

## HONOUR LECTURES

1. Energy Foresights, Security and Sustainability  
Inaugural Address at the NIAS-DST Training Programme on “Policy for Science and Science for Policies” , National Institute of Advanced Studies, Bengaluru  
7 November 2016
2. National Strategies to Ensure that Standards Build Trust  
Presidential address at the Bureau of Indian Standards, Southern Regional Office, Chennai  
16 October 2016
3. Energy Foresights, Security and Sustainability  
BRICS Young Scientist Forum: Bangalore Conclave-2016  
Organizers : NIAS & DST, 27<sup>th</sup> September 2016
4. 4<sup>th</sup> Industrial Revolution: Indian-Russian Collaborations  
Russian-Indian Think-Tank Forum, Moscow State Institute of International Relations (MGIMO),  
Moscow, Organized by Indian Council of World Affairs, New Delhi, 22-23 September 2016
5. India, ambitions depends on competent and ethical young minds  
Silver Oaks International School, Bangalore  
10 September 2016
6. Energy Foresight, Security and Sustainability in the Context of India  
Indian School of Mines, Dhanbad  
18 August 2016
7. Challenges and Opportunities in the Processing and Recycling of Rare-Earths in India  
Inaugural talk at the Indo-french workshop on Challenges in the Processing and Recycling of  
Rare Earths (CIPRE), TRDDC, Hadapsar, Pune  
19 July 2016
8. Frontiers in Non-Destructive Evaluation for Condition Monitoring  
CMSI-GITAM Endowment lecture, GITAM University Campus, Visakhapatnam  
4<sup>th</sup> March 2016
9. Energy Foresight, Security and Sustainability in the Context of India  
Baldev Raj  
D. V. Narasimha Rao Memorial Lecture, The Institution of Engineers (India), Mysore  
15<sup>th</sup> February 2016
10. Consciousness, His Holiness Dalai Lama and National Institute of Advanced Studies  
Baldev Raj  
Inaugural Address at the His Holiness the 14<sup>th</sup> Dalai Lama Visit, NIAS, Bangalore  
6 December 2015
11. Energy Security : Foresight and Technologies  
Baldev Raj  
Monash Energy Materials and Systems Institute (MEMSI) Forum, Monash University, Australia  
19<sup>th</sup> November 2015
12. Panel Discussion: Improving the quality of higher education in Institutions to bring them at par with  
the top institutions of the world  
Baldev Raj  
President of India Conference, Ceremonial Hall, Rashtrapati Bhavan Cultural Centre, New Delhi  
5 November 2015
13. Engineering, Education on India: Learning and Aspirations  
Baldev Raj

Symposium on “Engineering Education in the 21<sup>st</sup> Century: Issues Related to IMPRINT (India) and Grand Challenges (USA), INAE, MHRD and NAE(USA) Joint Symposium, India International Centre, New Delhi (oral)  
16<sup>th</sup> October 2015

14. Energy Security: Foresight and Technologies  
Baldev Raj  
Dr Raja Ramanna Memorial Lecture, Institute of Defence Scientists & Technologists (IDST)  
Bangalore  
19 September 2015
15. Energy Security: Foresight and Technologies  
Baldev Raj  
First Golden Jubilee Lecture at CSIR-Indian Institute of Toxicology Research, Lucknow  
25 August 2015
16. Science on Strategic Sector  
Baldev Raj  
Presentation to Hon'ble Prime Minister of India, Prime Minister Residence, New Delhi  
19 August 2015
17. Intertwined Science, Engineering and Technology to Meet National Aspirations  
Baldev Raj  
Fresher's Day Function, M.S. Ramaiah Institute of Technolgy, Bangalore  
6 August 2015
18. Indian Institute of Science & Indian Nuclear Programme  
Baldev Raj  
Third IISc Alumni Global Conference-2015, session on “Contributions to Strategic Sectors “, Indian Institute of Science, Bangalore  
26 June 2015
19. Challenging Inequalities with Science and Technologies, Social Sciences, Humanities and Policies  
Baldev Raj  
Convocation address, Christ University, Bangalore  
21 May 2015
20. Impact of Corrosion on Competitiveness and Growth  
Baldev Raj  
International Corrosion Awareness Day at FICCI, Delhi, organized by NACE International, The Worldwide Corrosion Authority  
24 April 2015
21. Inaugural talk at the Two-day discussion meeting on “Bridging Innovations in Academic Institutions to Society”, NIAS, Bangalore, Organized by NIAS, Thematic Unit of Excellence, Indian Institute of Technology (IIT) Madras  
28-29 April 2015
22. Defence Aspiration of India: Translating Homi Bhabha Model to the Current Realities  
Baldev Raj  
Convocation address Raising Day, Defence Institute of Advanced Technology (DIAT), Pune  
1 May 2015
23. Energy Security and Sustainability: Approaches and Priorities for Growing and Aspiring India  
Baldev Raj  
Prof. T R Anantharaman Memorial Lecture, IIT, Banaras Hindu University, Varanasi  
13 April 2015
24. Energy Security and Sustainability: Approaches and Priorities for Growing and Aspiring India  
Baldev Raj

- Public Lecture on Energy Security of India, Indian Institute of Science Education and Research (IISER), Mohali  
26 March 2015
25. Energy Security and Sustainability: Approaches and Priorities for Growing and Aspiring India  
Baldev Raj  
Inaugural Address, Seismech'15, Annual Symposium of Department of Mechanical Engineering, IIT Guwahati  
20 March 2015
  26. Presidential Address: Evidence Based Planning and Implementations of Clean Secure and Sustainable Energy in India  
Baldev Raj  
Book release function entitled: Wind and solar energy for meeting Karnataka's future electricity demand organized by NIAS and The Power System Operation Corporation Limited, NIAS, Bangalore  
5 March 2015
  27. Gender Participation in Science and Technology: an Essentiality to Meet National Aspirations  
ORAL  
Baldev Raj  
Valedictory address: NIAS-DST(DISHA Programme for Women in Science) Course on Science for Progress in India: Innovations in Technologies for Scientists and Technologists  
February 27, 2015
  28. A Perspective on Energy Demands and Security: Technology, Ethics and Equity  
Baldev Raj  
Mahatma Gandhi Institute of Technology, Hyderabad  
7<sup>th</sup> February 2015
  29. A Perspective on Energy Demands and Security: Technology, Ethics and Equity  
Baldev Raj  
Nuclear Fuel Complex, Hyderabad  
6<sup>th</sup> February 2015
  30. A Career in Non-Destructive Evaluation: Fun, Fame, Money and Building India  
Baldev Raj  
Two-day Skill Development Workshop on "Non Destructive Testing For Engineering Students" at QIS College of Engineering & Technology, Ongole, Andhra Pradesh  
28<sup>th</sup> January, 2015
  31. Convocation Address at Indian Institute of Information Technology Design and Manufacturing (IIITDM), Kancheepuram  
30<sup>th</sup> January 2015
  32. Building a Holistic Perspective of India in the 21<sup>st</sup> century  
Baldev Raj  
12<sup>th</sup> Convocation Address, Swami Vivekananda Yoga Anusandhana Samsthana (S-VYASA), Bangalore,  
12 January 2015
  33. Challenging Inequalities: A holistic Aspiration and Topological Map  
Baldev Raj  
IC4HD (International Centre for Human Development)-NIAS Round Table-Addressing Economic inequality In India  
8 January 2015
  34. Presidential Address: Discussion Meeting on Indian Metallic Heritage : Perspectives and Issues on Characterization and Conservation of Ancient Metallic Objects  
Dr. Baldev Raj  
Organised by INAE, ASI, Dept. of Culture & IIM, ASM Intl. USA, New Delhi

3 December 2014

35. A Perspective on Challenges and Opportunities to Meet Energy Demands of Emerging and Aspiring India  
Baldev Raj  
Institute Lecture series, Excellence Awards Function, IIT Gandhinagar  
2<sup>nd</sup> December 2014
36. Sustainable Engineering and Technology: Relevance, Ethics and Scalable  
Baldev Raj  
Chief Guest at 1<sup>st</sup> Convocation of National Institute of Technology Puducherry (Karaikal)  
6 December 2014
37. Distributed: Life cycle management and supportable energy and water sustainable systems  
Baldev Raj  
Workshop on Sustainable Technologies for Educational Campuses, ECE Department, Indian Institute of Science, Bangalore (Inaugural talk)  
7 November 2014
38. A Perspective on Challenges and Opportunities to Meet Energy Demands of Emerging and Aspiring India  
Baldev Raj  
Foundation Day Lecture, Indian Institute of Technology Kanpur,  
2<sup>nd</sup> November 2014
39. Presidential Address : Role of Indian National Academy of Engineering in Nation Buildings  
Baldev Raj  
Special Brainstorming Meeting on the Theme "Weather & Climate" during Engineer's conclave-2014 (jointly organized by INAE & ISRO) during October 30-1<sup>st</sup> November, 2014, Bangalore
40. Management Actions following Tsunami at Kalpakkam  
*Baldev Raj*  
Dr. S.S. Ramaswamy Memorial Endowment Lecture,  
31<sup>st</sup> DAE Safety & Occupational Health Professionals Meet, IGCAR, Kalpakkam  
15 October 2014
41. A Perspective on Technology Challenges with Emphasis on Energy Security & Sustainability  
Baldev Raj  
Brahm Prakash Memorial Medal Lecture  
INSA-IIT, Madras  
Chennai, August 4<sup>th</sup>, 2014
42. Presidential Address: A Perspective on National and International Collaborative Scalable and Sustainable example of success in Indian Science and Technology  
Baldev Raj  
International Conference on Advancements in Materials, Health and Safety towards Sustainable Energy & Environment  
Organized by Indian JSPS Alumni Association(IJAA), Govt.of India Atomic Energy Regulatory Board (AERB), Japan Society for the Promotion of Science(JSPS) Japan, Bio Nano Electronics Research Centre(BNERC) Toyo University, Japan  
Chennai, August 7<sup>th</sup> -8<sup>th</sup>, 2014
43. A Perspective on Technology Challenges with Emphasis on Energy Security & Sustainability  
Baldev Raj (Pre Dinner Talk to Young Engineers)  
Indo-American Frontiers of Engineering Symposium jointly organized by National Academy of Engineering, US and Indo-US Science and Technology Forum  
Mysore, May 19<sup>th</sup>, 2014
44. Measurements to Solve Global Challenges  
Baldev Raj  
World Metrology Day, CMTI, Metrological Society of India,

Bangalore, 20<sup>th</sup> May, 2014 ( delivered on the occasion of the first Life Time Achievement Award by Indian Metrological Society)

45. Energy Sustainability and Security: Eminent Choice of Nuclear Energy for India  
Baldev Raj  
National Technology Day Lecture, L&T Coimbatore, India  
May 9<sup>th</sup> ,2014
46. Matching Aspirations with R&D in Functional Textiles, in Indian Context  
Baldev Raj  
Two Day Conference on Advances in Functional Smart and Innovative Textiles organised by PSG IAS and PSG STEP, Department of Science and Technology  
Coimbatore 27<sup>th</sup>-28<sup>th</sup> February,2014
47. Science and Technology Aspirations of Current India  
Baldev Raj  
World Congress on Research & Innovation 2K13  
St. Josephs College, Thrissur, Kerala, December 17<sup>th</sup> -20<sup>th</sup> , 2013
48. NDE for Achieving Sustainability with Equity  
Baldev Raj  
14<sup>th</sup> APCNDT, Mumbai, November 18<sup>th</sup> ,2013
49. Materials Related Technologies in our Cultural Heritage  
Baldev Raj  
CV Sundaram Memorial Lecture-National Institute of Advanced Studies  
Bangalore, October 30<sup>th</sup> , 2013
50. Approaches to Challenges in Materials & Manufacturing Development for Defence Systems  
Baldev Raj  
Materials Technologies for Defence: Success Stories and the Road Ahead  
Organised by Defence Metallurgical Research Lab, Golden Jubilee Conference Inaugural Lecture  
Hyderabad, October 25<sup>th</sup> -26<sup>th</sup> , 2013
51. Non-Destructive Evaluation: Enhanced Role with Challenges; A Perspective specific to Asia Pacific Region  
Baldev Raj  
14<sup>th</sup> Asia Pacific Conference on NDT  
Mumbai, November 18<sup>th</sup> , 2013.
52. High Performance Computing 2013 : Human Resources Development Matching with National and Global Challenges , Workshop Emerging Trends and Advances in Computing: Academic, Research and Industry Perspectives, Inaugural Talk  
TEQUIP-Phase II, PSG College of Technology, November 13<sup>th</sup> , 2013
53. Prof. Brahma Prakash Memorial Medal Lecture: Energy Growth with Sustainability Challenges for India: Science, Technology, Innovation & Policy  
Baldev Raj  
Indian National Science Academy- Chennai Chapter, December 2013
54. Development of Stainless Steels in Nuclear Industry: with Emphasis on Sodium Cooled Fast Spectrum Reactors: History, Technology and Foresight  
Baldev Raj  
Stainless Steel Centenary Symposium SSCS 2013, organized by IIM & DAE , August 12-14, Mumbai
55. Energy Challenges of India: Contributions of material Scientist and Technologists  
Baldev Raj  
A lecture Series on Sustainability of Indian Energy Sector: Prospects and Challenges, Jadavpur University, August 22<sup>nd</sup> , 2013

56. Energy Challenges of India: Contributions of Material Scientist and Technologist  
Baldev Raj  
Golden Jubilee Lecture Series  
CSIR – Institute of Minerals & Materials Technology, Bhubaneswar  
July 22<sup>nd</sup> 2013 .
57. Materials for Energy Systems (included in October 2014)  
Baldev Raj  
Presentation to Planning Commission, New Delhi, India.  
June 03<sup>rd</sup> 2013 .
58. Distinguished Lecture: Welding Science and Technology in the World: A perspective on  
International Institute of Welding  
Baldev Raj  
International Conference on Design Fabrication & Economy of Metal Structures in the University of  
Miskolc, Hungary, April 21-26<sup>th</sup>, 2013
59. History, Science and Research Aspects of Materials, Chemistry and Corrosion  
First National Science Day Lecture instituted by NACE Gateway India, during International  
Symposium on Corrosion for Research Scholars, organized by NACE Gateway of India, IGCAR,  
DAE & BRNS, India, February 28<sup>th</sup>, March, 2013
60. Presidential Address: Realisation of Solutions with Functional Materials and Structures for meeting  
Energy Challenges (FAEMMS-2013), organized by SEST, University of Hyderabad, Indian  
National Academy of Engineering & Royal Academy of Engineering, UK  
Hyderabad, March 26<sup>th</sup> & 26<sup>th</sup>, 2013
61. Frontiers in Non Destructive Evaluation Science & Technology  
National Science Day Lecture, organized by Defence R& D organization, Ministry of Defence,  
Delhi, 28<sup>th</sup>, February, 2013
62. Presidential Address: Pathways to Enhance Applications of Relevant Welding Technologies in  
African Continent (in capacity as President, International Institute of Welding)  
International Institute of Welding, Conference on Frontiers in Welding Science and Technology  
Baldev Raj  
South Africa 6<sup>th</sup> -8<sup>th</sup>, October, 2012
63. Presidential Address: New Frontiers in Materials: A Need for Enhancing Synergy of Science and  
Technology to Society  
Nano Science and Technology, PSG Institutes, Coimbatore, October 2012
64. Enriching and Enhancing Young Metallurgists of India  
Presidential Address during Dr. Placid Rodriguez Endowment Lecture, IIM Chennai & Kalpakkam  
Chapter at IIT, Madras, October 25<sup>th</sup>, 2012
65. A Few Directions and Approaches for Enhanced Research and Application of High Nitrogen  
Steels  
Baldev Raj  
11<sup>th</sup> International Conference on High Nitrogen Steels and Alloys, Organised by Indian Institute  
of Metals and Board of Research in Nuclear Sciences, Chennai, India, September 27-29, 2012
66. Faraday: A colossal Scientist Unparallel in Contributions with Robust Lessons to Live Life  
First Faraday Birthday Celebration in India: Confederation of Indian Industry, Chennai &  
National Institute of Ocean Technology, Chennai, September, 22, 2012
67. Demands on Capacity and Capability of HRD to attract and retain quality human resources:  
Human Resources Development Conference, Organised by PSG Institute of Management,  
Coimbatore,  
SMA-YOG, August 2012

68. Innovations: Sharing Experiences in Devising Successful Mantra and Motivation Strategy  
International Conference towards a Better Innovation, Organised by Indian National Academy of Engineering, New Delhi, September 21-22, 2012
69. Addressing Challenges in Water Management in Synergy with International Collaborations  
Organised by Indian Institute of Technology, September, 2012
70. Sustainable Development; 40<sup>th</sup> World Environment Day, National Institute of Quality and Reliability  
Coimbatore, June 5, 2012
71. Clean energy technologies: Nuclear energy with safety for sustainability  
Baldev Raj  
National Science Day Lecture, Department of Science & Technology, IIT New Delhi,  
February 28, 2012
72. National Challenges: An opportunity to enrich and enhance science based technologies  
Baldev Raj  
National Technology Day Lecture, IIT, Madras, May 11, 2012
73. An exciting journey in NDE: My life, my love  
Academia NDT International meeting with 5 eminent speakers including Nobel Laurette,  
Harold Krote, 18th World Conference on NDT, Durban, South Africa, April 2012
74. Building an eminent centre of excellence in NDE, R&D and work programmes by the Directors of  
the institutes (from all the continents) to frame vision of working group on education and research,  
International committee on NDT, Durban, South Africa, April 2012
75. Development of science based technology of welding and hardfacing for Indian fast reactor  
programme  
Baldev Raj  
Portevin Lecture, 64<sup>th</sup> Annual Assembly and International Conference of International Institute  
of Welding, Chennai, July 17, 2011
76. Challenges in materials science of sodium cooled fast reactors and fuel cycle: Approaches and  
successes  
Baldev Raj  
1<sup>st</sup> Annual Materials Lecture, International Centre for Materials Science, Bangalore, June 24, 2011
77. Science and technology of sodium cooled fast reactors and associated fuel cycles  
Baldev Raj  
6<sup>th</sup> Raja Ramanna Memorial Lecture, Variable Energy Cyclotron Centre, Kolkata, June 16, 2011;  
Prof. C.V. Sundaram Memorial Lecture, Indian Institute of Metals, Mumbai Chapter, August 6,  
2011
78. Challenges and opportunities to meet growing Indian energy needs with sustainability and  
competitiveness  
Baldev Raj  
Sichuan University, Chengdu, China, June 10, 2011
79. Energy options & issues: Challenges & opportunities in materials science & technology  
Indian National Science Academy (INSA) Prize for Materials Science Lecture 2010, Indian  
Institute of Technology Madras, Chennai, March 14, 2011
80. Fun of doing Science: Make earth a better planet  
Baldev Raj  
Distinguished Research Scholar Lecture to Senior Students of Lalaji Memorial  
Omega International School, Chennai, January 4, 2011; Popular Lecture, Chennai  
Science Festival 2011, Chennai, January 30, 2011

81. Energy, ethics and equity – An interactive, intricate & inevitable triad of sustainability matrix  
Baldev Raj  
Evening Lecture during International Conference on Vistas in Chemistry, Indira Gandhi Centre for Atomic Research, Kalpakkam, October 11, 2011;  
Narsee Moonjee Institute of Management Studies, Mumbai, August 19, 2011;  
Dr. A.S. Rao Memorial Lecture, Andhra Pradesh Akademi of Sciences, May 11, 2011;  
Felicitatin Lecture, ASM International Chennai Chapter, Chennai, April 8, 2011;  
Distinguished Lecture, University of Hyderabad, March 21, 2011;  
INSPIRE Science Camp, Madras Diabetes Research Foundation, Chennai, December 28, 2010;  
Special lecture delivered to Trainee Officers & Research Scholars, Kalpakkam, January 12, 2011;  
Naval Materials Research Laboratory, Ambarnath, Maharashtra, August 16, 2010; Golden Jubilee Lecture, National Metallurgical Laboratory, Jamshedpur, August 31, 2010
82. Challenges and opportunities in sodium cooled fast breeder reactor and associated fuel cycle: Emphasis on chemistry and related technologies  
Baldev Raj  
Ashland-Prof.C.N.R. Rao Medal and CHEMCON Distinguished Speaker Award, Indian Institute of Chemical Engineering, Annamalai University, Chidambaram, December 27, 2010
83. Energy, ethics and equity  
World Nuclear University Summer Institute 2010, Oxford, United Kingdom, August 4, 2010
84. Challenges and opportunities in nuclear energy  
Baldev Raj  
12<sup>th</sup> Technology Day Lecture, National Aluminium Co. Ltd., Bhubaneswar, May 11, 2010
85. Nanomaterials Research: opportunities & Challenges  
Baldev Raj  
Inaugural Address during the International Conference on Nanoscience & Nanotechnology organized jointly by SRM University and Indira Gandhi Centre for Atomic Research, February 24, 2010; Evening talk to India-Brazil-South Africa School on Advanced Materials for Sensor Applications, Mamallapuram, February 23, 2010
86. An approach to energy sustainability  
Baldev Raj  
Dr. Swaminathan Endowment Lecture, Layola Institute of Frontier Energy, Chennai, December 2, 2009
87. Science & technology of sodium cooled fast reactors and associated fuel cycles  
Baldev Raj  
DAE Raja Ramanna Lecture in Physics, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, October 9, 2009
88. An approach to energy sustainability  
Baldev Raj  
Rukmini Lakshmi pathy Endowment Lecture, Womens Christian College, Chennai, September 23, 2009
89. Science and technology of Fast Breeder Reactor Programme in India: Challenges and Achievements  
Baldev Raj  
National Chemical Laboratory Diamond Jubilee Lecture, Pune, July 24, 2009
90. Ethics, equity and energy  
Baldev Raj  
Presidential talk, "Green Generation Programme", organized by Exnora Green Pammal, Atomic Energy Central Schools & Kendriya Vidyalaya Schools at Kalpakkam, Convention Centre, Anupuram, July 15, 2009
91. Series of lecture on Materials for Energy Systems  
Nagaoka University of Technology, Japan under the auspices of Japan Society for Promotion



- of Science Senior Visiting Fellowship, May 18 to June 6, 2009
92. Science and technology of fast reactor materials: Challenges and achievements  
Distinguished Materials Scientist Award lecture, Annual Meeting of Materials Research Society of India, Kolkata, February 10-12, 2009
  93. Course on Current Research & Developments in Materials for Mega Energy Systems  
Baldev Raj  
PSG College of Technology, Coimbatore, December 29, 2008
  94. Ethics, equity and energy  
Baldev Raj  
Post-graduate students, PSG College of Technology, Coimbatore, December 29, 2008
  95. Building cutting edge competence in engineering manufacturing  
Baldev Raj  
Lecture delivered to Visionary Corporate Leaders for Manufacturing (VLFM), Confederation of Indian Industries, Gurgaon, December 22, 2008
  96. Current status and future directions: Role of NDE in enhancing economics and safety of nuclear energy as a sustainable option  
Baldev Raj  
Quality Month Celebration, Nuclear Fuel Complex, Hyderabad, November 27, 2008
  97. Sustainable Nuclear Energy: Materials Challenges  
Baldev Raj  
Knowledge Leadership Forum, SASTRA University, Thanjavur, August 8, 2008
  98. Science and technology of fast breeder reactor programme in India: Challenges and achievements  
Baldev Raj  
Prof. Jai Krishna Memorial Award lecture 2008, Annual Convention of Indian National Academy of Engineering, Goa, December 5-6, 2008
  99. Ethics, equity and energy  
Baldev Raj  
Joint Indo-Belgium Seminar on Nuclear Research towards Sustainable Development, Chennai, November 11, 2008
  100. Ethics, equity and energy  
Baldev Raj  
Council meeting of Academia NDT International, Shanghai, China, October 26, 2008
  101. Science & Technology of Fast Breeder Reactors : Indian Success Story  
Baldev Raj  
24<sup>th</sup> Prof. Brahm Prakash Memorial Lecture (2008), August 21, 2008 (awarded every year to an eminent and distinguished metallurgist by the Indian Institute of Metals, Bangalore Chapter)
  102. Convocation Address, Satyabama University, Chennai, April 19, 2008
  103. Design and performance of Fast Reactor fuels for achieving energy sustainability and security  
Baldev Raj  
Dr. P.R. Roy Memorial Lecture, Powder Metallurgy Association of India, February 20, 2008
  104. Fast reactor programme and associated fuel cycle facility: In the context of Indian nuclear scenario  
Baldev Raj  
Prof. K.S.G. Doss Memorial Lecture, Fourteenth National Convention of Electrochemists, Society for Advancement of Electrochemistry Science & Technology, December 6, 2007

105. A perspective on materials science & technology programme at Indira Gandhi Centre for Atomic Research, Kalpakkam  
Baldev Raj  
Prof. A.K. Seal Memorial Lecture, Indian Institute of Metals, Kolkata, July 31, 2007
106. Status of sodium cooled fast reactors with closed fuel cycle in India  
Baldev Raj  
Director's colloquia, Los Alamos National Laboratory, USA, July 10, 2007. It is a distinction honour and this was chosen in the year 2011 by the Los Alamos National Security, LLC (LANS) to put on its external LANS website.
107. Marvels of Indian Bronze – Gods come alive  
Baldev Raj  
Institute for South Asia, Tibet and Buddhism of Vienna University, Vienna, Austria, June 15, 2007
108. An overview of materials technology at IGCAR  
Baldev Raj  
Institut de Soudure, Villepinte, France, May 10, 2007
109. Nuclear energy programme of India: Vision and challenges  
Baldev Raj  
Bharat Ratna C.Subramaniam Memorial Endowment Lecture, University of Madras, Chennai, March 29, 2007
110. Engineering education to contribute to science based mission technologies  
Baldev Raj  
Sri Venkateswara College of Engineering, Sriperumbudur, March 20, 2007
111. Education to enhance competence, capacity and commitment to achieve better quality of life  
Baldev Raj  
Loyola College, Chennai, March 20, 2007
112. Acoustic techniques for materials research, characterization and performance  
Baldev Raj  
Stanley Ehrlich Gold Medal Distinguished Lecture, Madras-India Regional Chapter of the Acoustical Society of America & International Research Institute for the Deaf (IRID), India, Chennai, December 2006
113. Nuclear energy programme of India: Self sufficiency to leadership  
Baldev Raj  
Defence Services Staff College, Wellington, Nilgiris, November 20, 2006
114. Pursuit of Science: Fun and services to the society  
Baldev Raj  
Lecture delivered to Class XI and XII students in Wellington, Nilgiris, November 20, 2006
115. Presidential Address, Scholarship Award function, SSN College of Engineering, November 17, 2006
116. A perspective on nuclear energy in India: Achievements and challenges in materials science & technology  
Baldev Raj  
1<sup>st</sup> A.K. Rao Memorial Lecture, ISAMPE, National Aerospace Laboratories, Bangalore, September 7, 2006
117. A perspective on the nuclear programme in India  
Baldev Raj  
Lecture delivered to Post-graduate students, PSG College of Technology, Coimbatore, August 28, 2006
118. Pursuit of Science: Fun and service to the society

- Baldev Raj  
Lecture delivered to Class XI and XII students at Coimbatore, August 28, 2006
119. Interaction with the students pursuing management studies  
Baldev Raj  
Lecture delivered to students of Management Study, PSG College of Technology, Coimbatore, August 28, 2006
120. Fast breeder technology: A passionate journey for providing energy security to India through nuclear energy  
Baldev Raj  
Guest of Honour lecture to young trainees, Defence Institute of Armament Technology, Pune, June 8, 2006
121. Fast breeder technology: A passionate journey for providing energy security to India through nuclear energy  
Baldev Raj  
Guest of Honour lecture, Vellore Institute of Technology, Vellore, July 29, 2006
122. A voyage of creativity and relevance: Senior science and technology  
Baldev Raj  
Guest of Honour lecture, Vellore Institute of Technology, Vellore, July 30, 2006
123. Pursuit of Science: Joy and Pride  
Baldev Raj  
18<sup>th</sup> Foundation Day Lecture, DAV Public School, Bhubaneswar, August 5, 2006
124. Development of Fast Breeder technology in India: Status and directions  
Baldev Raj  
Prof. E.C. Subba Rao Memorial Lecture, Indian Institute of Technology, Kanpur (2006)
125. Robust diagnosis of degradation in aerospace structures using NDE methodologies  
Baldev Raj  
Prof. P. Joga Rao Memorial Lecture, 14<sup>th</sup> National Seminar on Aerospace Structures, Visvesvaraya National Institute of Technology, Nagpur, January 30, 2006
126. Materials challenges for energy security of India  
Baldev Raj  
Presidential address: 43<sup>rd</sup> National Metallurgists' Day and 59<sup>th</sup> Annual Technical Meeting of The Indian Institute of Metals, Chennai, November 12, 2005
127. Pursuit of science: Joy and pride – Fascination and excitements of materials scientist  
Baldev Raj  
Prof. Brahm Prakash Memorial Lecture, Indian Institute of Metals, Kalpakkam (2005)
128. Welding research in India – Current interests & future directions  
Baldev Raj  
Jaeger Lecture, International Institute of Welding, Mumbai, February 16, 2005
129. Welding science & technology: Past, present and future – A journey through our experience at IGCAR  
Baldev Raj  
Life Time Achievement Award, Indian Welding Society, Indian Welding Society, Hyderabad, February 18, 2005
130. Robust fast breeder reactor and associated fuel cycle technology towards energy security  
Baldev Raj  
Prof. R.V. Tamhankar Memorial Lecture, Indian Institute of Metals, Hyderabad (2005)
131. Status on fast breeder reactors in India  
Baldev Raj

- Special lecture to HWB-NFC Training School students, Hyderabad (2005)
132. Development of fast breeder reactors and fuel cycle in the context of energy security to the nation  
Prof. C.Y. Krishna Murthi Memorial Lecture, National Institute for Quality and Reliability, Chennai, September 5, 2005
  133. Nuclear power scenario in India: Its future prospects and technology challenges in FBR and fuel cycle  
Special lecture to young officers at Institute of Armament Technology, Pune, February 9, 2005
  134. Pursuit of science: Joy and pride – Fascination and excitements of materials scientist  
Baldev Raj  
Meet the Distinguished Scientist programme to students of X to XII standards of Chennai schools under the auspices of The National Academy of Science, Allahabad (2005)
  135. Science and technology of ferrofluids  
Baldev Raj  
MRSI-ICSC Superconductivity & Materials Science Annual Prize lecture, Pune (2005)
  136. Baldev Raj  
1<sup>st</sup> V.S. Jain Memorial Lecture, Indian Society for Nondestructive Testing, Thiruvananthapuram, 2004
  137. Robust inspection technology at IGCAR, Kalpakkam  
Baldev Raj  
Life Time Achievement Award, Indian Society for Nondestructive Testing, December 2004
  138. Metallurgy in ancient India  
Baldev Raj  
Nehru Centre Lecture Series on “Science in India: Past and present”, Mumbai, January 4, 2003
  139. Radiation Science & Technology  
Baldev Raj  
Awareness programme on Applications of Radioisotopes and Radiation Technology for Societal Development, Anna University, Chennai, July 13, 2004
  140. Lasers for enhancing the domains of analytical and process chemistry (Inaugural)  
Baldev Raj  
Workshop on Lasers in Chemistry & Process, organized by University of Madras under the auspices of the Indian Academy of Sciences, Chennai, January 19, 2004
  141. A perspective on heat treatment: Current scenario and future directions  
Baldev Raj  
Inaugural address: International Heat Treat 2004 Conference & Exhibition, Chennai, January 9, 2004
  142. Directions in materials research & engineering  
Baldev Raj  
Guest of honour lecture, Conference of Research Scholars in Materials Science & Engineering (CRSME 2003), Indian Institute of Technology, Kharagpur, August 20, 2003
  143. R&D challenges in the technology of Fast Breeder Reactors for energy security in the country  
Baldev Raj, U. Kamachi Mudali and T. Jayakumar  
Diamond Jubilee Celebration of CSIR, National Metallurgical Laboratory, Jamshedpur, September 1, 2003
  144. Pursuit of science & technology: A passion with ethics  
Teachers Day Celebrations, PSG College of Technology, Coimbatore, September 5, 2003

145. A perspective on measurements in quality management: My experiences  
Baldev Raj  
C.Y. Krishnamurthy Memorial Lecture, National institute for Quality Research, Chennai (2003)
146. Life sketch and contributions of Dr. Glenn T. Seaborg  
Baldev Raj  
Presidential address to commemorate the birthday of Dr. Glenn T. Seaborg, Indian Association of Nuclear Chemists and Allied Scientists (IANCAS), Southern Regional Chapter, Kalpakkam, April 21, 2003
147. Welding technology  
Baldev Raj  
Presidential address, National Welding Seminar, Kolkata, January 23-25, 2003
148. A perspective on energy security strategies for India  
Baldev Raj  
Technology Day Celebration, Indian Institute of Technology Madras, Chennai, May 11, 2002
149. Experiences in material technology management for fast breeder reactors  
Baldev Raj  
ASM International, Chennai Chapter in association with Indian Society for Nondestructive Testing and Indian Institute of Metals, Chennai Chapters, Chennai, August 31, 2002
150. A perspective on meeting the challenges of sustainable energy security  
Baldev Raj  
Engineers Day Celebration, Indian Institute of Technology, Chennai, September 14, 2002
151. Materials research & technology: Issues and directions  
Baldev Raj  
4<sup>th</sup> National Symposium on Research Scholars, Indian Institute of Technology, Chennai, September 27-28, 2002
152. A perspective on holistic corrosion management  
Baldev Raj  
14<sup>th</sup> Prof. T.L. Ramachandran Memorial Lecture, Electrochemical Society of India, Bangalore, July 19, 2002
153. 112.. Status, challenges & opportunities in NDE science and technology  
Baldev Raj  
Dr. Kishore Kumar Memorial Lecture, Indian Institute of Metals, Baroda Chapter, February 16, 2002
154. Strategy for exploiting relevant science and technology for conservation of heritage objects and monuments  
Baldev Raj  
Valedictory Address during the International Seminar on "Conservation of Stone Objects With Special Reference to Limestone Objects, 150<sup>th</sup> Year Celebrations of the Government Museum, Chennai, November 20, 2001
155. Ultrasonics in materials research and applications  
Baldev Raj  
Presidential Address, X National Seminar on Ultrasonics, Hyderabad, March 15 & 16, 2001
156. Welding technology in nuclear applications  
Baldev Raj  
Special Guest Lecture on 25<sup>th</sup> Anniversary of Welding Research Institute, BHEL, Tiruchirapalli, November 29, 2000
157. Intelligent manufacturing of materials  
Baldev Raj  
33<sup>rd</sup> Engineer's Day and 139<sup>th</sup> Birth Anniversary of Sir M. Visveswaraya, the Institute of

Engineers (India), Chennai, September 15, 2000

158. Trends in advanced nondestructive techniques for comprehensive assessment of engineering materials and components  
Baldev Raj  
Metallurgy & Materials Division Medal 2000, The Institution of Engineers (India), Indian Engineering Congress, Hyderabad
159. Advances in manufacturing technologies  
Baldev Raj  
Prof. T. Ramachandran Endowment Lecture organized by Metallurgical Engineering Association, Karnataka Regional Engineering College, Surathkal, November 8, 2000
160. Intelligent processing of materials – vision for material manufacturing in 21<sup>st</sup> century  
Baldev Raj  
Prof. Brahm Prakash Memorial Lecture organized by the Indian Institute of Metals, Trivandrum Chapter, Regional Research Laboratory, January 3, 2000
161. Metallurgy & materials research at Indira Gandhi Centre for Atomic Research, Kalpakkam  
Baldev Raj  
National Metallurgist Day Lecture, 37<sup>th</sup> National Metallurgists' Day Celebrations organized by the Indian Institute of Metals, Salem Chapter, Salem Steel Plant, December 23, 1999
162. Acoustic emission for materials research in austenitic and ferritic alloys  
Dr. M.S. Narayanan Memorial Lecture Award, National Symposium on Acoustics (NSA-99), Acoustical Society of India, Virudhunagar, September 23&24, 1999
163. Challenges in materials development for energy systems  
Platinum Jubilee Lecture, 83<sup>rd</sup> Indian Science Congress, Patiala, January 1996
164. Fresh insights into microstructure, deformation and processes using nondestructive methodologies  
Baldev Raj  
G.D. Birla Gold Medal Lecture presented at the Golden Jubilee Annual Technical Meeting of The Indian Institute of Metals, New Delhi, November 1996
165. Presidential address – 14<sup>th</sup> World Conference on NDT, organized by International Committee on NDT, New Delhi, December 8-13, 1996
166. A perspective on material characterization for technology advancement and industrial growth –  
Emphasis on nondestructive evaluation  
Presidential Address – Materials Science Section, 82<sup>nd</sup> Indian Science Congress, Kolkata, 1995. Published as a Special Issue of Bulletin of Materials Science (Presidential Address, Platinum Jubilee and Invited Lectures at the 82<sup>nd</sup> Indian Science Congress, Kolkata, January 1995 – 19(6) (1996) pp. 839-856
167. Towards improved reliability of welded structures  
Keith Hartley Memorial Lecture, National Welding Seminar, Kolkata, November 1992
168. Analytical nondestructive evaluation for materials characterization  
Baldev Raj  
MRSI Medal Lecture – Presented at the Third Annual General Meeting of the Materials Research Society of India, Bangalore, February 9-11, 1992

## PLENARY LECTURES

1. Interdisciplinary Measurements in a Spectrum of Applications Related to Frontier Technologies  
Baldev Raj  
International Conference on Metals and Materials Research (ICMR 2016), organized by Indian Institute of Metals, Bangalore Chapter & Supported by Materials Engineering, Metal Sciences Division, IISc & Electron Microscope Society of India at Indian Institute of Science, Bangalore, India  
21<sup>st</sup> June 2016
2. Corrosion Management in Nuclear Industry: Learning from Experiences  
Baldev Raj  
17th Asian Pacific Corrosion Control Conference (APCCC17), Victor Menezes Convention Centre, IIT Bombay, Mumbai  
28<sup>th</sup> January 2016
3. Integrated Education Policy: Mega successes with academy ..... Industries; A few glimpse  
Baldev Raj  
Plenary Session on the "Role of STI Policy" at 103rd Indian Science Congress – 2016, University of Mysore, Mysore  
3<sup>rd</sup> January 2016
4. Understanding and Applications of Ferrofluids  
Baldev Raj and John Philip  
Plenary talk at the International Conference on Nanomaterials and Nanotechnology NANO-15, Centre for Nanoscience and Technology, K.S.Rangasamy College of Technology, Tiruchengode, Tamil Nadu, India (in Association World Class University (WCU), GIST, South Korea)  
7<sup>th</sup> December 2015
5. Corrosion Mitigation, Monitoring And Inspection Technologies  
Plenary talk at the Annual Corrosion & Prevention Conference  
Adelaide Convention Centre, Adelaide, South Australia  
17<sup>th</sup> November 2015
6. A Perspective on Advanced Materials for Energy Systems  
Baldev Raj  
Plenary Talk: Intl. conf. on Frontiers in Materials Processing, Applications, Research & Technology (FiMPART-2015), Hyderabad  
Endorsed by Materials Research Society, Singapore (supported by Springer, ICMCB, MGIT-Hyderabad, CNRS, Conf. Development Centre, Star Alliance)  
14<sup>th</sup> June 2015
7. Energy Sustainability: Emphasis on Changing Demands on Materials Research and Technology in Nuclear Energy  
Baldev Raj  
International Conference on Advanced Materials and Manufacturing Processes (ICAMPS 2015), Indian Institute of Metals, Trivandrum,  
13<sup>th</sup> May 2015
8. Nuclear Energy After Major Accidents: Economics, Safety, Risk, Scale, Acceptance,...  
Baldev Raj  
Special Lecture on "Global Nuclear Politics and Strategy: Vth Annual Residential Workshop for Young Scholars, International Strategic and Security Studies Programme (ISSSP), NIAS, Bangalore  
7 May 2015
9. Child Nurturing and Growth: A sure way to right India  
Baldev Raj  
79<sup>th</sup> Indian Montessori Training Courses, Indian Montessori Centre, Bangalore  
30 April 2015

10. A Perspective and Approaches to Energy Security and Sustainability in India  
Baldev Raj  
Plenary Discussion on Nuclear Energy – The Present and Future for India, International Round Table Conference on “Sustainable Development – New Perspectives and Emerging Trends”-SDNPET-2015, AIMS Institutes, Bangalore  
**13<sup>th</sup> February 2015**
11. A Perspective on Corrosion Management: Experiences and Challenges  
Baldev Raj  
Plenary lecture for International Conference on Corrosion TECH during CHEMTECH World Expo 2015, Bombay Exhibition Grounds, Mumbai  
31<sup>st</sup> January 2015
12. Plenary Talk: Management of Water Challenges: Opportunities in context of India  
Baldev Raj  
The Second International Conference on Emerging Technologies for Clear Water, IIT Madras, Chennai  
23-24 October 2014
13. A perspective on Energy Security and sustainability for India  
Baldev Raj  
Forty-Seventh Engineer’s Day Celebration to commemorate 154<sup>th</sup> birth anniversary of Dr Sir M Visvesvaraya in “The Institution of Engineers (India), Karnataka State Centre  
Bangalore, 15<sup>th</sup> September 2014
14. Science & Technology of Advanced Sodium Cooled Fast Spectrum Reactors in Context of Energy Sustainability in 21<sup>st</sup> Century  
Baldev Raj  
Plenary Talk, Council of Academies of Engineering and Technological Sciences; Annual International Conference on Sustainability with Science & Technology, Beijing , China June 2<sup>nd</sup>-5<sup>th</sup> ,2014
15. Corrosion Science: Education ,Research & Human Resources  
Baldev Raj  
Plenary Talk, CORCON -2013, hosted by NACE International Gateway India Section  
New Delhi, October 2<sup>nd</sup>,2013
16. Clean Coal technologies Summit,CII,2013  
Baldev Raj  
Served in Panel on” International Experiences and Global Perspectives”  
Served in Valedictory Panel on “ Policy Imperatives: Road Maps to bring out an enabling Policy Framework”  
New Delhi, October 11<sup>th</sup> ,2013
17. Nuclear Energy Today and in the Future  
Baldev Raj  
Forum for Next Generation Researchers, IV World Materials Summit  
Strasbourg, France, EU-Materials Research Society, October 12-13,2013
18. Materials and manufacturing for sodium cooled fast breeder and fusion power reactor  
MRSI, 24<sup>th</sup> Annual Meeting, IGCAR, Kalpakkam, February 2013
19. (Mentor Talk): Materials science & technology, central theme to quality of life  
National Workshop on Materials Science & Nano technologists organized by PSG College of Technology, February 23<sup>rd</sup>,2013
20. Energy Basket of India: capabilities , challenges and opportunities  
Contributions by engineers: An approach to National Building, INAE Convention CSIR-CBRI and IIT Roorkee, December 6-7<sup>th</sup> , 2012
21. Nuclear energy and future development



- 9<sup>th</sup> Science and Technology in Society Forum, October 7-9, 2012, Kyoto, Japan, A forum where most eminent among professionals are invited to give a plenary on their specialization
22. Mentor lecture- Frontiers of Imaging in NDE,  
Workshop on Imaging in NDE, 18<sup>th</sup> World Conference on NDT, Durban, South Africa, April 2012
  23. Teaching science: A challenging reward ; A programme of atomic energy educational society, Kalpakkam, May 2012
  24. Building capacity, capability and reputation of research in an eminent educational science and technology institute  
HRD Programme of PSG College of Technology, Coimbatore, India Feb 2012
  25. Innovation as essentials for meeting the challenges; A model ecosystem for engineering Institute  
CII-South region initiative to ignite engineering students for achieving innovations.
  26. NDE approaches for enhanced performance and mitigation of risks in demanding technologies  
Baldev Raj, B. Venkataraman and P. Chellapandi  
18<sup>th</sup> World Conference on Non-Destructive Testing organized under the auspices of International Committee on NDT, Durban, South Africa, April 16-20, 2012
  27. Nano coatings for high tribological performance  
4<sup>th</sup> International Conference on Nanoscience & Technology (Nano Africa 2012), University of the Free State Bloemfontein, South Africa, April 1-4, 2012
  28. NDE assessments to ensure performance of cutting edge technologies  
Baldev Raj, Enrich & Excel through NDE (NDE 2011), Indian Society for Non-Destructive Testing, Chennai, December 8-10, 2011
  29. Recent progress of R&D activities on reduced activation ferritic/martensitic steels  
Q. Huang, A. Alamob, N. Balucc, Young David, S. Jitsukawae A. Kimura, R.Kurtzg, R. Lindauh, E. Luconi, T. Muroga, Baldev Raj, R.E. Stollern, Lizhen Tan, H. Tanigawa, A.-A.F.Tavassoli, F. Wano and Y.Wua  
15<sup>th</sup> International Conference on Fusion Reactor Materials, Charleston, USA, October 2011
  30. Energy Materials: Opportunities and Challenges  
49<sup>th</sup> National Metallurgist Day, Ministry of Steels and Mives, Indian Institute of Metals Nov.2011
  31. Nano coatings for energy systems  
Baldev Raj  
2<sup>nd</sup> Trilateral Conference on "Advances in Nano Science - Energy, Water and Healthcare, organized under the auspices of Materials Research Societies of China, India and Singapore, Shanghai, China, November 9-13, 2011
  32. Health monitoring coupled with asset management for performance and risk assessment of high technology components and systems  
Baldev Raj  
19<sup>th</sup> International Council of Academies for Engineering Technological and Sciences (CAETS) Convocation, Mexico City, Mexico, June 29, 2011
  33. Current Status of Sodium Cooled Fast Reactors and Fuel Cycle Technologies in India  
Baldev Raj  
International Conference on Advances in Power Plants (ICAPP 2011), Nice, France, May 2-5, 2011
  34. Metal processing technologies for sodium cooled fast spectrum reactors  
Baldev Raj, A.K. Bhaduri and S.Venugopal  
International Conference on World Class Materials and Manufacturing Technologies,

ASM International Pune Chapter, Mumbai, March 8, 2011

35. Pursuit of materials science & technologies to realize successes in advanced fast neutron spectrum reactors  
Baldev Raj  
Conference on Frontiers of Science, Kolkata, March 2, 2011
36. Energy options & issues: Challenges & opportunities in materials science & technology  
Baldev Raj  
International Seminar on Electromagnetism, Central Glass Ceramic Research Institute, Kolkata, March 1, 2011
37. Materials challenges for fast reactors  
Baldev Raj  
2<sup>nd</sup> International Conference on Advances in Nuclear Materials, Mumbai, February 9, 2011
38. Women in Science: A compelling essentiality for robust sustainable society  
Baldev Raj and M. Vijayalakshmi  
XI All India Meeting of Women in Science ethical Issues – Science & Technology, Indian Women's Scientists Association, New Mumbai, January 28, 2011
39. Pursuit of materials science and technologies to realize successes in advanced fast neutron spectrum reactors  
Baldev Raj  
Tata Institute of Fundamental Colloquium, Mumbai, January 5, 2011
40. Energy, ethics and equity  
Baldev Raj  
Special Evening Lecture, International Symposium on Research Scholars (ISRS 2010), Indian Institute of Technology Madras, Chennai, December 22, 2010
41. Integrity assessment of aero structures and the related NDE  
Baldev Raj  
International Winter School on Advances in Aeronautical Materials and Technologies, Hyderabad, December 18, 2010
42. Sodium cooled fast reactors with closed fuel cycle: Challenges and opportunities to realize mega sustainable energy system  
Baldev Raj  
Advances in Nuclear Technology (ADNUTECH 2010), Bhabha Atomic Research Centre, Mumbai, December 2-3, 2010
43. Mission 2017: Advanced ultra super critical technology demonstration  
Baldev Raj  
Clean Coal India 2011, New Delhi, December 7, 2010
44. Materials for manufacturing technologies for sodium cooled fast reactors and associated fuel cycle: Innovations and maturity  
Baldev Raj  
2<sup>nd</sup> International Conference on Asian Nuclear Prospects (ANUP 2010), Radison Resort Temple Bay, Mamallapuram, October 11-13, 2010
45. Recent developments of structural welds and pipes for the fast reactor programme in India  
Baldev Raj and A.K. Bhaduri  
63<sup>rd</sup> Annual Assembly & International Conference of the International Institute of Welding, Istanbul, Turkey, July 11-17, 2010
46. Non-Destructive evaluation – Status, directions, innovations and challenges - A case study:IGCAR  
Baldev Raj  
20<sup>th</sup> Annual Conference of Indian Nuclear Society (INSAC-2009) organized by Indira Gandhi Centre for Atomic Research and Bharatiya Nabhikiya Nigam Ltd. and supported by Board of Research in Nuclear Sciences, Department of Atomic Research, Chennai, January 6, 2010

47. Materials, manufacturing and inspection technologies for back end fuel cycle of sodium cooled fast reactors  
Baldev Raj  
GLOBAL 2009 International Conference on The Nuclear Fuel Cycle: Sustainable Options & Industrial Perspectives, Paris, France, September 5-12, 2009
48. Status of sodium cooled fast reactors and associated fuel cycle technologies in India in the context of energy security and sustainability  
Baldev Raj  
International Workshop on Asian Nuclear Prospects, Kobe, Japan, October 19-22, 2008
49. Current status and future directions on the role of NDE in enhancing economics and safety of nuclear energy as a sustainable option  
Baldev Raj  
17<sup>th</sup> World Conference on Non-Destructive Testing, Shanghai, China, October 25-28, 2008
50. Reactor physics and safety aspects of fast neutron reactors with associated fuel cycle  
Baldev Raj and P. Mohanakrishna  
International Conference on the Physics of Reactors – “Nuclear Power: A Sustainable Resource”, Interlaken, Switzerland, September 14-19, 2008
51. A comprehensive perspective on plutonium fuels for sodium cooled fast breeders  
Baldev Raj  
Plutonium Futures – The Sciences 2008, Dijon, France, July 7-11, 2008
52. R&D facilities for the development of nuclear energy in India  
Baldev Raj  
International Conference on Nuclear Fuel Cycles for a Sustainable Future (ATLANTE 2008), Montpillier, France, May 19-23, 2008
53. Current status of fast reactor and associated fuel cycle technology in the context of energy security and international developments  
Baldev Raj  
IIT Kanpur REACH Symposium, Khajuraho, March 15-18, 2008
54. Indo-Brazil-South Africa (IBSA) Nanotechnology initiative – A case study of effective cooperation  
Baldev Raj  
3<sup>rd</sup> International Dialogue on Responsible R&D of Nanotechnology, European Commission, Brussels, Belgium, March 11&12, 2008
55. Steel research and development for nuclear technology in India  
Baldev Raj and K. Bhanu Sankara Rao  
13<sup>th</sup> International Conference on Fusion Reactor Materials, Nice, France, December 10-14, 2007
56. Development of NDE techniques for monitoring and evaluation of forging processes and products  
Baldev Raj and T. Jayakumar  
ASPF 2007, National Physical Laboratory, New Delhi, November 5-6, 2007
57. Status of sodium cooled fast reactors with closed fuel cycle in India  
Baldev Raj  
International Congress on Advances in Nuclear Power Plants (ICAPP 2007), Nice, France, May 13-18, 2007
58. Science & Technology: A passionate career of high relevance to society  
Baldev Raj  
DAE Anu Week Celebrations, Vellore Institute of Technology, Vellore, February 13, 2007
59. Materials development and related issues in closed fuel cycle with fast breeder reactors  
Baldev Raj  
International Conference on Advances in Nuclear Materials, Mumbai, December 12-14, 2006

60. Science to technology: A perspective on holistic corrosion management  
Baldev Raj  
International Conference on Corrosion (CORCON 2005), Chennai, November 28-30, 2005
  
61. R&D to achieve 200 GWd/t burn-up in fast reactor fuels  
Baldev Raj  
International Conference on Characterization & Quality Control of Nuclear Fuels, Hyderabad, November 9-11, 2005
  
62. Pursuit of science & technology of NDT in India  
Baldev Raj  
National Seminar on NDT & E (NDE-2005), Kolkata, December 2, 2005
  
63. Prospect on the projected quantities of nuclear systems in the future  
Baldev Raj  
GLOBAL 2005, Tokyo, Japan, October 2005
  
64. Indian Nuclear research activities in the context of nuclear energy growth scenario  
Baldev Raj  
GLOBAL 2005, Tokyo, Japan, October 2005
  
65. Safety of nuclear fuel cycle technology  
Baldev Raj  
Consultancy Meeting, International Atomic Energy Agency, Vienna, September 2005
  
66. Frontiers in NDE research nearing maturity for exploitation to ensure structural integrity of pressure retaining components  
Baldev Raj  
8<sup>th</sup> International Conference on Operating Pressure Equipment (OPE-8) & Exhibition, Melbourne, Australia, April 20-25, 2005
  
67. Surface alloying of nitrogen to improve corrosion resistance of steels and stainless steels  
U. Kamachi Mudali, H.S. Khatak, Baldev Raj and M. Uhlemann  
International Workshop on High Nitrogen Steels, The Netherlands (2003)
  
68. Advanced NDE techniques towards assessment of remaining life of aged components  
Baldev Raj, T. Jayakumar and B.P.C. Rao  
Workshop on RLA, National Metallurgical Laboratory, Jamshedpur, January \* & 9, 2003
  
69. Techniques for assessment of concrete structures-Research and development  
Baldev Raj, T. Jayakumar and B.P.C. Rao  
INAE National Seminar on "Engineering Building Materials and their Performance", Indian Institute of Technology Powai, Mumbai, January 17 & 18, 2003
  
70. Role of NDE in industries  
Baldev Raj  
Course on Advanced Methods in Nondestructive Evaluation, Centre for Nondestructive Evaluation, Indian Institute of Technology Madras, Chennai, December 16-20, 2002
  
71. Online monitoring of Zirconium alloy components of pressurized heavy water reactors by advanced NDE technologies  
Baldev Raj, P. Kalyanasundaram and B. Venkataraman  
Symposium on Zirconium 2002 (ZirC-2002), Bhabha Atomic Research Centre, Mumbai, September 11-13, 2002
  
72. Comprehensive evaluation of microstructures and damage by nondestructive methods  
Baldev Raj  
International Symposium on Materials Ageing and Life Management, Kalpakkam, India, October 3-6, 2000

73. NDE for realizing better quality of life in the context of India – An emerging economy  
Baldev Raj  
15<sup>th</sup> World Conference on NDT, Rome, Italy, October 15-21, 2000
74. A perspective on emerging opportunities in neutron radiography application  
Baldev Raj  
National Workshop on Utilization of KAMINI Reactor, IGCAR, Kalpakkam, organized by BRNS, AERB and IUC-DAEF, August 30 to September 4, 1999
75. Engineering approach to corrosion management  
Baldev Raj and Geogy George  
Corrosion Management Course, Ooty, June 28-30, 1999
76. Reliability of quality through intelligent welding methodologies  
Baldev Raj  
IMACS/IEEE CSCC-99, Athens, Greece, 1999
77. NDE characterization of Sangam and Roman coins  
Annual Meeting of South Numismatic Society, Kanyakumari, February 1998
78. Training and certification in India – An overview  
Baldev Raj, B. Venkataraman and V.A. Chandramouli  
National Seminar on Nondestructive Evaluation (NDE-98) – The Indian Scenario and Challenges Ahead, Trivandrum, December 10-12, 1998
79. Status of NDE research and applications for life management of nuclear power plants in India  
Baldev Raj, M.T. Shyamsunder and T. Jayakumar  
24<sup>th</sup> MAP-Stuttgart Seminar on Safety and Reliability of Plant Technology, Stuttgart, Germany, October 7-9, 1998
80. Recent developments in the use of nondestructive testing technique for monitoring industrial corrosion  
Baldev Raj  
International Conference on Corrosion and its Control, Indian Institute of Technology, Mumbai, December 3-6, 1997
81. R&D in NDE for life management of engineering components  
Baldev Raj  
National Seminar on NDE and Life Extension of Engineering Components, DE-97, Hyderabad, 1997
82. NDE to enhance competitiveness of the Indian chemical industry  
Baldev Raj  
Workshop on DAE Technologies, Institution of Chemical Engineers, Kolkata, February 1997
83. Nuclear methods for material diagnosis  
Baldev Raj  
On the occasion of the 40<sup>th</sup> Anniversary of MSIA SPECTRUM, Moscow, the International Conference on NDT in Russia, organized by the Russian Academy of Sciences, Moscow, Russia, June 1996
84. Demodulated autocorrelogram pattern recognition (PR) – A universal PR tool for NDT  
Baldev Raj  
8<sup>th</sup> Asia-Pacific Conference on NDT, Taipei, Taiwan, December 1995
85. Eddy current testing of fast breeder reactor fuel cladding tubes  
Baldev Raj  
Proc. 6<sup>th</sup> European Conference on NDT, NICE, France, October 1994
86. Status of NDE research and applications in India

Baldev Raj  
Proc. 7<sup>th</sup> Asia-Pacific Conference on NDT, Shanghai, China, October 1993

87. Reliable solutions to engineering problems in testing through acoustic signal analysis

Baldev Raj  
13<sup>th</sup> World Conference on Nondestructive Testing, Sao Paulo, Brazil, October 18-23, 1992

88. NDE – Current national status and priorities

Baldev Raj  
National Seminar on Application of Advanced Technology in the Field of Testing and Evaluation of Materials, Platinum Jubilee Session of National Test House, Kolkata, November 1988

## KEY NOTE LECTURES

1. Changing Paradigms in Security: Defining Collaborations  
Workshop on India-US Cooperation on Global Security: Dialogue on Strategic Security Threats of the 21<sup>st</sup> Century, NIAS- CISAC meeting  
5 October 2016
2. Frontiers of Research: Imaging in Non Destructive Evaluation  
Baldev Raj  
Inaugural Keynote Address : A Week Summer School on NDTE-Perspectives on Imaging, M. S. Ramaiah Institute of Technology (MSRIT), Bangalore  
11<sup>th</sup> July 2016
3. Non Destructive Evaluation for Understanding Defects, Microstructures and Stresses for Asset Management  
Baldev Raj  
First Structural Integrity Conference and Exhibition (SICE-2016) organized by Indian Structural Integrity Society (InSIS) along with Indian Institute of Science, Bangalore and Indian Institute of Technology Madras, Chennai, 5<sup>th</sup> July 2016
4. Current Status and Future Directions of Welding Science and Technology: Indian Context  
Baldev Raj  
Golden Jubilee Celebrations of IIW-India, Kolkata  
26 April 2016
5. Keynote at the Symposium on “Welding for Nation Building” at Golden Jubilee Celebration of IIW-India, The Stadel, Salt Lake, Kolkata  
22 April 2016
6. Keynote address at the Two-Day Workshop on “Explosive Detection Technologies”  
Baldev Raj  
Victor Menezes Convention Centre (VMCC), Lecture Hall No. 21, IIT-Bombay  
22<sup>nd</sup> February 2016
7. Residual Stresses: Mechanisms, Measurements and Solutions  
Baldev Raj  
Keynote Address at the All India Seminar on “Residual Stress: Key Challenges and Remedies”, The Institution of Engineers (India), Karnataka State Centre; National Design and Research Foundation & Central Power Research Institute, Bangalore  
21 January 2016
8. Life Cycle Management of Structural Components of Reactors and Reprocessing Plants  
Baldev Raj  
Keynote talk at the Fourth International Conference on “Through-Life Engineering Services (TESConf2015)”, Cranfield University, UK  
3 November 2015
9. Brain Storming Session on Accelerated Nuclear Energy in India between INAE and DAE, Nuclear Power Corporation of India, Mumbai  
7<sup>th</sup> September 2015
10. Energy Security : Foresight and Technologies  
Baldev Raj  
Engineers’ Conclave (EC 2015), Nabhiklya Urja Bhawan, Anushaktinagar, Mumbai  
Organized by Indian National Academy of Engineering (INAE) & Bhabha Atomic Research Centre (BARC)  
7<sup>th</sup> September 2015
11. India: Reality and Aspiration  
Baldev Raj  
Chief Guest and Prize Distribution Function at Clarence High School, Bangalore

4 July 2015

12. Keynote address at Motorola Scholar Awards (2014-15) Programme, Foundation for Advancement of Education and Research, MS Ramaiah Institute of Technology, Bengalore  
30 June 2015
13. Keynote address at NRDC Prize Award Ceremony and Conference on "Make in India: Opportunities through Innovation" PSG College of Technology, Coimbatore  
25 February 2015
14. India's Asian Order: Culture, Economy and Security  
Baldev Raj  
International Conference on India's Asian Order: Culture, Economy and Security, Dept. of Civics and Politics, Univ. of Mumbai, Mumbai  
8 December 2014
15. Frontiers of casting science and Technology  
Baldev Raj  
VII National Foundry Conclave, Hotel Le Meridien, Coimbatore organized by Confederation of Indian Industry (CII) Southern Region; (Session 1: In Pursuit of knowledge)  
27 November 2014
16. A Perspective on Tailoring Surfaces for Corrosion Mitigation and Performance  
Baldev Raj  
International Conference on Pump, Values, Surfaces and Coatings  
Confederation of Indian Industries, Chennai, July 4<sup>th</sup>-6<sup>th</sup>, 2014
17. Energy Solutions with Unmanned Autonomous Vehicles  
Baldev Raj  
TEQUIP-2, PSG College of Technology  
Coimbatore 28<sup>th</sup> April, 2014
18. World Looks up to Material Scientists and Technologists to Solve Challenges Facing Mankind  
Baldev Raj  
National Workshop on Recent Trends in Materials Science, Nanoscience and Nanotechnology  
Department of Applied Science, PSG College of Technology, Coimbatore, February 22<sup>nd</sup>, 2014
19. Engineering Innovations: Enablers and Ecosystems. Launch of Manufacturing Focused Technology Services Portal  
Baldev Raj  
Department of Science and Industrial Research & National Manufacturing Competitiveness Council, National Conference on Acceleration Technology Innovation for Inclusive and Growth  
New Delhi, November 7<sup>th</sup>, 2013
20. Automation in Welding: Emerging Directions  
Baldev Raj  
International Conference on Automation in Welding, Organized by International Institute of Welding  
Essen, Germany, September, 10<sup>th</sup> -17<sup>th</sup>, 2013
21. Science, technology, ethics and society  
Baldev Raj  
Management Students from Germany & India  
PSG Institute of Management, August 2013
22. Identify the young minds to take a progress in corrosion mitigation and take a progress in surface engineering → pathway to sustainability amidst challenges  
Baldev Raj  
Chair Panel of International Experts during International Conference on Heat Treatment and Surface Engineering, ASM Chennai, 2013



23. India study abroad program (2013), multidiscipline students of San Diego University, USA  
Baldev Raj  
Nuclear Power In India, January 9, 2013
24. Technology Foresight for leaders in Technology Management  
Energy Security and Sustainability in the Context of India: Technology Foresight  
National Institute of Advanced Science & Department of Science and Technology,  
Bangalore, December 17, 2012
25. Industry Distinguished Collaboration: National and Global Challenges, Realising synergy of  
interdisciplinarity to grow future technologies  
Baldev Raj  
CEO and Senior team of R&D Leaders during the Annual Review of *Tata Consultancy Services*,  
Corporate Office, Mumbai, 21 October 2014
26. Materials Science Research by Doctoral Students: Opportunities and approaches  
International Symposium of Research scholars organized by IIT Madras, Indian National  
Academy of Engineering and Indian Institute of Metals, December 13, 2012, IIT, Madras
27. Capacity, capability, commitment and ecosystem for excellence in management  
Consulting Valedictory Keynote Address: Management Consulting by Directorate of Industrial  
and Scientific Research and PSG College of Technology, December 15<sup>th</sup>, 2012
28. Keynote address at the Research Carnival at the students Research Council of PSG College  
of Technology, Coimbatore, January 4<sup>th</sup>, 2012
29. A perspective on system approach to nuclear security  
India-US cooperation on global security: a workshop on technical aspects of civilian nuclear  
security; specialist talk US National Academies of Science and the National Institute of  
Advanced Studies, Bangalore  
October 29-31, 2012
30. Defining specialization in the context of National Challenges  
Baldev Raj  
Science Teachers Programme of Department of Science and Technology,  
Pollachi, Tamilnadu, May 2012
31. NDE measurements for understanding of performance. A few case studies on  
Engineering components, human health and cultural heritage.  
Baldev Raj  
39<sup>th</sup> Annual Review of progress in Quantitative Nondestructive evaluation (QNDE), Denver,  
July 16<sup>th</sup>, 2012
32. Recent trends in science and technology of nondestructive evaluation, innovation and opportunities  
Baldev Raj  
Singapore International Conference on Nondestructive Testing and NDT Expo, Singapore,  
November 3&4, 2011
33. Overview: Region & Challenges  
Baldev Raj  
6<sup>th</sup> Asian Pacific IIW International Congress and 6<sup>th</sup> WTIA Annual Conference on Improving Quality  
of Life through Welding, Cairns, Australia, September 25-27, 2011
34. Materials science & technology: A key driver in achieving judicious energy mix, demands and  
security, INAE-ASTE Workshop on Energy Efficiency, New Delhi, April 11, 2011
35. Role of materials science technology drivers in achieving energy security  
Baldev Raj  
Seminar on Energy Options for India, Indian Institute of Chemical Engineers & Asian and  
Mideast Institute of Chemists, Mumbai, March 19, 2011

36. Challenges of managing mega projects under Indian conditions  
Baldev Raj  
Course for Senior Executives, National Institute of Advanced Scientific Research,  
Bangalore, January 8, 2011
37. Safety of sodium cooled fast reactors: An Indian perspective  
Baldev Raj  
Third International Consulting Meeting on Harmonization of Safety Aspects of SFR towards  
global deployment, Tokyo, Japan, September 9-10, 2010
38. Development of materials and manufacturing technologies for Indian Fast Reactor Programme  
T. Jayakumar, A.K. Bhaduri and Baldev Raj  
9<sup>th</sup> Liege Conference on “Materials for Advanced Power Engineering”, Liege, Belgium,  
September 27-29, 2010
39. Scientific approach to demanding corrosion management issues in nuclear industry  
Baldev Raj  
Special address, CORCON 2009, NACE International Gateway of India Section, Mumbai,  
October 1, 2009
40. Advanced NDE for pressure vessels and piping  
Baldev Raj  
9<sup>th</sup> International Conference & Exhibition 2009 on Operating Pressure Equipment Incorporating  
The AINDT Biennial Conference organized by The Institute of Materials Engineering, WTIA  
And AINDT, Queensland, Australia, August 26-28, 2009
41. Nuclear Energy and the Case of Fast Breeder Reactors  
Baldev Raj  
International Conference on “India and Energy” organized by the Centre of Geopolitics of Energy  
and Raw Materials (CGEMP), University of Dauphine, Paris, June 18 & 19, 2009
42. India on the rise: Sustainable energy needs and strategies for the nuclear energy  
Baldev Raj  
Discussion Meeting on ‘Materials – Quo Vadis’, Centenary Celebration of Indian Institute of Science,  
Bangalore, December 12, 2008
43. Realization of fast breeder reactor technology in India  
Baldev Raj  
Indian Nuclear Society Conference on “Nuclear Technology – Role of Industry”, Mumbai,  
November 25, 2008.
44. Corrosion management strategies and successes in fast breeder reactor programme  
Baldev Raj and U. Kamachi Mudali  
International Workshop on Corrosion Engineering and Mitigation, NACE International India Section,  
Defence Institute of Armament Technology, Pune, November 7, 2008
45. Materials Challenges in Nuclear Energy  
Baldev Raj  
International Conference on Electronic Materials organized by International Union of Materials  
Research Society, Sydney, Australia, July 28 to August 1, 2008
46. Information assurance in 21<sup>st</sup> Century: Making it happen  
Baldev Raj  
Address delivered during the 4<sup>th</sup> Indo-Australian Conference on IT Security (IACITS 2008), Central  
University, Pondicherry, March 25, 2008
47. A perspective on engineering manufacturing  
Baldev Raj  
INAE-DAE International Conference on Advances in Manufacturing Technology for Young  
Engineers, Indian Institute of Technology Madras, Chennai, February 6-8, 2008
48. 27. Building on Knowledge-base on Sodium Cooled Fast Breeder Reactors to Develop

Materials Technology for Fusion Reactors

Baldev Raj

13<sup>th</sup> International Conference on Fusion Reactor Materials, Nice, France, December 10-14, 2007

49. Research and applications of acoustics : Materials – engineering – healthcare – culture  
Baldev Raj  
National Seminar on Acoustics, K.S. Rangasamy College of Technology, Tiruchengode,  
December 5, 2007
50. Knowledge management in a nuclear research Centre  
Baldev Raj and S.A.V. Satya Murthy  
International Conference on Knowledge Management in Nuclear Facilities, Vienna, June 18-21,  
2007
51. Frontiers of Research in NDE  
Baldev Raj  
12<sup>th</sup> Asia-Pacific Conference on Nondestructive Testing, Auckland, New Zealand,  
November 5-10, 2006
52. Nuclear Science: A fascinating career to serve society  
Baldev Raj  
Workshop on Research and Career Opportunities for Physicists and Chemists,  
Qunne Mary's College, Chennai, January 30, 2007
53. A perspective on FBR programme in India  
Baldev Raj  
2<sup>nd</sup> IIT-European Union Alumni Conference, Paris, France, May 11, 2006
54. Reliable and relevant non-destructive measurements for robust technologies  
Baldev Raj and B. Venkataraman  
12<sup>th</sup> Asia Pacific Conference on NDT, Auckland, New Zealand, November 5-10, 2006  
Selected for publishing in NDT.net Database, Rolf Diederichs (Editor)
55. Simulation, modeling and monitoring of materials, microstructure and defects for high  
Performance components  
Baldev Raj  
International Conference on Recent Advances in Materials and Processing (RAMP 2006),  
PSG College of Technology, Coimbatore, December 15-16, 2006
56. Comprehensive characterization of ageing behaviour in M250 maraging steel using  
multi-NDE techniques  
K.V. Rajkumar, Anish Kumar, T. Jayakumar, S. Vaidyanathan, S. Mahadevan, B. Sasi,  
G. Amarendra, Baldev Raj and K.K. Ray  
9<sup>th</sup> European Conference on Non-Destructive Testing, Berlin, Germany, September 25-29, 2006
57. Characterization of microstructures with linkages to performance by NDE methodologies  
Baldev Raj  
Indo-US Workshop on Recent Advances in Microstructures/Textures/Property Relations in  
Close Packed Metals, Visakhapatnam, December 28-30, 2005
58. A voyage to the exciting research & application in engineering and medicine of infrared techniques  
and technologies  
Baldev Raj  
Workshop on NDE of Imaging Techniques in Medicine and Industry, Indian Society for  
Nondestructive Testing, Kolkata, December 1, 2005
59. . perspective on fast reactor fuel cycle in India  
Baldev Raj, H.S. Kamath, R. Natarajan and P.R. Vasudeva Rao  
First COE-INES International Symposium (INES-1) on Innovative Nuclear Energy Systems  
for Sustainable Development of the World, Tokyo, Japan, October 31 to November 4, 2004.

60. NDE in manufacturing and life management  
Baldev Raj and T. Jayakumar  
AICTE-ISTE sponsored short term course on advances in Nondestructive Testing, NIT,  
Karnataka, Surathkal, June 30 to July 12, 2003
61. Mechanical properties and nondestructive evaluation of chromium-molybdenum ferritic steels  
For steam generator application  
Baldev Raj and B.K. Choudhary, 7<sup>th</sup> International Conference on Operating Pressure Equipment  
(OPE-7), Melbourne, Australia, April 2-4, 2003
62. Microstructure driven process modeling  
Baldev Raj, P.V. Sivaprasad and S. Venugopal  
International Conference on Digital Aided Modeling and Simulation, Coimbatore Institute  
of Technology, Coimbatore, January 6-8, 2003
63. Nondestructive evaluation to enable comprehensive failure analysis and ensure structural integrity  
of engineering components  
Baldev Raj  
International Conference on Failure Analysis, Australia, November 2002
64. Current status of FBR science & technology in India  
Baldev Raj  
Indian Institute of Metals during Council of National Technology Day, Chennai, May 2002
65. Welding and NDE: Inter-twinned technologies  
Baldev Raj  
4<sup>th</sup> National Seminar on Research Scholars, Indian Institute of Technology Madras,  
Chennai, September 2002
66. Fracture mechanics and NDE – A robust approach to ensure structural integrity  
Baldev Raj  
One day Workshop on Fracture Mechanics & Nondestructive Evaluation, Mumbai, May 18, 2002
67. Materials & characterization  
Baldev Raj  
Training Workshop on Materials Processing, Characterization and Testing of Industrial Quality  
Control, National Research & Technology Consortium, Parwanoo, March 20-24, 2002
68. Advances in Nde techniques for inservice inspection  
Baldev Raj, T. Jayakumar and B.P.C. Rao  
Workshop on Inservice Inspection of Nuclear Power Plants, Kalpakkam, January 22-24, 2002
69. KAMINI – A versatile tool for radiography and activation analysis  
Baldev Raj  
International Seminar on Application of Radioisotopes and Radiation Technology in the 21<sup>st</sup> Century,  
December 12-14, 2001, Mumbai
70. Creep and fatigue of high temperature materials, An overview  
Baldev Raj and K. Bhanu Sankara Rao  
Short Term QIP course on Creep, Fatigue and Fracture of Materials and Industrial Components,  
Indian Institute of Technology Madras, Chennai, December 3, 2001
71. A perspective on developments in NDE to enable safe and reliable nuclear power industry  
Baldev Raj and T. Jayakumar  
10<sup>th</sup> Asia-Pacific Conference on Nondestructive Testing, Brisbane, Australia, September 17-21,  
2001
72. Meeting the challenges in NDE research and applications  
Baldev Raj  
Engineering Materials 2001 Conference, Melbourne, Australia, September 24-26, 2001
73. Advances in nondestructive techniques to evaluate weld quality

Baldev Raj and A.K. Bhaduri  
ISTE Summer School on Recent Developments in Materials Joining, Annamalai University,  
Chidambaram, May 28 to June 8, 2001

74. Indian nuclear energy programme: R&D in materials  
Baldev Raj  
AICTE-ISTE Sponsored Short Term Training Programme on Intelligent Materials for the  
New Millennium, Pondicherry Engineering College, May 21, 2001
75. Science-Industry interaction for the effective corrosion management  
Baldev Raj  
Corrosion Management Course, Ooty, June 28-30, 1999
76. Status of micromagnetic NDE methods for ferromagnetic materials characterization, testing  
and evaluation  
V. Moorthy, Baldev Raj and T. Jayakumar  
Germany-India-Russia Workshop on Magnetic Methods for NDT, Ekaterinburg, Russia,  
June 14-17, 1999
77. .Application of intelligent processing of materials  
Baldev Raj  
National Seminar on NDT in Steel and Allied Industries, National Metallurgical Laboratory,  
Jamshedpur, April 2-4, 1998
78. Application of microscopy to challenging problems in materials science and engineering  
Baldev Raj  
National Symposium on One Hundred Years of Electron Discovery, Kuvempu University,  
Shankaraghatta, December 29-30, 1997
79. Application of new developments in testing & evaluation to quality management of welded  
components  
Baldev Raj  
Course on Welding Metallurgy, Processes and Quality, Nuclear Fuel Complex, Hyderabad,  
July 22-23, 1997
80. Acoustic emission in materials research – Current status and future directions  
Baldev Raj  
AEWG(I) Workshop on Acoustic Emission, Bhabha Atomic Research Centre, Mumbai,  
August 22-23, 1997
81. Trends in quality management and fresh insight into technology of heat exchangers through  
failure investigations  
Baldev Raj, K.V. Kasiviswanathan and T. Jayakumar  
Third National Alexandria Conference on Heat Exchangers, Boilers and Pressure Vessels,  
Montazah  
Sheraton Hotel, Alexandria, Egypt, April 5-6, 1997
82. Challenges and opportunities for academicians towards total quality management in Indian industry  
Baldev Raj  
Seminar on Role of Academicians in Quality Improvement of Industries, Osmania University  
and Indian Society of Technical Education, Hyderabad, February 23, 1997
83. Status of NDT in India  
Baldev Raj, K.V. Kasiviswanathan and C.G. Krishnan Nair  
60<sup>th</sup> Anniversary Conference of the Chinese Mechanical Engineering Society, Beijing, China,  
September 1996
84. Development of inservice inspection technique for nuclear power plants in India  
P. Rodriguez and Baldev Raj  
International Conference on Pipes and Pressure Vessels, Singapore, February 1-2, 1996

85. Exploring the horizons for condition monitoring of operating plants  
P. Rodriguez and Baldev Raj  
International Conference on Maintenance, Inspection, Corrosion, Metallurgy and Plant Reliability (MICMAP-96), Baroda, January 1996
86. Corrosion monitoring and role of NDT  
Baldev Raj  
Seminar on Technological Frontiers in Corrosion Monitoring and Mitigation, Bombay, November 1994
87. Neutron radiography and gauging – An overview  
Baldev Raj  
First National Workshop on Neutron Radiography and Gauging, SHAR Centre, Sriharikota, March 25, 1994
88. Image analysis and microstructures in nondestructive evaluation  
Baldev Raj and C. Babu Rao  
IAEA Regional Workshop on Image Processing in Materials Science and NDT, BARC, Bombay, January 1992
89. Emerging technology in NDE of weldments – Status in India  
Baldev Raj  
International Symposium on Joining of Metals (SOJOM-91), Trichy
90. Nondestructive evaluation for the 1990's  
Baldev Raj and D.K. Bhattacharya  
National Seminar on NDE for Increased Reliability, Productivity, Hyderabad, April 1990
91. Development in NDT and condition monitoring for improving plant reliability and durability  
Baldev Raj  
National Seminar on Maintenance and Productivity, NPC, New Delhi, February 1990
92. Role of NDE in maintenance engineering  
Baldev Raj  
Workshop on Maintenance Engineering, Indian Institute of Technology, Delhi, November 1988
93. NDT methods to assess damage in materials and components  
Baldev Raj  
National Seminar on Advances in Repair Technology, NPC, New Delhi, January 1988
94. Status of acoustic emission for condition monitoring  
Baldev Raj  
Seminar on Advances in NDT Techniques and Instrumentation, Baroda, January 1988
95. Status of ultrasonic testing and evaluation  
Baldev Raj  
National Seminar on Acoustics, Trichy, December 1987
96. An overview of the status in testing and control of welds – Report from commission V of International Institute of Welding  
Baldev Raj, D.K. Bhattacharya and C.V. Subramanian  
International Welding Conference, BHEL, New Delhi, 1987
97. Radiography in nondestructive evaluation  
Baldev Raj  
National Symposium on Radiations in Health, Environment and Industry, DRDL, Jodhpur, April 1987
98. Frontiers of NDE research at IGCAR, Kalpakkam  
National Seminar on NDT, Vikram Sarabhai Space Centre, Trivandrum, December 1986

99. Nondestructive evaluation for materials research, quality and reliability in nuclear industry  
Baldev Raj and C.V. Sundaram  
National Seminar on NDE in Engineering Industry, ISNT Coimbatore, May 196
100. Perspective on the fast reactor fuel cycle  
C.V. Sundaram and Baldev Raj  
Seminar on Fast Reactor Fuel Cycle, Kalpakkam, February 1986

## INVITED LECTURES

1. Address at the One day Consultation Future of the River Basin: Looking beyond Cauvery, NIAS, Bangalore  
17<sup>th</sup> November 2016
2. Talk at Workshop on Unmanned Aerial Systems for Governance  
Karnataka Jnana Aayoga (Karnataka Knowledge Commission), Bangalore  
27 October 2016
3. Proposed Network for Future of Manufacturing  
Roundtable Meeting on the Future of Manufacturing, National Institute of Advanced Studies, Bangalore  
22<sup>nd</sup> October 2016
4. Talk at Empereal-KDDS Renewable Energy PVT Ltd, Coimbatore  
13 October 2016
5. Transitioning to Lower carbon economy: Technology and Engineering Considerations in Building and Transportation Sectors  
CATES Council Meeting  
Royal Academy of Engineering, London, UK  
15<sup>th</sup> September 2016
6. Talk delivered at Inaugural Session of EETech 2016 - Technical Conference and Exposition on Energy Efficiency, Environment and Technology, India Habitat Centre, Lodi Road, New Delhi  
Organized by Confederation of Indian Industry, Chandigarh  
1<sup>st</sup> September 2016
7. Materials for Strategic Sectors: A Perspective  
Indian School of Mines, Dhanbad  
17<sup>th</sup> August 2016
8. Materials for Strategic Sectors: A Perspective  
Workshop on "Strategies for Strategic Materials", MECON Limited, Ranchi  
12<sup>th</sup> August 2016
9. Chief guest and Inaugural talk at the First year Under Graduate Programs at Reva University, Bangalore  
10 August 2016
10. Realizing Design Success in Challenging Technologies  
Workshop on "CII-IISc Designing New Products Through Research Innovation (DCODE)", Centre for Product Design and Manufacturing (CPDM), Indian Institute of Science, Bangalore  
27<sup>th</sup> July 2016
11. Science based Technology in Context of Aspiring India  
Talk at Graduation Function, Raja Ramanna Centre for Advanced Technology, Indore  
23 July 2016
12. Visible and sublime outcomes, transforming Bangalore  
Workshop on Bangalore's 'Great Transformation': Land, Ecologies, Economies, Communities,  
24 June 2016, NIAS, Bangalore
13. Advanced Materials Research in Manufacturing  
Workshop on Advanced Manufacturing Technologies in Defence Sector  
National Institute of Advanced Studies, Bangalore  
18 June 2016



14. Interlinked ecosystems of innovations, vocation, education, innovations and pursuit of profession, Welcome address at the Two day National Consultative Meet on Vocational (Skill), Technical and Higher Education, NIAS , Bangalore  
13 June 2016
15. Conflicts resolution: A multidiscipline dialogue with armed visible sublime outcomes  
A discussion meeting on Armed conflict, peace audit and early warning-Decennial Review 2016, National Institute of Advanced Studies, Bangalore  
9 June 2016
16. Energy, Ethics and Equity  
Nightingales Elders Enrichment Centre, Malleswaram, Bangalore  
20<sup>th</sup> May 2016
17. Fun of Doing Science: Make Earth a Better Planet  
Woodstock School, Mussoorie  
18<sup>th</sup> April 2016
18. Professional Societies Contribution to Strengthening the Indian Accreditation System  
Interaction Session with the Accreditation Delegation from The Institution of Engineering and Technology, UK, The Institution of Engineers (India), Karnataka State Centre, Bengaluru
19. Energy Foresights, Security and Sustainability  
Baldev Raj  
NIAS-DST Training Programme on “Science Policy and General Management”  
29<sup>th</sup> February 2016
20. Inaugural Address at the Workshop on Advanced NDE Techniques, Indian Institute of Technology Madras, Chennai, 24 February 2016
21. Role of today’s Institutions and Organisations in Specific Learning Difficulty (SLD)  
Baldev Raj  
Felicitation Ceremony of the Specific Learning Difficulty: train the Trainers-A Certificate Programme, Christ University co-organized by Times Foundation (The Times group)  
20 February 2016
22. Fun of Doing Science: Make Earth a Better Planet  
Baldev Raj  
NIAS Course for ISHAN VIKAS – UDHAN programme (Sponsored by Ministry of human resource development government of India)  
25 December 2015
23. Successful globalization case studies in strategic sectors  
Baldev Raj  
Forum for Global Knowledge Sharing, 10<sup>th</sup> Annual Conference on “Technology, Growth and Sustainability”, NIAS (organized by Knowledge Forum, Bangalore)  
27 November 2015
24. Energy Security : Foresight and Technologies  
Baldev Raj  
The Thirteenth Annual NIAS-DST Training Programme on Multidisciplinary Perspectives on Science, Technology and Society; Core Theme: Energy Security and Management  
10 August 2015
25. Aspiring Scientists in Aspiring India  
Inaugural address at INSPIRE Internship Camp-2015, Centre for Nanoscience and Technology, Tiruchengode (Organized by Dept. of S&T, Govt. of India)  
5 August 2015
26. Science is Fun: Service to Society is Accomplishment

- Interactive session: INSPIRE Internship Camp-2015, Centre for Nanoscience and Technology, Tiruchengode (Organized by Dept. of S&T, Govt. of India)
27. Challenges and opportunities to realizing India of my Dreams  
Address at Freshers' Day Function, Atria Institute of Technology, Bangalore  
3 August 2015
  28. Welcome address at the "Consultative Workshop on "Future of Education: The Schools of the Future", National Institute of Advanced Studies (NIAS), Bangalore (co-organizers Future Agenda, Karnataka Knowledge Commission, TCS)  
29 July, 2015
  29. Welcome address at the Conference on "Myanmar at the Crossroads: Current Realities, Challenges and Opportunities, ISSSP Unit, NIAS  
20<sup>th</sup> July 2015
  30. Technology, Ethics, Equity and Sustainability  
Atomic Energy Retired Officers' Association, Annual General Body Meeting, Bangalore  
18<sup>th</sup> July 2015
  31. Inaugural address the 1st Quantitative Infrared Thermography Asia Conference (QIRT-Asia 2015) at Radisson Blu, Mahabalipuram (organized by IGCAR)  
7 June 2015
  32. Energy Security and Sustainability: Approaches and Priorities for Growing and Aspiring India  
Baldev Raj  
Institute of Nano Science & Technology, Punjab  
27 March 2015
  33. Advanced Materials and Technologies  
Baldev Raj  
Colloquium Talk, Indian Institute of Science Education and Research (IISER), Mohali  
27 March 2015
  34. Energy Security and Sustainability: Approaches and Priorities for Growing and Aspiring India  
Baldev Raj  
Research Scholars Day, IIT Madras, Chennai  
13 March 2015
  35. Approaches to prioritise application and leadership in Unmanned Aerial Systems  
Baldev Raj  
Round Table meeting on Civilian Applications of Unmanned Aerial Systems, International Institute for Aerospace Engineering & Management, Jain University, Bangalore  
7 March 2015
  36. A Perspective and Approaches to Energy Security and Sustainability in India  
Baldev Raj  
International Conference on "Sustainable Development – New Perspectives and Emerging Trends".  
IMS Centre for Sustainability (ACS) under the aegis of Acharya Institute of Management and Sciences (AIMS).  
3<sup>th</sup> February, 2015.
  37. Challenging Inequalities: A holistic Aspiration and Topological Map  
Baldev Raj  
IC4HD (International Centre for Human Development)-NIAS Round Table-Addressing Economic inequality In India  
8 January 2015
  38. Inaugural Address: Science is Fun: Service to Society is Accomplishment  
Dr Baldev Raj

NIAS Course for Ishan Vikas – Udhan Programme (Sponsored by Ministry of Human Resource Development, GOI)  
22 December 2014

39. Approaches of education and informal mechanism for skill development

Dr Baldev Raj

National Level Consultation on Skill Development, Employment and Mobility in India

22 December 2014

40. Policy for science and science for policy: A perspective scalable and sustainable as a few examples of successes

Baldev Raj

NIAS-DST Training Programme on "Policy for Science and Science for Policies"

19 December 2014

41. National Energy Perspective

Baldev Raj

The Twelfth Annual NIAS-DST Training Programme on Multidisciplinary Perspectives on Science, Technology and Society (Core Theme: Energy Security and Management), NIAS, Bangalore

10 November 2014

42. A perspective on S&T frontiers, standardization efforts and management of national GIS (ORAL)

Baldev Raj

Consultation Meeting on Standards and Foundation Dataset for National GIS, NIAS

Bangalore, September 11, 2014

43. Gender synergy: Growing young women leaders in science and technology (ORAL)

Baldev Raj

Inaugural Address for International Training Programme on "Leadership and Career Development for Women Scientists and Technologists", NIAS

Bangalore, 8<sup>th</sup> September 2014

44. A Perspective on Energy Sustainability

Baldev Raj

Manipal University, April 25-26<sup>th</sup>, 2014

45. Science & technology of Sodium Fast Reactors

Baldev Raj

Manipal University, April 25-26<sup>th</sup>, 2014

46. Science and Technology in India : Demography, Diversity and Demands

Baldev Raj

Scholars of San-diego University, USA, 2014

47. Materials and Manufacturing for Sodium Cooled Fast Spectrum reactors and Associated Fuel Cycles

Baldev Raj

Materials: A Key Enabling Technology for Secure Energy & Sustainable Development

IV World Materials Summit

Strasbourg, France, European, materials Research Society

October 14<sup>th</sup>-15<sup>th</sup>, 2013

48. Experiences in In-situ repair welding of steam turbine shrouds and blades

Baldev Raj & A K Bhaduri

65<sup>th</sup> Annual Assembly of the International Institute of Welding, Denver, USA July 12, 2012

49. Degradation mechanisms and their management in nuclear components

Baldev Raj

IAEA Workshop on Environment Degradation of Nuclear Materials, International Centre for Theoretical Physics, Trieste, Feb 2012

50. Design to combat degradation of nuclear components  
Baldev Raj  
IAEA Workshop on Environment Degradation of Nuclear Materials, International Centre for Theoretical Physics, Trieste, Feb 2012
51. Materials and manufacturing to have good DNA of the nuclear component  
Baldev Raj  
IAEA Workshop on Environment Degradation of Nuclear Materials, International Centre for Theoretical Physics, Trieste, Feb 2012
52. NDE for health diagnosis of nuclear component  
Baldev Raj  
IAEA Workshop on Environment Degradation of Nuclear Materials, International Centre for Theoretical Physics, Trieste, Feb 2012
53. Analysis based diagnostic measurements leading to minimal risks in asset management of high performance machines and plant  
Baldev Raj  
Ninth Annual NIAS-DST Programme on "Multidisciplinary Perspectives on Science, Technology and Society". Theme: Science & Technology Communications, National Institute of Advanced Studies, Bangalore, August 18, 2011
54. High performance nano coatings: frontiers in tribology performance  
Baldev Raj  
Trilateral conference on nanotechnologies for energy, environment & health care (China, India & Singapore), Shanghai, Nov 2011
55. Challenges of managing mega projects under Indian conditions  
Baldev Raj  
Lecture delivered to Engineers and Trainee Officers of Nuclear Fuel Complex, Hyderabad, January 14, 2011
56. Recent developments of structural welds and pipes for the fast reactor programme in India  
Baldev Raj and A.K. Bhaduri  
International Conference organized by International Institute of Welding, Istanbul, July 15 & 16, 2010
57. Closing the fuel cycle for sodium cooled fast reactors: Challenges and directions  
Baldev Raj  
International Conference on Peaceful Uses of Atomic Energy, New Delhi, September 29-30, 2009 during Homi Bhabha Centenary Year Celebrations organized under the auspices of Department of Atomic Energy and International Atomic Energy Agency, Vienna, Austria
58. Nuclear energy and issues of sustainability and energy security  
Baldev Raj  
International Conference on Research Policy for Sustainable Energy, October 12, 2009, New Delhi organized by Indian National Academy of Engineering
59. Seamless Engineering: A rewarding challenge  
Baldev Raj  
5<sup>th</sup> National Convention on Seamless Engineering Education for Better Employability of Engineers – Policy Issues, New Delhi, September 30, 2009
60. Frontiers in science and technology of nondestructive testing application for industry, health and culture  
Baldev Raj  
NDT Driving Industry Safety, Growth and Performance, Malaysia International NDT Conference and Exhibition, Kuala Lumpur, Malaysia, July 20-21, 2009
61. Current status and future plan of fast reactor development in India  
Baldev Raj  
Orai R&D Centre, Japan Atomic Energy Agency, Japan, May 21, 2009

62. Current status and future plan of fast reactor development in India: Emphasis on materials science and technology  
Baldev Raj  
National Institute of Materials Science, Tsukuba, Japan, June 2, 2009
63. Approaches to development of steels and manufacturing technologies for fusion reactors  
Baldev Raj  
29<sup>th</sup> Riso International Symposium on “Energy Metals – Advances in Characterization, Modeling and Application, Roskilde, Denmark, September 1-5, 2008
64. Clad and Wrapper Materials Development at IGCAR for Fast Breeder Reactors : An Overview  
Baldev Raj  
IAEA Technical meeting on SS Cladding and Fuel Assembly Materials and Components for LMFR, Nuclear Fuel Complex, Hyderabad, July 2-4, 2008
65. Energy scenario in India: Nuclear Energy – Applications of nano science & technology  
Baldev Raj  
India-Brazil Workshop on “Energy; Applications of nano Science & Tchnology”, Johannesburg, South Africa, June 11-13, 2008
66. Current status of nuclear energy in India: Sustainable and environmentally acceptable option for energy security in 21<sup>st</sup> century  
Baldev Raj  
17<sup>th</sup> Convocation of the International Council of Academies of Engineering and Technological Sciences (CAETS), Tokyo, Japan, October 23-26, 2007
67. Materials challenges in fusion and fission reactors for energy sustainability: Indian scenario  
Baldev Raj  
First World Materials summit on Materials Research: Key to Meeting Energy Needs and Climate Change, Lisbon, Portugal, October 4-5, 2007
68. Indian Fast Reactor Programme: Current status and projections to the future  
Baldev Raj and K.V. Kasiviswanathan  
8<sup>th</sup> Russian Conference on Reactor Material Science, Dimitrovgrad, Russia, May 21-25, 2007
69. Advances in modeling and monitoring in metal forming and welding processes  
Baldev Raj  
International Symposium for Research Scholars (ISRS-2006), Indian Institute of Technology Madras, Chennai, December 18-20, 2006
70. Application of the science and technology of welding and hardfacing for the Prototype Fast Breeder Reactor  
A.K. Bhaduri and Baldev Raj  
All India Conference on “Welding Applications in Construction and Maintenance of Power Plants”, Indian Institute of Welding, Kolkata, September 23, 2006
71. Current and 2050 energy perspectives in India – Opportunities for material scientists and technologists  
Baldev Raj  
8<sup>th</sup> Liege Conference on Materials for Advanced Power Engineering, Liege, Belgium, September 18-20, 2006
72. Strategies for fast reactor fuel cycle development  
Baldev Raj  
9<sup>th</sup> Information Exchange Meeting on Actinides and Fission Product Transmutation & Partitioning, Nimes, France, September 25-29, 2006
73. Current status of pyroprocessing research in India  
K. Nagarajan, T. Subramanian, B. Prabhakara Reddy, P.R. Vasudeva Rao and Baldev Raj,  
International Conference on Pyroprocessing Research, Idaho National Laboratory, August 2006

74. R&D Synergy for Robust Fast Breeder Reactors and Associated Fuel Cycles  
Baldev Raj, Special Colloquium on the occasion of the Golden Jubilee Year of Bhabha Atomic Research Centre, Trombay, Mumbai, April 25, 2006
75. Relative influence of different factors on Young's modulus in nickel and zirconium based alloy systems upon precipitation of intermetallics  
Anish Kumar, T. Jayakumar and Baldev Raj  
9<sup>th</sup> European Conference on Non-Destructive Testing, Berlin, Germany, September 25-29, 2006
76. Application of computational and experimental mechanics in FBR design  
Baldev Raj  
5<sup>th</sup> International Conference on Computational Engineering and Science, Indian Institute of Technology Madras, Chennai, December 1-6, 2005
77. A perspective of Indian nuclear energy & fuel cycle: Fast reactor fuel cycle for energy sustainability  
Baldev Raj  
Workshop on Nuclear Fuel Cycle (Backend), Institute of Research & Innovation, Tokyo, Japan, October 7, 2005
78. FBR development in India  
Baldev Raj  
GLOBAL 2005, Tokyo, Japan, October 2005
79. Design linked manufacturing challenges in the sodium cooled Fast Breeder Reactor  
Baldev Raj and P. Chellapandi  
Indo-US Technology Summit on Excellence in Integrated Design and Manufacturing Systems: Indo-US Partnership, Federation of Indian Chambers of Commerce and Industry and Indo-US Science & Technology Forum, New Delhi, November 9, 2005
80. Numerical and experimental simulation of mechanical consequences of core disruptive accident in Fast Breeder Reactor  
Chellapandi, S.C. Chetal and Baldev Raj  
AERB-USNRC Joint Meeting, USA, September 2005
81. NDT for realizing better quality of life in emerging economies like India  
Baldev Raj  
Course on Non-Destructive Evaluation – A comprehensive overview for managers, Chennai, May 31, 2003
82. Comprehensive corrosion management: Issues and directions  
Baldev Raj  
Seventh International Symposium on Advances in Electrochemical Science & Technology, Chennai, November 27-29, 2002
83. Advances in NDT methods for monitoring structural integrity of engineering components  
Baldev Raj  
NMD-ATM 2002, Indian Institute of Metals, Baroda, November 14-17, 2002
84. NDE of titanium alloys  
Baldev Raj, T. Jayakumar and Anishkumar  
Conference on "Light Metals & Composites for Strategic and Societal Needs (LMCSSN 02), Regional Research Laboratory, Thiruvananthapuram, October 22-23, 2002
85. Acoustic emission technique for characterizing deformation and fatigue crack growth  
Baldev Raj, C.K. Mukhopadhyay, V. Moorthy and T. Jayakumar  
28<sup>th</sup> Review of Progress in Qualitative Nondestructive Evaluation, Bellingham, USA, July (2002)
86. Challenges in in-service inspection for nuclear components: Scenario and emerging directions  
Baldev Raj, T. Jayakumar and B.P.C. Rao

- 4<sup>th</sup> International Workshop on “The Integrity of Nuclear Components”, Jeju, Korea, April 14-15, 2002
87. Assessment of microstructures and damage by NDE methods  
Baldev Raj, T. Jayakumar and Anish Kumar  
17<sup>th</sup> Annual Conference of Korean Atomic Industrial Forum Inc./Korean Nuclear Society, Seoul, Korea, April 17 & 18, 2002
88. Nondestructive evaluation techniques for assessment of degradation of microstructures and defects in pressure retaining components  
Baldev Raj and T. Jayakumar  
Indo-German Theme Meeting on Fatigue and Fracture Assessment of Pressure Retaining Components, Mumbai, February 25 to March 1, 2002
89. NDE and failure analysis of landing gear components of aircrafts  
Baldev Raj  
11<sup>th</sup> National Seminar on Aerospace Structures (NASAS) – Experimental Techniques and Testing Methods, National Aerospace Laboratories, Bangalore, February 8-9, 2002
90. Advances in NDE techniques for inservice inspection  
Baldev Raj, T. Jayakumar and B.P.C. Rao  
IAEA/RCA Regional Training Course on Inservice Inspection or Research Rectors, Mumbai, January 21 to February 1, 2002
91. Materials challenge at the back-end of the fuel cycle  
Baldev Raj and U. Kamachi Mudali  
Conference on Nuclear Technology Challenges in the 21<sup>st</sup> Century, 12<sup>th</sup> Annual Conference of Indian Nuclear Society (INSAC-2001), Centre for Advanced Technology, Indore, October 10-12, 2001
92. Intelligent characterization  
Baldev Raj  
AICTE-USTE Sponsored Short Term Training Programme on Intelligent Materials for the New Millennium, Pondicherry Engineering College, May 21, 2001
93. Sensors and software for materials characterization: Development at IGCAR  
Baldev Raj  
AICTE-USTE Sponsored Short Term Training Programme on Intelligent Materials for the New Millennium, Pondicherry Engineering College, May 21, 2001
94. Challenges and approaches in nondestructive evaluation of ageing aircrafts  
Baldev Raj  
International Seminar on Aerospace Technologies: Developments & Strategic (AERO INDIA 2001), Bangalore, February 8 & 9, 2001
95. Probing of microstructures and their evolution by magnetic and acoustic methods  
Baldev Raj  
Sixty-sixth Annual Meeting of Indian Academy of Sciences, Goa, November 24-26, 2000
96. Acoustic measurements for evaluation of materials and components  
Baldev Raj and T. Jayakumar  
National Symposium on Acoustics (NSA 2000), St. Joseph’s College, Tiruchirapalli, November 22-23, 2000 – Proc. Journal Acoustical Society of India, Volo.28, No.1-4 (2000) pp. 25-48
97. Application of signal analysis, image processing and knowledge-based systems in nondestructive evaluation  
Baldev Raj  
4<sup>th</sup> International Conference on Advances in Pattern Recognition and Digital Techniques (ICAPRDT’99), Indian Statistical Institute, Calcutta (1999)
98. Research and development of sensors at IGCAR  
Baldev Raj

International Technology Convention '99, Indian Institute of Chemical Technology, organized by Dr. D. Swaminathan Research Foundation, Hyderabad, November 2-4, 1999

99. Technological challenges in the indigenous development of PFBR fuel and materials  
Baldev Raj and T.P.S. Gill

International Technology Convention '99, Indian Institute of Chemical Technology, organized by Dr. D. Swaminathan Research Foundation, Hyderabad, November 2-4, 1999

100. Role of NDE in quality management of products in metallurgical industries  
Baldev Raj

National Conference on Quality Control in Metallurgical Industries, PSG College of Technology, Coimbatore, September 29 & 30, 1999

101. Front end of the nuclear fuel cycle and special materials for the nuclear programme  
Baldev Raj

5-Day Workshop for Journalists, Bhabha Atomic Research Centre, Mumbai, April 12-16, 1999

102. Assessment of creep and fatigue damage using advanced nondestructive evaluation techniques

Baldev Raj, V. Moorthy and T. Jayakumar

Third Workshop on Creep, Fatigue and Creep-Fatigue Interaction, Kalpakkam, January 20-22, 1999

103. Characterization of South Indian bronzes

Baldev Raj and B. Venkataraman

Special Session on Heritage at the Annual Technical Meeting of Indian Institute of Metals, Bangalore, November(1998)

104. Comprehensive approaches for reliable assessment of performance of heat exchangers

Baldev Raj and B.P.C. Rao

Transactions of the Metal Finishers' Association of India 8(1) (1999) pp.13-22

105. Role of R&D institutions in updating technical education

Baldev Raj, P.V. Kumar and P. Rodriguez

Seminar on Accreditation of Self Financial Engineering Colleges in Tamil Nadu, Andhra Pradesh, Karnataka, Kerala and Pondicherry, Chennai, September 12, 1998

106. An overview on management of welding technology

Baldev Raj

1<sup>st</sup> Technical Meeting of the year 1998-99, Indian Institute of Welding, Chennai Branch, August 29, 1998

107. Acoustical signal processing for nondestructive evaluation

Baldev Raj

National Symposium on Acoustics, Calcutta, December 9-11, 1998

108. Current trends in ultrasonics testing and evaluation of engineering materials and components

Baldev Raj

IX National Symposium on Ultrasonics, Pondicherry University, December 26 & 27, 1998

109. Quality management practices for nuclear power plants

Baldev Raj

Seminar on Project Management for Large Nuclear Power Plants, IGCAR, Kalpakkam, June 30, 1998

110. NDE and failure analysis towards damage assessment of high temperature components

K.V. Kasiviswanathan, T. Jayakumar and Baldev Raj

Workshop-cum-Seminar on Deformation and Integrity of Structural Components at Elevated Temperatures, Institute of Technology, Banaras Hindu University, Varanasi, February 6&7, 1998

111. Mastering materials performance for fast breeder reactors

Baldev Raj and K. Bhanu Sankara Rao



- Engineering Excellence in India, 12<sup>th</sup> Engineering Congress, Nagpur, January 9-13, 1998
112. Insights into technology and conservation of South Indian bronzes  
Baldev Raj and U. Kamachi Mudali  
Workshop on Indian Bronzes, Sarabhai Foundation, Ahmedabad, January 24-26, 1998
113. Engineering failures: New science and improved technology  
Baldev Raj and K.V. Kasiviswanathan  
International Conference on Advances in Mechanical and Industrial Engineering, University of Roorkee, February 6-8, 1997, Ajay Printers and Publishers, Roorkee, IN 01/01, pp.1-10
114. Improved technology through failure investigations  
Baldev Raj  
Workshop on DAE Technologies, Institution of Chemical Engineers, Calcutta, February 1997
115. Artificial intelligence to maximize contributions of nondestructive evaluation to materials science and technology  
Baldev Raj and C. Rajagopalan  
Trends in NDE Science & Technology, Proc. 14<sup>th</sup> World Conference on NDE, New Delhi December 8-13, 1996, Oxford and IBH Publishing Co. Pvt. Ltd., Vol.1 (1996) pp. 47-56
116. Nondestructive testing and evaluation of nuclear power plant components  
Baldev Raj and T. Jayakumar  
Joint Meeting of Indo-Kazakhstan, IGCAR, Kalpakkam, August 1996
117. History of metallurgy in India  
Baldev Raj  
Invited talk at the Seminar on Traditional Chemical and Scientific Practices, National Institute for Advanced Studies, Bangalore, March 11-14, 1996
118. Nondestructive testing and microstructural characterization  
T. Jayakumar and Baldev Raj  
Conference on Defects in Condensed Media, IGCAR, Kalpakkam, September 1995
119. Corrosion monitoring using nondestructive test techniques  
Baldev Raj  
5<sup>th</sup> National Science Congress on Corrosion Control, National Corrosion Council of India, New Delhi, April 19-21, 1995
120. Evolving inspection technologies for reliable condition assessment of components and plants  
Baldev Raj  
INS Annual Conference on Advanced Technologies related to Nuclear Power (INSAC-94), Bhabha Atomic Research Centre, Bombay, February 28 to March 2, 1994
121. Co-operation among universities, industries and research institutes  
Baldev Raj  
Centenary Year of G.D. Birla National Symposium, Birla Institute of Technology and Science, Pilani, April 1994
122. Intelligent processing of materials  
Baldev Raj  
Seminar on Advanced NDT Techniques, Hyderabad, April 6, 1994
123. Materials aspects in ageing management  
P. Rodriguez and Baldev Raj  
National Symposium on Ageing Management of Nuclear Facilities, Bhabha Atomic Research Centre, Bombay, January 1994
124. Emerging trends in nondestructive characterization of materials  
Baldev Raj

Lead Talk: Structure Session on NDT and Quality Assurance, Annual Technical Meeting of Indian Institute of Metals, Hyderabad, November 1993

125. Corrosion management through state-of-the-art NDE

Baldev Raj

International conference on Maintenance, Inspection, Corrosion Management and Plant Reliability (MICMAP-93), Indian Institute of Metals, Baroda, January 1993

126. Nondestructive test techniques for application in intelligent processing of materials

Baldev Raj and T. Jayakumar

Indian Science Congress, Goa, January 3-7, 1993

127. Looking into future: New techniques in NDT and their potentials

Baldev Raj

Seminar on NDE (NDE-92), Trichy, C.R.L. Murthy, Baldev Raj, O. Prabhakar and A. Srinivasulu, Vol.1 (1992), pp. 23-28

128. Aspects of history of chemistry and metallurgy in ancient and medieval India

C.V. Sundaram and Baldev Raj

Symposium on History of Development of Science in India and France, organized by the Indo-French Committee for Promotion of Advanced Research, Kovalam, Madras, October 1992

129. Emerging trends in NDT as relevant to aerospace industry

Baldev Raj

Seminar on NDT of Aerospace Materials and Components, Vikram Sarabhai Space Centre, Trivandrum, September 1992

130. Standards and codes on acoustic emission technique: Current status and future developments

Baldev Raj and T. Jayakumar

Workshop on Acoustic Emission (NAWACE 92), DRDL, Hyderabad, September 1992

131. NDT of aerospace materials – Challenges and solutions

Baldev Raj

Convention on Aerospace Materials, Institution of Engineers (India), Hyderabad, August 1992

132. Failure analysis in nuclear industry – Specialities and ensuing strategies

P. Rodriguez, Baldev Raj and T. Jayakumar

Seminar on Failure Analysis in Industry, National Aerospace Laboratories, Bangalore, April 23-24, 1992

133. Recent advances in application of ionizing radiations to NDT evaluation

Baldev Raj and B. Venkataraman

3<sup>rd</sup> INS Annual Conference on Nuclear Energy Programme: Achievements and Prospects in Medicine, Industry and Agriculture, March 25-26, 1992

134. Recent trends in corrosion monitoring with emphasis on advanced NDE techniques

Baldev Raj

Workshop on Nondestructive Evaluation in Corrosion-92, BRNS, Kalpakkam, January 29-31, 1992

135. ISI techniques for pressure tube and calendria tube assemblies of Indian PHWRs

Baldev Raj

Symposium on Zirconium Alloys for Reactor Components (ZARC-91), BRNS, Bhabha Atomic Research Centre, Bombay, December 1991

136. Emerging trends in engineering materials and components testing using acoustic methods

Baldev Raj, P. Kalyanasundaram and C. Rajagopalan

National Symposium on Acoustics (NSA 91), New Delhi (1991)

137. Relevance of NDE in the context of gulf war

Baldev Raj

National Seminar on ISI-PSI-91, Indian Society for Nondestructive Testing, Bombay, February 1991

138. Aluminium applications in nuclear industries

P. Rodriguez, Baldev Raj and K.V. Kasiviswanathan

International Conference on Aluminium, Indian Institute of Science, Bangalore (1991)

139. Applications of laser techniques for NDE

Baldev Raj and C. Babu Rao

International Workshop on Laser and their Applications, DST and Centre for Advance Technology, Indore, November 1991

140. Needs, deficiencies and suggestions for improvements in training and certification of NDT personnel

Baldev Raj

National Seminar on Training and Certification, ISNT, BIS & MERADO, Pune, July 6-7, 1990

141. Recent trends in NDE for corrosion monitoring

Baldev Raj and D.K. Bhattacharya

First National Conference on Metallic Corrosion, Central Electrochemical Research Institute, Karaikudi, March 1990

142. Nondestructive testing for characterization of materials

Baldev Raj

National Workshop on Characterization of Materials (TACOM-90), Indian Institute of Metals, Bombay, March 1990

143. Nondestructive evaluation for quality engineering

International Conference on Quality Improvement – Metals and Processes, Madras, January 12-13, 1990

144. Radiation damage in fast reactor components

P. Rodriguez, Baldev Raj, S.L. Mannan and Kanwar Krishan

Symposium on PIE in Nuclear Programme, BRNS, Bhabha Atomic Research Centre, Bombay, (1989)

145. Acoustics for nondestructive evaluation

Baldev Raj and P. Kalyanasundaram

National Symposium on Acoustics (NSA-89), Calcutta (1989)

146. Safety and reliability through NDE

Baldev Raj

Seminar on Safety Engineering, World Federation of Engineering Organizations, New Delhi, September 1989

147. Advances in ultrasonic techniques for evaluation of materials and components

Baldev Raj and P. Kalyanasundaram

National Symposium on Ultrasonics, National Physical Laboratory, New Delhi, September 1989

148. Image analysis and processing activities at IGCAR

Baldev Raj

National Symposium on Image Processing in Materials Science and Other Disciplines, BRNS, Bombay, March 1-3, 1989

149. NDE of austenitic stainless steel

Baldev Raj and C.V. Subramanian

National Workshop on Stainless Steels, Indian institute of Technology, Madras, December 1988

150. Research and development in nondestructive evaluation at Indira Gandhi Centre for Atomic Research, Kalpakkam

P. Rodriguez and Baldev Raj

Seminar on NDE of Solid Propellants and Components, ISRO, Sriharikota, August 18, 1989

151. Post-irradiation examination and NDT measurements  
Baldev Raj, K.V. Kasiviswanathan and C. Babu Rao  
Indo-German Workshop on Techniques for Materials Characterization, Hyderabad, Dec., 1988
152. Promises of acoustic emission testing  
Baldev Raj and T. Jayakumar  
National Seminar on NDT for Managers, Indian Society for Nondestructive Testing, Bombay, June 1988
153. Recent trends in utilizing radiation in nondestructive evaluation  
Baldev Raj and B. Venkataraman  
National Symposium on Radiochemistry and Radiation Chemistry, Bhabha Atomic Research Centre, Bombay, February 1988
154. Materials research using NDT techniques  
Baldev Raj  
Indo-German Seminar on Trends and Techniques in Modern Research, Indira Gandhi Centre for Atomic Research, Kalpakkam, January 1987
155. Nondestructive test methods for evaluation of microstructures – Present status and trends  
Baldev Raj and A.K. Rao  
National Symposium on Metallography and NDT: Interactions in materials Evaluation, BRNS, Bhabha Atomic Research Centre, Bombay, February 1986
156. Nondestructive evaluation in nuclear industry  
Baldev Raj  
Seminar on NDT for Profit, Baroda, January 1984
157. Acoustic emission technology  
Baldev Raj  
First National Seminar on NDT and Inspection, Madras, February 1983