. K. Mittal, P. Sharma

3. Scheduling Components for Automatic Manufacturing of Printed Circuit Board
   (Proceedings of XV Annual Convention of ORSI, Kharagpur)
   A. K. Mittal, P. V. Ramana

4. Bivalent Quadratic Integer Programming-A Computational Study
   (Presented at Annual Convention of CORSI, Winnipeg, Canada, May 1983)
   S. K. Gupta, K. P. Reddy, A. K. Mittal

5. Interactive Solution of Bicriteria Mathematical Programmes (Naval Research Logistics Quarterly)
6. A Multiobjective Approach to the National Transport Policy (Annual Convention of ORSI, 1982)
   S. Sadagopan, T. Rajendran

7. Innovation in Indian Firms:
   Myths and Reality
   (Accepted for publication in forthcoming Economic and Political Weekly)
   A. P. Sinha

8. Interpretative Structural Modelling of a Food Supply System
   (Proceedings of the Int. Conf. on Food System of the World with Special Reference to India Feb. 15-20, 1983, Aligarh)
   Wasim Abbas, J. L. Batra

9. An Integrated Approach for Productivity Improvement
   (Proceedings of the All-India Seminar on Productivity Maximization in Industry, The Institution of Engineers (India) April 1983)
   Wasim Abbas, J. L. Batra

    R. K. Ahuja, J. L. Batra, S. K. Gupta

11. Convex Cost Network Flow and Related Problems
    (Accepted for publication in European Jr. of Operations Research)
    R. K. Ahuja, J. L. Batra, S. K. Gupta
12. The Parametric Network Feasibility Problem  
(Accepted for publication in Cahiers Du Centre D Etudes De Recherche Operationnelle)  
   R. K. Ahuja, J. L. Batra, S. K. Gupta

13. Minimizing Unconstrained Quadratic Bivalent Functions  
(Accepted for publication in European Jr. of Operations Research)  
   S. K. Gupta, V. P. Gulati, A. K. Mittal

14. Constrained Optimum Communication Tree and Sensitivity Analysis (Accepted for publication in SIAM Jr. of Computing)  
   S. K. Agarwal, A. K. Mittal, P. Sharma

MATERIAL SCIENCE PROGRAMME

1. Melt Spinning Parameters and the Metallic Glass Ribbons geometry (J. Mat. ScLLET. 1(9), 385)  
   D. C. Agrawal

2. Mossbauer spectroscopic studies on some Fe-B Metallic Glasses (Proc. Int. Conf. on Mossbauer Effect Indian National Science Academy, 1982, 335)  
3. Effect of Aluminium Substitution of Hydrogen Storage in MNis-x Alx Systems
   R. Rani, S. Gupta, J. Kumar and K. N. Rai

   P. Sarkar, Jitendra Kumar, D. Chakravorty

5. Spin-state equilibrium in YbCoO3 (Bull. Mat. bci., 4, 7, 1982)
   D. Bahadur

   D. Bahadur, B. Sharma & D. Chakravorty

7. Study of Na20-Si02-Y02a-Fe20a glass by Massbuer and EPR Spectroscopy (J. Mat. Sci. 17, 2687, 1982)
   A. Prasad, D. Bahadur, R. M. Singru and D. Chakravorty

8. Electron Transport and Magnetic Properties of La1_x:Sr",Co",SiOy (x = 0a or x = yb) (J. Solid State Chem. 46, 197, 1983)
   D. Bahadur & Om Prakash

9. Effect of nucleating agents on the crystallisation in Na20a-Si02-Y20a-Fe20a glass system (J. Appl. Phys. 53, 7813, 1983)
   D. Bahadur, P. K. Das & D. Chakravorty

    Om Prakash, D. Bahadur
11. Magnetic properties of PbO-BzoAlzOa-FeOa-YzOa glass Ceramics  
   (J. Magnetism and Magnetic Materials 31-34, 1513, 1983) D. Bahadur, D. Chakravorty, A. Prasad,  
   R. M. Singru

12. On the Mechanism of Degradation in Si/SiO2/Ag MOS Solar Cells  


15. The effect of illumination on Inversion Layer formation in Metal-Thin Oxide-Silicon devices  
   (J. Appl. Phys. 54, pp. 1124-1126, 1983) D. Shankar & S. Kar

Nuclear Engineering & Technology Programme

1. Solution of the energy Dependent Neutron transport equation by Separation of variables  
   (Nucl. Sci. and Engg. 82, 372, 1982) A. Sengupta

2. A Transport Theoretic approximation method for the monoenergetic neutron transport equation  
   (J. Phys. (A) 15L 487, 1982) A. Sengupta

3. Experimental programme in gas discharges and plasma diagnostics at IIT/K  
   (Presented at Workshop on Fusion, IP A, Bombay) M. S. Kalra
4. X-ray Fluorescence applications to grinding process
   (ANS Transactions, June 1982)
   K. Sri Ram

5. Vibration analysis of periodically supported pipe
   without and with absorbers
   (accepted for publication in Journal of
   Applied Mechanics, 1983)
   A.K. Mallik, S.B. Kulkarni and K. Sri Ram

6. 'Analysis of Steam generator transients with
   RETRAN - 02' (International Retran
   Conference, Sandiego, April 1982)
   K. B. Ramsden, P. Munshi,

7. Suppression pool temperature transient
   analysis using RETRAN -01
   (International Retran Conference, Sandiego, April
   1982)
   P. Munshi
DEPARTMENT OF AERONAUTICAL ENGINEERING

Conferences

A. Organised at the Institute

   K. Ghosh

B. Attended by Faculty elsewhere

1. "Design Engineering" Sept. 6-8, 1982  
   (Organised by Engineering Staff College, Hyderabad)  
   Vijay Gupta.

   N. G. R. Iyengar
   N. G. R. Iyengar

4. Annual General Meeting of the Aero. Society of India  
   Dec. 9-11, 1982, IIT, Madras  
   N. G. R. Iyengar

5. 13th International Symposium on Space Science and Technology, Japan. June 28 to July 3, 1982, Tokyo, Japan  
   A. C. Jain

6. 11th National Conference on Fluid Mechanics & Fluid  
   Pqyv~r, flyd~rqb~4, Dec. 16-18, '82, Hyderabad  
   R. ~. SuHerey

Summer & Winter Schools/Workshops

Attended by Faculty elsewhere

1. Short course 0N IStability of Structures' at the Engineer..; ing Staff College of India, organised by Dr. N. G. R. Iyengar & Dr. Ashwini Kumar, Sept. 27--0ct. 2, 1982, Hyderabad  
   N . .q.'R. iyep.gar

2. Short course on IIAircraft Design" sponsored by ARDB  
   N. G. R. Iyengar

3. Workshop-eum-Seminar on State & Parameter Estima-  
   T T~~hpiques in Aerosp~~e Engineering (orgp.pised by ISe, Bangalore & ISRO) Dee. 13-18, 1982, Bangalore  
   M. Krishnamurthy

4. Fraptp~e M~chantes & A pplieC}tiop to  
   D. Yadav
CHEMICAL ENGINEERING

a. Organized

1. Compact Heat Exchangers at Tata R&D Centre, Poona, Jan. 1982
   J. P. Gupta

2. Recent Advances in Membrane Separation Processes, at IIT-R, December 6-18, 1982
   R. P. Singh, P. R. Bhattacharya

   R. N. Sharma

b. Attended by Faculty elsewhere

1. UGC symposium: Ion Exchange in Teaching and Research-Recent Developments - Viswa Bharti University, 1982,
   R. N. Sharma

   R. N. Sharma

3. Workshop on Science & Technology held at IIr-Ranpur in December 1982; paper entitled 'Technological Self-Reliance and Multinational Corporations'
   R. S. Gandhi

4. Seminar entitled "On some Problems in Modelling Polymerisation Reactors" was presented in I.I.Sc., Bangalore in May 1982
   R. S. Gandhi

6. Three phase flow through porous media, Seminar delivered by Professor D. N. Saraf at Mobil Research Centre, Dallas, Texas, U.S.A. in March 1982 and Petro Canada Research Center, Calgary, Alberta (Canada), May 1982

7. Process simulation of Ammonia Plants, Seminar delivered at University of Calgary, Jan. 1982, D. N. Saraf

8. Attended 34th Annual IIChE Conference held in 1981, J. K. Gehlawat


10. Wasserstoff Informationstagung Symposium, Berne, Switzerland, June 1982, R. D. Srivastava


14. Syracuse University, Syracuse, U.S.A., October 1981, R. D. Srivastava


18. University of Maryland, College Park, U.S.A.,
   December 1981
   R. D. Srivastava

19. E.I.duPont de Nemours & Company, Wilmington,
    DE, U.S.A., December 1981
   R. D. Srivastava

20. Witco Chemical Corporation, Oakland, N.J., U.S.A.,
    January 1982
   R. D. Srivastava

21. Imperial Chemical Industries, Runcorn, England,
    March 1982
   R. D. Srivastava

22. University of Napoli, Naples, Italy, March 1982
   R. D. Srivastava

23. E.T.H., Zurich, Switzerland, April 1982
   R. D. Srivastava

24. University of Erlangen, Erlangen, West Germany,
    May 1982
   R. D. Srivastava

25. Ecole Poly tech, Launsanne, Switzerland, June 1982
   R. D. Srivastava

26. Seminar on Polyethylene terephthalate at Indian Aca-
    demy of Sciences, 48th National Meetings, Nainital,
    October 1982
   S. K. Gupta

27. Two seminars at IPCL, R&D Department, Baroda on
    modelling and optimization of Polycondensation
    Reactors and Effects of Diffusion on Step-Growth
    Polymerization, 1983
   S. K. Gupta

28. 35th Annual Session of IIChe, Walt air held from
    January 2-5, 1983 attended by Professor M.S. Rao
    Chairman of session on Reaction Engg. II
29. Lectured in Short Courses: Recent Developments in Process Engineering, IIT-Delhi, 1982 and Computer Applications in Chemical Engineering, RRL, Hyderabad, 1982
   Ariil' Kumar

30. Attended CHEM-TECH Conference on Pollution Control and monitoring, Feb. 1983
   A. B. L. Agarwal

Department of Chemistry

Invited lectures, Symposium and Conferences

2. Poona University, March 1983
   S. Ranganathan
3. First National bio-organic symposium, Bangalore, August 1982
   S. Ranganathan
4. Professor Kulkarni Endowment Lectures, Bombay, March 1982
   S. Ranganathan
5. Glaxo Research Laboratories, April 1982
   S. Ranganathan
6. Ciba-Geigy research centre, April 1982
   S. Ranganathan
   D. N. Dhar
8. Invited talk: Seminar on the chemistry of the evolution of life; Mahabaleswar, Jan. 10-17, 1983
   P. S. Goel
   P., S. Goel

10. Two papers based on the Ph.D. work of krishna were presented at the National on Radio and Radiation chemistry (D.A, Pune University in Dec. 1982  
   S.'Mukherji

   S. S. Katiyar

   S. S. Katiyar

13. Invited talks by Dr. N. Sathyamurthy o a prototype alkali-hydrogen halide exc given at:  
   (i) Hahn-eitner Institute, Berlin, West Sept. 1982  
   (ii) Max-Placnk Institute for stromung Gottingen, West Germany, Sept. 19  
   (iii) Department of Chemistry, Univ. of Toronto, Canada, Jan. 1983  
   (iv) Univ. Division, NRC, Ottawa, Canal

14. 7th International Symposium on Gas Ki Gottingen, West Germany, Aug. 1982

15. Symposium on the chemistry of natura: Sydney university, Sydney, Australia,  
   S. Chandrasekharan

16. Delivered six lectures to Post-Graduate CSO in a summar school held at IIT Ca June 1983  
   S. K. Dikshit
17. Participated in the symposium held at IIT/Bombay to review the chemistry course at B.Tech., M.Sc. and Ph.D. level
   S. K. Dikshit

18. An invited lecture on 'Recent development in kinetic methods of analysis for trace constituent determination' at the National Symposium on recent trends in micro-analytical chemistry held at the Presidency College, Calcutta, from Dec. 27-30, 1982
   P. C. Nigam

19. An invited talk on 'Mechanism of ligand replacement reactions in octahedral nickel (II) complexes at the National Symposium on Coordination chemistry held at the M.L.K. College, Balrampur, U.P. (Oudh Univ.) from Feb. 5-6, 1983
   P. C. Nigam

20. Presided over a session and presented a paper at the National Symposium on Kinetics and mechanism of reaction in solution held at The University of Mysore, Mysore from July 23-25, 1983
   P. C. Nigam

21. Presented a paper at the second Annual Conference of Indian Council of Chemists held at the Univ. of Srinagar, Srinagar from Nov. 6-8, 1983
   P. C. Nigam

22. National Symposium on Kinetics and Mechanism of reactions in solution, University of Mysore, Mysore, July 1983, paper presented on 'Proton transfer reaction of 3-Aminofluoranthene
   A. K. Mishra and S. K. Dogra

23. Delivered a plenary lecture at the 2nd Annual Conference of the Indian Council of Chemists held at Srinagar (Kashmir), in November 1982
   P. R. Singh
Sponsored Projects

1. 'Selective peptide formation under captive environments' DST, 1983-1986
   S. Ranganathan

2. 'Evolution of earth's atmosphere over geological times'
   DST started in Jan. 1982
   P. S. Goel

3. 'Study of reactive and non-reactive collisions' DST - sponsored
   N. Sathyamurthy

4. 'Transition metal reagents in organic synthesis'
   DST supported
   S. Chandrasekaran

5. 'Organonopalladium chemistry in organic synthesis':
   Development of new synthetic methods and total synthesis of Natural products, DST sponsored
   Y. D. Vankar

Honours

1. Professor S. S. Katiyar was elected (1) Fellow of Indian National Science Academy, India
   (2) Member of the American Society of Biological Chemists, U.S.A.

2. Professor S. Ranganathan was selected as:
   (i) Professor Kulkarni Endowment Lectures
   (ii) the Co-convenor of the National Symposium for bio-organic chemistry.

3. Professor P. R. Singh is elected sectional president of the organic chemistry section, Indian Council of chemistry for the year 1983.

CIVIL ENGINEERING

1. National seminars, on housing, environment and habitat
   Andhra University, Waltair (Attended), Aug. 1982
   C. Venko Bachar
2. Delivered lectures on "Design of small waste water treatment plants" Inst. of Engg. at Lucknow Sub-Centre, 1982
   C. Venkobachar

   C. Venkobachar

4. IIInd International Conference on Chitinal Chitoson Sapporo, Japan (Attended & presented a paper) July 1982
   A. V. S. P. Rao

5. 27th Congress of Indian Society of Theoretical and Applied Mechanics, Calcutta, Dec. 1982
   A. S. R. Sai

6. All India Seminar on economical design construction & rehabilitation of culverts, Inst. of Engineers, Lucknow October 1982
   A. S. R. Sai

7. Non destructive testing of structural components, Defence Laboratory, Jodhpur (Invited lectures) October 1982
   A. S. R. Sai

8. Short-term course on 'Stability of Structures' Engineering Staff College of India, Hyderabad (Delivered lectures), September 27--October 2, 1982
   Ashwini Kumar

9. 4th International Conference on Numerical Methods in Geomechanics, Edmonton, Canada (Attended) May--June 1982
   N. S. V. Kameswara Rao

    B. C. Raymahashay
11. Delivered lectures in the QIP Short-term course on Erosion and Sediment control, IIT, Ranpur, July 1982
   B. C. Raymahashay

   V. Lakshminarayana

13. Coordinator of the QIP short-term course on Erosion and Sediment Control and delivered lectures, July 1982
   T. Gangadhariah

Books Published

   Co P. Dayaratnam

   P. Dayaratnam

3. Flow in open channels--2
   R. Subramanya

ELECTRICAL ENGINEERING

Consultancy Projects

1. Power System Cell, UPSEB
   R. R. Padiyar

2. Design and Development of a Microprocessor based Rail Car Axle Counting Indoor Processing Subsystem, CEL
   R. R. Sharma
Intensive Courses, Summer & Winter Schools, etc.

1. A short term course entitled "Error control coding for digital communication", sponsored by DRDO and QIP, Dec. 6-18, 1982

2. A short term course entitled "High voltage transmission, laboratory and dielectric techniques", sponsored by ISTE. Dec. 8-21, 1982

3. A workshop on "Curriculum for Science and Technology Policy Studies," jointly organized by the EE Dept., IIT, Kanpur and IIM, Bangalore, sponsored under QIP, Dec. 2-6, 1982

4. An intensive course in microprocessors and their applications, for Engineering College Teachers, sponsored under the Microprocessor development and training program of the Ministry of Education. Jan 31-March 5, 1983


Awards to Students

1. Chanchal Chatterjee and P. A. B. Prasad

   For their paper: "On the analysis and synthesis of Hindi Consonants: a study" in the
   (a) Annual Student Paper Contest-1983 of the Computer Society of India. Third Prize
   (b) Annual Technical Paper Contest of the Alumni Association, IIT, Kanpur. First Prize

2. S. Halda and G. B. Singh

   For their paper: "Recognition of variable Font type written characters by dimensionality reduction using K-L expansion" in the Student Paper Contest-1983 of IEEE(India Chapter). Second Prize
Seminar Talks in the Department

About 25 invited talks were organized in the department during 1982-83.

HUMANITIES AND SOCIAL SCIENCES

Attended by Faculty elsewhere outside India:

English:

1. VIII International James Joyce Symposium, Dublin, June 1982
   Presented: "Walking Joyce's Dublin Streets"
   S. K. Aithal

   S. K. Aithal

Psychology:

1. International Association of Cultural Psychology VIth World Congress, Abdeen, 1982, Presented Interpersonal construct system and Work styles of Indian managers" Usha Kumar and S. B. Saxena

   Presented "Work and Identity: Reflection on the experience of the Indian Working Women" in a symposium on Women at work
   Usha Kumar

Sociology:

1. International Symposium on Small Towns in National Development: Towards action for Rural-Urban Integration in Developing Countries held at the Asian Institute of Technology, Bangkok, Thailand, Dec. 1982
   Presented "Development of Small Towns and medium-
size towns in India, Experience and Policy Implications"
   E. Haribabu

B) Attended by Faculty elsewhere in India

Economics:

1. Delivered lectures on Econometrics of Managerial Decisions in the Industrial Management Department Indian Institute of Science, Bangalore
   T. V. S. Ramamohan Rao

2. 65th Annual Conference of the Indian Economic Association, University of Jabalpur, Dec. 82, Presented: Production Linkages and Identification of Key industries in Indian economy"
   R. R. Barthwal

   B. Rath

4. 65th Annual Conference of the Indian Economic Association, University of Jabalpur, Dec. 82
   B. Rath

5. 16th Annual Conference of the Orissa Economic Association, Ravenshaw College, Cuttack, March 1983
   B. Rath

   B. Rath

7. ISTE Summer School on Integrated Rural Development, organized by the Rural Development Centre, nT, Kharagpur, June 1982
   B. Rath
ENGLISH

1. XVII Annual Conference of the Indian Association for American Studies, Annamalai University, February 1983. Delivered Presidential Address: "Image of Man in the Post-Second World War American Fiction"
   P. P. Sharma

2. Extra-moral lecture at Roorkee University, March 1983. "A Course in Iridian Literature for Engineering Institutions"
   P. P. Sharma

3. Lecture at Gurukul Kangri University, March 1983. "Appreciating Literature"
   P. P. Sharma

4. Emerson Centenary Symposium organized by Dhvanyaloka: The Literacy Centre for English Studies, Mysore, May 1982. Presented "Emerson and the American Image of India"
   R. K. Gupta

5. Seminar on Stylistics and Language Teaching, Patiala, August 1982. Presented: "Place of Stylistics in the English Language teaching Programme in India"
   B. N. Patnaik

6. Seminar on "What should go into a grammar" held at Central Institute of Indian Languages, Mysore, Jan. 1983. Presented: "On the structuring of Pedagogical Grammars for L1 Teaching"
   B. N. Patnaik

   P. P. Sah

8. All India Painters' Camp, organized by the National Academy of Art at Trichura
   R. K. Bhatnagar

   R. K. Bhatnagar
**PHILOSOPHY**

1. Seminar on Value and Reality Indian Council of Philosophical Research, New Delhi, December 1982  
   R. Prasad

2. International Seminar on Perspectives of Meaning and Aurobindo, organized by Jadavpur University, Calcutta, January, 1983  
   R. Prasad

   R. Prasad

4. Seminar on Language and Reality Lucknow University, Lucknow, January 1983  
   R. Prasad

5. Presented four invited lectures on Muslim Ethics in the Department of Philosophy, Poona University, Pune, February 1983  
   S. A. Shaida

**Psychology**

   L. Krishnan

   N. K. Sharma

**SOCIIOLOGY**

1. Delivered 6 invited lectures on Social Cybernetics at Workshop on Research Methodology, (sponsored by UGC) at Jodhpur University, Jodhpur, July 1982  
   P. N. Rastogi
2. Delivered a series of lectures on Quantitative Methods in a course on Research Methodology at Kanpur Univ. Kanpur, February, 1983
   P. N. Rastogi

3. Contributed invited paper, "Prediction, Explanation, and Problem Solving in social systems"
   P. N. Rastogi.

4. XVIth All India Sociological Conference, organized by the Department of Sociology, Annamalai University, Annamalai Nagar, in December 1982.
   Presented: "Theoretical Issues in Modernization Theory"
   R. Pandey

5. Vth Uttar Pradesh Sociological Conference, organized by the Department of Sociology, Kanpur University, Kanpur, February, 1983.
   Presented: "Max Weber's theory of Social Stratification: Controversies, contexts and Correctives"
   R. Pandey

6. National Seminar on Social Relations of Scientific and Technical Change, Administrative Staff College of India; Hyderabad (sponsored by UNESCO)
   Presented: "Scientific Growth and the Nature of Scientific Community"
   V. R. Jairath

7. XVI All India Sociological Conference at Annamalai Univ., Annamalai Nagar, December, 1982
   E. Haribabu

B) Organized at IIT/Kanpur

1. The following faculty members participated in the National Workshop on Profiles in Indian Languages, Organized by the Indian Language Society, IIT/Kanpur in December, 1982

   1. "Central Pahari Languages"
      P. P. Sah
"An Approach to Language Planning and Language Education in India"
B. N. Patnaik

3. "Novel as Anti-Purana: A Study of Neela Shah and N~Jadri Bijaya"
B. N. Patnaik

4. "Modern Indo-Aryan Languages"
A. C. Pandey

2. Workshop on Curriculum for Science and Technology policy Studies, IIT, Kanpur, December 1982 Presented: "Technological Self-Reliance and MultiNational Corporations"
V. R. Jairath and K. S. Gandhi

DEPARTMENTAL SEMINARS

A.C. Pandey

VI Distinctions Conferred;

Prof. P. P. Sharma: Elected President of the Indian Association for American Studies, for the second time, for the year 1982-83

Prof. P. N. Rastogi (i) Awarded Senior Fellowship by the ICSSR. (ii) Appointed member of the Editorial Board, Journal of Sociological Studies

Prof. S. K. Aithal: Appointed Bibliographer in the General Literature Section of the M.L.A. International Philosophy, the most valuable research tool in English studies. Dr. R. K. Bhatnagar: Two of his paintings were selected for the National Collection of art.

The following speakers presented seminar in the Department during 1982-83:

Dr. A. C. Pandey Dr. B. Rath
Dr. N. K. Sharma
IIT/Kanpur
IIT/Kanpur
IIT/Kanpur
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<tr>
<th>Name</th>
<th>Institution</th>
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<tr>
<td>Ms. G~etha</td>
<td>IIT/Kanpur</td>
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<td>Ms. Premlata</td>
<td>IIT/Kanpur</td>
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<td>Ms. Jaishri</td>
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<td>Ms. Asha Kaul</td>
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<td>Mr.' Sanjeev</td>
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<td>Sharma Mr. L. Behara</td>
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<td>Mr. Neeroj Banerjee</td>
<td>IIT/Kanpur</td>
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<td>Ms. Rajyashree</td>
<td>IIT/Kanpur</td>
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Dr. A. K. Sinha (English) Delhi University, Delhi
Dr. C. J. Daswani (English) Poona University, Poona
Dr. Hennig Coher (English) Pennsylvania University, U.S.A.
Dr. Ghanshyam Singh (English), University of Belfast, Ireland
Dr. R. Jha (Economics), Institute of Public Enterprise, Hyderabad
Dr. Kant Rao (Economics), Pennsylvania State Univ., U.S.A.
Prof. Jai Zarotia (Fine Art), College of Art, New Delhi
Dr. Jamal Khuraja (Philosophy), Aligarh Muslim Univ., Aligarh
Dr. R. Sundararajan (Philosophy), Poona University, Poona
Dr. S. Kanekar (Psychology), University of Bombay, Bombay
Dr. Dorothy Rowe (Psychology), St. John's Hospital, Lincoln, England
Dr. J ai B. P. Sinha (Psychology), ANS Institute of Social Studies, Patna
Dr. Ype H. Poortinga (Psychology), University of Tilburg, Netherlands
Dr. For~~t Tyler (Psychology), University of Maryland, Visiting Prof. AUq.nflQad
Dr. K. L. Sharma (Sociology), Punjab University, Chandigarh

Dr. Sharit Bhowmick (Sociology), N.E. Hill University, Darjeeling

MATHEMATICS

Conference organised at the Institute or attended by the members of the department elsewhere

I Silver Jubilee Conference of the Canadian Operations Research Society
   May 24-26, 1983, Winnipeg, Canada

1. The role of Maximum Entropy Principle in Operations Research (Invited address)
   J. N. Kapur

2. Bivalent Quadratic Programming Problem: A Computational Study
   S. K. Gupta

3. Thoughts on Operations Research (Presided over a session)
   J.N. Kapur

4. Whither or Education (Participated as Panelist)
   S. K. Gupta

II XI Annual Conference of the Administrative Sciences Association of Canada
   May 30 - June 1, 1983, University of British Columbia, Canada

Derivation of some purchase incidence stochastic models from entropy maximization principle
   J. N. Kapur and S.K. Gupta
III International Biometric Society
6-11 September, 1982, Toloson, France
Use of auxiliary information in the analysis of series of experiments
G. K Shukla

IV Recent Developments in Statistical Theory and Data Analysis
Dec. 15-17, 1982, Tokyo, Japan
Sufficiency of a sufficient statistic for Non-randomized equivariant estimation
Divakar Sharma

V Seminar on Probability and Statistical Inference
June 23-25, 1983, Deptt.of Statistics, Poona University, Poona
Distribution of range and quasi range from doubly truncated exponential distribution
P. C. Joshi

VI Annual meeting of American Mathematical Society
Jan. 1983, Univ. of Colorado, Denver, U.S.A.
1. K-reflexivity and canonical completion M. Gupta
2. Bi-locally convex spaces and schauder decomposition P. K. Kamthan and M. Gupta

VII Combinatorics and its Applications
Dec. 14-17, 1982, Indian Statistical Institute, Calcutta
Sensitivity analysis of multiterminal flows and optimal communication tree problem
Prabha Sharma, Sunita Agarwal and A.K. Mittal
VIII Annual meeting Orissa Mathematical Society

Feb. 1983, Bhubaneswar

1. Nasty numbers and its characterization S. P. Mohan
ty
2. Mathematics of Finite elements
   P. C. Bas

IX Symposium on Functional Analysis

27 Oct. 1982, Oberwolfach, West Germany

Why do we study the Schauder basic theory in T.V.S.?
(Invited talk)
   P. R. Ramthan

X 48th Annual meeting Indian Mathematical Society

Dec. 1983, University of Bhagalpur, Bhagalpur

1. Summability of conjugate Fourier series by a class of.
   regular methods
   R.S.L. Srivastava and R. N. Misra
2. On absolute cesaro summability of factored infinite
   series
   R.S.L. Srivastava and R.N. Misra

MECHANICAL ENGINEERING

CONFERENCE (Organized)

1. All India Seminar on Alternate Energy Sources-
   their applications and constraints" in collaboration
   with small industries services Institute, Ranpur,
   March 1983
   H. C. Agrawal
SUMMER SCHOOL (organized)

1. Introduction to Fibre Reinforced composites,
   April" 1983
   B. D. Agarwal

CONFERENCES ATTENDED

1. XI Laser Radar Conference at wisconsin USA,
   June 21,...25, 1982
   J. S. Goela
2. Symposium on Non-Destructive Evaluation at B.H.U.
   Varanasi, February 21 and 22, 1983
   J. S. Goela
3. IXth Annual Symposium on ARDB Sponsored projects,
   LLT. Delhi, March 23 and 24, 1983
   B. D. Agarwal
4. Attitude Stabilization and Reorientation of Space-
   pointing Satellites by Radiation pressure, invited paper
   presented at the 10th IMACS World Congress on
   8-13, 1982, Montreal, Canada; published in the
   Conference Proceedings, pp. 231-233
   K. C. Pandey
5. Tenth AIMTDR Conference, December, 20-22, 1982
   G. S. Kainth
6. Fifth IS ME Conference on Mechanical Engineering,
   Dec. 22-24, 1982, Allahabad
   G. S. Kainth
7. National Seminar 'Whither Welding in" Industry',
   January, 1983. BHEL Trichirapalli
   G. S. Kainth
8. Physical Basis of the Mechanical behaviour of materials,
   RRC, Kalpakam
   S. N. Bandopadhyay
METALLURGICAL ENGINEERING

Conferences attended by faculty elsewhere

   R. R. Dube

2. Coordinated a two-day national workshop on 'Computer Applications in Smelting Industry' held at HZL, Udaipur, June 1982
   S. P. Mehrotra

3. Annual Technical melting of LLM., Rourkela, Nov. 82 N.
   R. Batra

   T. R. Ramachandran
   R. P. Gupta, R. R. Rajendran, S. Das

5. Annual conference of the German Metallurgical Society held in Vullach (Austria), June 1982
   R. R. Ray

   G. S. Murty

7. 'Deformation all aspects' at SAIL, Ranchi, March 1983
   G. S. Murty, R. C. Sharma, A. R. Jena

   G. S. Upadhyaya

9. 9th Annual technical conference of Powder Met. association of India, Goa, 9.-11 April 1983
   G. S. Upadhyaya
10  Presented a paper on UStructure and magnetisation studies of Ti-substituted Ni$_{0.7}$Zn$_{0.7}$Fe$_2$O$_4$, at 27th annual conference on magnetism and magnetic materials, Georgia, U.S.A. 1981
   D. C. Khan, M. Mishra, A. R. Das

11  Presented paper on structure and properties of some dual phase steels at International conference on Deformation-All aspects held at Ranchi, March 17-19, 1983
   G. S. Sharma, R. C. Sharma, A. K. Patwardhan

12  Attended International conference on particles at LLT, Madras, Dec. 1982
   P. C. Kapur

13  Attended a National symposium on ucreep resistant steels for power plants", BHEL Corporate R&D, Hyderabad, January 1983
   M. N. Shetty

14  Invited to chair a session on uThe Physical Basis for Mechanical Behaviour, R.R.C. Kalpakkam, Madras February 1983
   M. N. Shetty

   M. N. Shetty

16  International Symposium on Superplastic forming of structural alloys, July 6-9, 1982
   M. L. Vaidya

   Keynote address entitled UPhysico-chemical aspects of rimming and blowhole formation during ingot dasting of steel" in the discussion meeting on UMaking and processing of semikilled and rimming steels" held at Rourkela Steel Plant, July 22-23, 1982
   A. Ghosh
18. Chief guest in technical seminar on "Modernization of Bhilai steel plant and introduction of quality control circle" held at Bhilai Steel Plant, Nov. 12, 1982
   A. Ghosh

   K. P. Singh

20. Thermodynamic Properties of Zr-Nb Alloy, ICNS, Bangalore, July 14-17, 1981
   K. P. Singh

   K. P. Singh

   K. P. Singh

23. Attended Spring. College on Amorphous Materials and Liquid State at International Centre for Theoretical Physics Trieste (ITAL Y)
   K. N. Rai

24. A paper "Effect of Aluminium Substitution on Hydrogen Storage in MNis-xAlx System" was presented at VI World Hydrogen Energy Conference at Pasadena California (USA) Dr. K. N. Rai

SUMMER AND WINTER SCHOOLS

a) Organised at the Institute:

   S. P. Mehrotra
   T. R. Ramachandran and A. K. Jena

b) Attended by faculty elsewhere:
1. Delivered invited lecture on "Mass transfer and reaction mechanism in L.D. Steelmaking" at a refresher course held at TISCO, Jamshedpur on "Theory of L.D. Steel making", Dec. 8, 1982
   A. Ghosh

c) Seminars:
   T. R. Ramachandran

   T. R. Ramachandran

3. Presented seminars on:
   . i) Electron beam-specimen interaction
      T. R. Ramachandran
   ii) Electron diffraction patterns
      Theory of diffraction contrast
      Seminar series organised by USIC, University of Roorkee Feb. 1983

PHYSICS

Conferences Attended by faculty

2. Dr. A. S. Parasnis participated in the National Meeting on the Physical Basis of Mechanical Behaviour, Reactor Research Centre, Kalpakkam, Feb. 7-9, 1983

3. Dr. M. Yllssouff participated in
   (i) International Conference on Theoretical Physics, Delhi University, Jan. 1982
   (ii) Non-Debye Relaxation, Bangalore, Sept. 1982
   (iii) Physics of Mechanical Behaviour-RRC, Kalpakkam, Feb. 1983

4. Dr. G. C. Upreti participated in
   (i) Indo-Soviet Symposium, Dushanbe USSR and presented a paper on EPR studies in single crystals.
   (ii) 2nd National Conference on Ferroelectric and Dielectrics and 1st National Workshop on Ferroelectric Materials and Device Applications, Raipur and presented a paper on 'Ferroelectric and Ferroelectric Phase Transition Studies Using EPR Technique'.
   (iii) 14th National Seminar on Crystallography, Kharagpur and presented a paper alongwith Prem Chand on 'Phase Transition in NH1: An EPR Study of Copper Doped NH41 Single Crystals'

5. Dr. R. Ramachandran participated in 'VI High Energy Physics Symposium' held at Mysore (Dec. 6-11, 1982).

6. Dr. R. M. 'Singru participated in the Seventh International Conference on Positron Annihilation,' Forth Worth Texas (USA) April 13-17, 1982 and gave a Keynote address on 'l2D ACPAR : Comparison between theory and experiment'.

7. Dr. J. K. Bhattacharjee participated in a Conference in Deutsches Physikalische. Gesslsehaft Munster West Germany 1982 and gave a talk on 'lt1/n expansions in simple non-equilibrium situations'.
8. Dr. H. D. Bist participated in

(1) 8th International Conference on Raman Spectroscopy held at Bordeaux France (6-11 Sept., 1982) and presented 3 papers on (i) (Temperature evolution of Raman Spectra in (CH3COO)4D− and phase Transition' (H. D. Bist with G. S. Raghuvanshi & A. Agarwal), (ii) (Spectroscopic Studies on Phase Transition in (NH4)Znch./ (H. D. Bist with K. Ram), (iii) (Variable Temperature Raman Studies in the Liquid Phase of Several Cyclopropyl Derivatives' (H. D. Bist with J. R. Durig & T. S. Little-presented by T. S. Little).

(2) Fifty Second Annual Session of National Academy of Sciences held at Bhavanagar between Oct. 31 - Nov. 2, 1982.

(3) Second National Conference on Ferro- and Dielectrics & presented the paper (Spectroscopic Evidence of Low Temperature Phase Transition in Pyrelectric (N02H−O by H. D. Bist and O. P. Lamba; O. P. Lamba presented the paper

(4) Fourteenth National Seminar on Crystallography held at IIT Kharagpur between Dec. 20 - 24, 1982 (with M. B. Patel, G. S. Raghuvanshi - presented 3 papers)

(5) Twenty-sixth (DAE) Nuclear Physics and Solid State Symposium held at BHU between Dec. 26-31, 1982 and Papers presented on (i) (Dynamics of Disordered Graphite Lattice, (with G. S. Raghuvanshi, D. P. Khandelwal and V. N. Sarin); (ii) (Relaxation times and Anharmonic and Coordination Effects for Crystal Water in Ni (ClO.6H2O (with P. Chand, D. P. Khandelwal); (iii) (Phase Transition in Ammonium Tetrachlorozincate by. Raman Technique' (with A. Agarwal & M. Pal)

9. Dr. D. Saran participated in the IX International Conference on Liquid Crystals held at Bangalore (Dec. 6-10. '1982).

SUMMER AND WINTER SCHOOLS ATTENDED BY FJ\LCULTY

1. Dr. S. C. Agarwal participated in (Workshop on Photovoltaic Devices', Roorkee 1982

3. Dr. K. K. Sharma delivered a series of Lectures at the Spectroscopy Symposium (organized by the Kanpur University)


7. Dr. R. K. Popli participated in 'Regional Workshop on Role of Science & Technology in Tribal Development (Bishunpur, Bihar)

8. Dr. O. P. Katyal participated in the 'Workshop on Condensed Matter Physics', June 20 - July 29, 1982 (ICTP, Trieste, Italy)

9. Dr. D. C. Khan participated in the 'Workshop on Condensed Matter Physics', June 20 - July 29, 1982, (ICTP, Trieste, Italy)

COMPUTER SCIENCE PROGRAMME

Conferences And
Seminars

INDUSTRIAL AND MANAGEMENT ENGG. PROGRAMME

Attend~d by Faculty elsewhere

1. XV Annual Convention of ORSI, Kharagpur, Dec. 1982

A. K. Mittal and S. Sadagopan
   A. K. Mittal

**Summer, and Winter Schools**

(a) Organised at the Institute

1. 'The Use of Computers in Appraisal, Monitoring and Evaluation of Plan Schemes'. Dec. 2-7, 1982
   The course was organised for State Planning Institute, Lucknow
   A. K. Mittal, A. P. Sinha and J. L. Batra

2. 'Recent Developments in Manufacturing'. The Course was organised for Senior Executives from Thapar Group of Industries, March 31- April 5, 1983
   G. K. Lal, J. L. Batra, A. Ghosh and G. S. Kainth

**MATERIALS SCIENCE PROGRAMME**

**Attended elsewhere:**

1. 36th Annual Technical Meeting of IIM Rourkela, Nov. 1982
   D. C. Agarwal

2. 9th International Conference on Liquid Crystals Bangalore, Dec. 1982
   K. V. Rao

3. Conference on Deformation - All aspects (SAIL, Ranchi, March 1983)
   G. S. Murty

   G.S. Murty

5. World Hydrogen Energy Conference IV (Pasadena, California, USA June 1982)
   S. Gupta
   K. P. Gupta & D. Bahadur

7. All India Symposium on, "Furnace Technology" (New Delhi, 1983)
   B. Sharma.

8. Fourth National Conference on Power Sources (New Delhi, April, 1983)
   S. Kar

5. II. SUMMER & WINTER SCHOOL

(a) Organised at the Institute:

1. Applications of Electron Microscopy to Engineering Practice
   T. R. Ramachandran & A. K. Jena

(b) Attended elsewhere:

1. Winter School on "Ferroelectric Materials and Devices" held at Dept. of Phys. IIT Kharagpur
   K. V. Rao

(c) Participated in Summer/Winter School, organised at the Institute:

1. Winter School on "High Voltage Transmission, Laboratory & Dielectric Techniques", Dec. 1982
   J. Kumar

2. Introduction to Fibre Reinforced Composites, April 1983
   D. C. Agrawal

3. Applications of Electron Microscopy to Engineering, Dec. '82
   K. P. Gupta
(d) Participated in Winter/Summer Schools organised elsewhere:

1. Magnetic Bubble Materials
   (IIT Bombay, March 1982)
   D. Bahadur

(e) Lectures delivered on invitation

1. Properties and Applications of Metallic Glasses
   (Lecture delivered at the DMSRDO, Kanpur)
   D. C. Agrawal

2. Quantitative Electron Microscopy
   (Lectures delivered in Workshop on Quantitative Metallography, SAIL, Ranchi)
   T. R. Ramachandran

3. Quantitative X-ray Microanalysis of Thin Foils
   (Lecture delivered at the Annual Conf. of EMSI at Varanasi)
   T. R. Ramachandran

NUCLEAR ENGG. & TECH. PROGRAMME

Conference attended/organized:

1. Annual meeting of American Nuclear Society, Sanfrancisco, June 1982
   K. Sri Ram

2. Workshop on Fusion, Matehorn, Dec. 1982
   M. S. Kalra

3. IX annual IARP conference BARC, Bombay, March 1983
   K. Sri Ram