Publications of Professor Hardev Singh Virk (1972-2020)

List of Publications Classified under Interdisciplinary Areas of Research

Section A: Elementary Particles & Cosmic Rays

1. Virk H. S. (1972) Proton-nucleon interactions at 14 GeV in nuclear emulsion. Nucl. Phys. B, 48, 476-486.

2. Tsai-Chu and Virk H S (1972) Energy loss and radiation length of electrons in nuclear emulsion. Compt. Rendu, Acad. of Sciences, Paris, 275,165-167.

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4. Virk H S (1972) Study of nuclear interaction at high energy. Compt. Rendu, Acad. of Sciences, Paris, 275, 219-222.

5. Virk H S (1972) Do the particles with mass between that of electrons and muon exist? Compt. Rendu, Acad. of Sciences, Paris, 275, 709-711.

6. Virk H S and Bansal B K (1973) Law of gap length distribution and grain density of tracks. Compt. Rendu, Acad. of Sciences, Paris, 277, 65-66.

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8. Virk H S (1974) Ionization of ultra relativistic electrons over Fermi plateau. Compt. Rendu, Acad. of Sciences, Paris, 278, 291-292.

9. Virk H S and Verma Veena (1984) Deutron-nucleus interactions at 10 GeV/c in BR-2 nuclear emulsion. Czech. J. Phys. B, 34, 1032-1037.

10. Virk H S (1979) Cosmic radiation effects in Dhajala meteorite. Curr. Sci., 48, 1067-1068.

Section B: Geochronology (Fission Track Dating and Applications)

1. Virk H S and Koul S L (1974)
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   Compt. Rendu, Acad. of Sciences, Paris, 279, 477-478.

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4. Virk H S and Koul S L (1975)
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5. Virk H S and Koul S L (1975)
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11. Virk H S (1977)
Origin and age of Tektites.
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Fission track dating and estimation of uranium in some garnets of Rajasthan (India).
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Section C: Radon Studies for U Exploration, Environment and Earthquake Prediction

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Proc. of 2nd Punjabi Conference held at Pbi. Univ., Patiala (Dec.7-9).

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IAPT Bulletin, 1, 18-19.

17. Virk H S (1985)
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IAPT Bulletin, 2, 107-108.

18. Virk H S (1985)
Improvement of under-graduate Physics education.
IAPT Bulletin, 2, 177-178.

19. Virk H S (1985)
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Khoj Patrika, Punjabi University, Patiala.

20. Singh A and Virk H S (1986)
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IAPT Bulletin, 3, 93-95.

21. Virk H S and Singh A (1986)
Teaching of Physics: Students Point of View-A Survey Report.
IAPT Bulletin, 3, 315-317.

22. Virk H S (1987)
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IAPT Bulletin ,4, 299-300.

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IAPT Bulletin ,4, 326-330.

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Science and Culture, 53, 12-15.

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IAPT Bulletin ,5, 91-92

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27. Virk H S (1989)
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IAPT Bulletin, 6, 265-270.

28. Virk H S (1989)
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IAPT Bulletin, 6, 264.

29. Virk H S (1991)
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30. Virk H S (1992)
Science and Society: Guest Editorial.
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31. Virk H S (1993)
The fate of experimental physics in India.
IAPT Bulletin, 10, 275-276.

32. Virk H S (1993)
My rendezvous in China.
IAPT Bulletin, 0, 81.

33. Virk H S (1994)
Research in American University system.
IAPT Bulletin, 11 , 178.

34. Garg A K, S Amrita Kaur and Virk H S (1994)
Applications of conductivity cell in pollution control.
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35. Virk H S (1994)
My reminiscence as a Physicist.
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36. S. Amrita Kaur and Virk H S (1995)
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IAPT Bulletin, 12, 78-79.

37. Virk H S (1995)
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38. Virk H S (1995)
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42. Virk H S (1996)
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Ind. Sci. Cruiser, 10, 14-19.

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Bull IAPT, 14, 114-117.

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IAPT Bulletin, 14, 284-285.

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Professor D.P. Khandelwal: In Memorium
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51. Virk H S (1998)
Decline in research in Indian Universities.
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Indian Sci. Cruiser, 12(1), 11.

55. Virk H S (1998)
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The Science Tribune, June 4.

56. Virk H S (1998)
Indian Science: Ailments and remedies.
Science Tribune, April 23.

57. Virk H S (1998)
Appointment of Vice-Chancellors.
University Today, 18(12),7-8.

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What ails Indian Science?
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59. Virk H S (1998)
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IAPT Bulletin, 15(5),132.

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61. Virk H S (1998)
What ails Indian science? Some suggested remedies.
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62. Virk H S (1998)
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63. Virk H S (1999)
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IAPT Bulletin, Guest Editorial, 16(2), 36.

64. Virk H S (1999)
Ruchi Ram Sahni : who introduced scientific temper in Punjab.
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65. Virk H S (1999)
Sikhism: The Scientific Religion for the Mankind.
Understanding Sikhism-The Research Journal, 1(1), 21-23.

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Discovering the roots of Punjabi culture in Uzbekistan.
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Frustrations of doing science in India.
Curr.Sci., 78(5), 101.

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Role of Indian science managers .
IAPT Bulletin, Guest Editorial , 17(5), 132.

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IAPT Bulletin,17(7), 211.

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Excitement in Physics: Myth & Reality.
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Curr. Sci., 78(9), 1052

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78. Virk H S (2000)
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82. Virk H S (2000)
A case for History and Philosopy of Science in Indian universities.
Curr. Sci., 79(11), 1514.

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Ion Track Filters: An Overview of Production and Application.
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84. Virk H S (2000)
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103. Virk H S (2002)
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117. Virk H S (2004)
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118. Virk H. S (2004)

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119. Virk H.S. (2004)
Does India shine in scientific research?
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Curr. Sci. 106(1), 101.

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Curr. Sci. 107(2), 310.

128. Virk H.S. (2016)
Sikhs in Asia Pacific: Travels among the Sikh Diaspora from Yangon to Kobe
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129. Virk Hardev Singh (2016)
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134. H.S. Virk (2016)
JAPUJI: Exegesis & Poetic Rendering.
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135. H.S. Virk (2018)
A Review of Life of a Gurmukh: Sant Teja Singh.
The Sikh Review 65, March 2018.

136. H.S. Virk (2018)
New book explodes myth about cost of instruments used by C V Raman.
India Science Wire, April 2018.

137. H.S. Virk (2018)
A botanical garden invisible to naked eyes.
India Science Wire, May 7, 2018; http://vigyanprasar.gov.in/isw/isw.htm

138. Hardev Singh Virk (2018)
Scientific Vision of Guru Nanak - The Universe and Stephen Hawking
https://www.sikhnet.com/authors/**hardev-singh-virk**

139. Hardev Singh Virk (2020)
A Tribute to (Late) Professor Amrit Kaur Raina.
The Sikh Review, 68(6), 71.

140. Hardev Singh Virk (2020)
Satgur Nanak Pargatya: The Divine Light of Universal Truths and Love Manifested.
The Sikh Review, 68(7), 77- 82.

141. Hardev Singh Virk (2020)
Concept of Maya in Indian Philosophy and Sikh Religion.
The Sikh Review, 68(9), 13-26.

142. Hardev Singh Virk (2020)
Fighting for Sikh causes in Indian Parliament.
The Sikh Review, 68(10), 45-53.

143. Hardev Singh Virk (2020)
Failure of Sikhs to gain an Independent State during Partition of India.
Asia Samachar, 10 Sept. Issue Online.

144. Hardev Singh Virk (2020)
Punjab ground water crisis: https://asiasamachar.com/2020/10/01/33864/
Asia Samachar, 1 October Issue Online.

145. Hardev Singh Virk (2020)
The Sikhs and the Partition of Punjab – Conclusions from Crowe's MA History Thesis:
https://asiasamachar.com/2020/10/31/34077/
Asia Samachar, 31 October Issue Online.

146. Hardev Singh Virk (2020)
Root Cause of the Sikh Problem: The Partition of India (1947): Part I:

https://asiasamachar.com /2020/12/08/35040/
Asia Samachar, December 8 Issue Online.

147. Hardev Singh Virk (2021)
Sikhs in Continental Europe.
The Sikh Review, 69(1), 79-83.

148. Hardev Singh Virk (2021)
Global Perspectives in Science and Sikh Religion.
The Sikh Review, 69(2), 57-62.

149. Hardev Singh Virk (2021)
Concept of Time and Reality in Science and Sikh Religion.
Omega Ind. J. Sci. & Religion (in Press)

150. Hardev Singh Virk (2021)
In Search of GOD: The God of Spirituality: Book Review
The Sikh Bulletin, 23(1), 35-38.

Section I: List of Books Published by Professor H.S. VIRK

A. Books in Punjabi

1. Virk H S (1970)
Brahmandi Kirna di Kahani (Story of Cosmic Rays)
Punjabi University, Patiala.

2. Virk H S (1978)
Brahmand Di Rachna (Cosmology)
Singh Brothers, Amritsar.

3. Virk H S (1988)
Adarsh ate Haqiqat (Punjabi Translation of *Ideals and Realities* by Professor Abdus Salam, Nobel Laureate), Guru Nanak Dev University, Amritsar.

4. Virk H S (1990)
Sade Vigyani (Our Scientists)
Guru Nanak Dev University, Amritsar.

5. Virk H S (1994)
Vigyan de Krishme (Wonders of Science)
Guru Nanak Dev University, Amritsar.

6. Virk HS (2008)
Sikh Dharam ate Vigyan (Sikh Religion & Science)
Tarlochan Publishers, Chandigarh

7. Virk HS (2008)
Amrika- Canada di Yatra (My Travels in America & Canada)
Tarlochan Publishers, Chandigarh

8. Virk HS (2008)
Meri Vishav Yatra (My travels around the Globe)
Tarlochan Publishers, Chandigarh

9. Virk HS (2008)

Sikh Qaum da Dard ate Santap (Pain and Agony of Sikh Nation)
Tarlochan Publishers, Chandigarh

10. Virk HS (2009)
Europe da Safarnama (My Travelogue of Europe)
Tarlochan Publishers, Chandigarh

11. Virk HS (2017)
Mera Jeevan Safar (Journey of My Life)
Gracious Books, Opposite Punjabi University, Patiala.

12. Virk HS (2017)
Sikh Dharam Ate Vigyan (Sikh Religion and Science, Revised edition)
Panj Pani Parkashan, D-12 Industrial Area, Phase I, Mohali.

13. Virk HS (2017)
Ikivin Sadi Da Zafarnama
Panj Pani Parkashan, D-12 Industrial Area, Phase I, Mohali.

14. Virk HS (2017)
Gurbani Di Saral Viakhia
Panj Pani Parkashan, D-12 Industrial Area, Phase I, Mohali.

15. Virk HS (2020)
Mere Supnia da Gurdwara
Singh Brothers, Amritsar.

B. Books in English

16. Virk HS (2007)
Scientific Vision in Sri Guru Granth Sahib & Interfaith Dialogue.
Singh Brothers, Amritsar.

17. Virk HS (2008)
Professor Puran Singh: Scientist, Poet & Philosopher
Tarlochan Publishers, Chandigarh

18. Virk HS (Ed.) (2012)
Harmony in Science and Sikh Religion.
Singh Brothers, Amritsar (Distributors)

19. Virk HS (2018)
My Journey in Science: Autobiography of an Indian Scientist
Gracious Books, Opposite Punjabi University, Patiala.

20. Virk HS (2019)
My Book of Reviews: A Critical Study of 30 Books.
San Bun Publishers, New Delhi.

21. Virk HS (Ed.) (2020)
Interfaith Dialogues: A Sikh Perspective
Singh Brothers, Amritsar

22. Virk HS (Ed.) (2021)

Science-Religion Dialogue: A Sikh Perspective
The Sikh Review, Kolkatta

23. Virk HS (2021)
Fighting For The Sikh Cause in Parliament
Singh Brothers, Amritsar (in Press)

C. Books in Science and Technology

24. Virk H S (1973)
Dhuni Vigyan (Text Book on Sound)
Punjabi Unversity, Patiala.

25. Virk H S (1975)
Text Book of Physics for School Students (Translation into Punjabi)
Punjab School Education Board, Chandigarh.

26. Virk H S (1975)
ਐਟਮ ਅਤੇ ਇਸਦਾ ਨਿਊਕਲੀਅਸ (Translation of *Atom and its Nucleus* by PS Gill)
Punjab State University Text Book Board, Chandigarh.

27. Virk H S (1977)
Tapgati Vigyan (Text Book on Heat and Thermodynamics)
Punjabi University, Patiala.

28. Virk H S (1978)
Atomi-Bhautic Vigyan (Text Book on Atomic Physics)
Punjabi University, Patiala.

29. Virk H S (1980)
Vayu Mandal (A Monograph on Atmosphere)
Punjab State Languages Department, Patiala.

30. Virk H S (1983)
Nuclear Tracks: Methods and Applications (Ed.)
Guru Nanak Dev University, Amritsar.

31. Virk H S (1988)
History and Philosophy of Science (Ed.)
Guru Nanak Dev University, Amritsar.

32. Virk H S (1997)
Rare Gas Geochemistry: Applications in Earth and Environmental Sciences (Ed.) Guru Nanak Dev University, Amritsar.

33. Virk HS (2004)
Vigyan ate Vigyani (Punjabi translation of Science and Scientists)
National Book Trust of India, New Delhi.

34. Virk HS and Kleemann W (Eds.) (2012)
Ferroics and Multiferroics (Reviews Volume in SSP Series)
Trans Tech Publications, Switzerland.

35. Virk H.S. (Ed.) (2013)
Functional Nanomaterials and their Applications(Reviews Volume in SSP SeriesTrans Tech Publications, Switzerland.

36. Rajshree Jotania and Virk H.S.(Eds.) (2013)
Ferrites and Ceramic Composites I (Reviews Volume in SSP Series)
Trans Tech Publications, Switzerland.

37. Virk H.S. (Ed.) (2013)
Radiation Damage Effects in Solids (Reviews Volume in Defect and Diffusion Forum).Trans Tech Publications, Switzerland.

38. Virk H.S. (Ed.) (2013)
Luminescence Related Phenomena and their Applications (Reviews Volume in Defect and Diffusion Forum).Trans Tech Publications, Switzerland.

39. Virk H.S. (Ed.) (2014)
Luminescent Materials and their Applications (Reviews Volume in Defect and Diffusion Forum). Trans Tech Publications, Switzerland.

40. Virk H.S. (Ed.) (2014)
Luminescence: Basic Concepts, Applications and Instrumentation (Reviews Volume in Defect and Diffusion Forum).Trans Tech Publications, Switzerland.

41. Virk H.S. (Ed.) (2015)
Nanomaterials: Basic Concepts and Applications(Reviews Volume in SSP Series)
Trans Tech Publications, Switzerland.

42. Virk H.S. (Ed.) (2015)
Solid State Nuclear Track Detectors and their Applications (Reviews Volume in SSP Series)Trans Tech Publications, Switzerland.

43. Virk H.S. (Ed.) (2015)
Radiation Damage Induced Modification of Materials (Reviews Volume in SSP Series) Trans Tech Publications, Switzerland.

44. Virk H.S. (Ed.) (2015)
Ferroic Materials: Synthesis and Applications (Reviews Volume in SSP Series) Trans Tech Publications, Switzerland.

45. Rajshree Jotania and Virk H.S. (Eds.) (2016)
Ferrites and Ceramic Composites II (Reviews Volume in SSP Series)
Trans Tech Publications, Switzerland.

Section J: Participation in International Conferences/Workshops/Schools

1. Participated in first European Conference on Intermediate Energy Nuclear Physics held at Aix-en-Provence, France (Sept. 1972).

2. Participated in Autumn Workshop on Physics of Earth at ICTP, Trieste, Italy (Oct. - Dec. 1977).

3. Participated in International Summer College on Physics held at Nathiagali, Pakistan

(June, 1980)

4. Participated in International Symposium on Renewable Energy Sources held at Lahore, Pakistan (April, 1983).

5. Participated in 12th International Conference on SSNTD held at Acapulco, Mexico (Sept, 1983).

6. Participated in Solar Energy Workshop at ICTP, Trieste, Italy (1985).

7. Chaired a session at 13th International Conference on SSNTD held at Rome, Italy (1985).

8. Participated in "College on Neurophysics" at ICTP, Trieste, Italy (1986).

9. Participated in High Energy Physics Conference at ICTP, Trieste, Italy (1987).

10. Participated in International Workshop on Superconductors at ICTP, Trieste, Italy (1987).

11. Participated in 4th International Conference on Radiation Effects in Insulators at Lyon, France (1987).

12. Participated in College on Medical Physics at ICTP, Trieste, Italy (1988).

13. Chaired a session at 14th International Conference on SSNTD held at Lahore, Pakistan, (1988).

14. Invited paper at 5th International Conference on Radiation Effects in Insulators at McMaster University, Hamilton, Canada (1989).

15. Attended 9th International Conference on Ion Beam Analysis at Queen's University, Kingston, Canada (1989).

16. Chaired a session at 15th International Conference on Particle Tracks in Solids at Marburg, Germany (1990).

17. Participated in 6th International Conference on Radiation Effects in Insulators at Weimer, Germany (1991).

18. Participated in 5th International Conference on Radiation Physics held at Dubrovnik, Yugoslavia (1991) .

19. Chaired a session at 16th International Conference on SSNTD held at Beijing in China (Sept., 1992).

20. Participated in 7th International Seminar on Earthquake Prognostics held at Asian Institute of Technology, Bangkok, Thailand (Sept.,1992).

21. Participated in 15th International Conference on Atomic Collisions in Solids at University of Western Ontario, London, Canada (July, 1993).

22. Participated in 7th International Conference on Radiation Effects in Insulators at Nagoya University,
Nagoya, Japan (Sept., 1993).

23. Participated in 9th International Conference on Ion Beam Modification of Materials (IBMM) held at Australian National University, Canberra, Australia (Feb. 1995).

24. Delivered a planery talk at 3rd International Conference on Rare Gas Geochemistry held at Guru Nanak Dev University, Amritsar, India (Dec., 1995).

25. Delivered an invited talk at International Symposium "Prediction studies on Earthquakes and Volcanic Eruption" held at University of Tokyo, Japan (March 1996) .

26. Partcipated in 10th International Conference on Ion Beam Modification of Materials (IBMM-96) at Albuquerque, USA (Sept. 1-6, 1996).

27. Delivered an invited talk at International Symposium on Materials Science Applications of Ion Beam Techniques (IBT-96) held at Seeheim, Germany (Sept. 9-12, 1996).

28. Attended International Conf. on Paleoseismology held at Wadia Institute of Himalayan Geology, Dehradun (March, 1997).

29. Invited talk at 4th International Conference on Rare Gas Geochemistry held at Rome, Italy (Oct. 8-10, 1997).

30. Invited talk at 33rd International Conference of International Society Hydrothermal Technology(SITH) held at Kanagawa, Japan (Dec. 1-4, 1997).

31. Attended Int. Conf. on Swift Heavy Ions in Materials Engg. and Characterization held at NSC, New Delhi (Oct. 19-21, 1998).

32. Invited talk at International Symposium on Earthquake Hazard Assessment and Earth's Interior , NGRI , Hyderabad (Dec. 1-3, 1998).

33. Invited talk on Radon/Helium Monitoring for Earthquake Prediction Studies in N-W Himalaya at Jubilee Scientific Conference held at Institute of Seismology, Tashkent, Uzbekistan, April 24-25, 1999.

34. Participated in IRPA Regional Congress on Radiation Protection held in Budapest, Hungary, Aug.22-27, 1999

35. Participated & Chaired a session at the 5th International Conference on Rare Gas Geochemistry (ICRGG) held at Debrecen, Hungary, Aug.30-Sept.3, 1999.

36. Participated & Chaired a session at the 20th International Conference on Nuclear Tracks in Solids, held at Portoroz, Slovenia, Aug.28-Sept1,2000.

37. Participated in 5th International Conference on High Levels of Natural Radiation & Radon Areas held at Munich, Germany, Sept. 4-7, 2000.

38. Participated & Chaired a session at the 2nd International Symposium on Radiation Protection held at Dresden, Germany, Sept.10-14, 2000.

39. Participated in International Workshop on Seismo-Electromagnetics and Space Science held at Agra, India, Dec.19-21, 2000.

40. Participated in International Conference on Natural Hazards: Mitigation & Management held at Amritsar, India, March 12-15, 2001.

41. Participated in 11th International Conference on Radiation Effects in Insulators,Lisbon,Portugal,

Sept.3-7, 2001.

42. Participated in 21st International Conference on Nuclear Tracks in Solids (ICNTS-21) held at New Dehli, Oct. 21-25, 2002.

43. Participated in International Conference on Nanotechnology (ICON-2003) held at CSIO, Chandigarh, Dec. 22-23, 2003.

44. Participated in 3rd Int. Conference MMT-2004 held at College of Judia and Samaria, Ariel, Israel, Sept. 6-10, 2004.

45. Participated in 4th Int. Symposium on Use of Nuclear Techniques in Environmental Studies, Irbid, Jordan, Sept. 13-15, 2004.

46. Invited Lecture at International Symposium on Modern Science, Mysticism and East-West Dialogue, held at Lonavla, Maharashtra, India, Jan. 2-6, 2005.

47. Invited Lecture at Kangra Earthquake Centenary Seminar (KECS-2005), organised by GSI, North Circle, Lucknow at Palampur, HP, 4-5 April, 2005.

48. Participated in International Conference on SCIENCE & SPIRITUALITY in Modern India, held at JNU, New Delhi, Feb. 5-7, 2006.

49. Invited Lecture at International Conference on Concept of Time in Scientific and Sikh Traditions held at Jawaddi Kalan, Ludhiana, India, March 22 – 24, 2006.

50. Invited Lecture at German Physical Society Meeting held at Technical University, Dresden (Section Metals & Materials), March 27-31, 2006.

51. Delivered a Talk " Heavy Ion Tracks Route to Nanotechnology" and Chaired a session in International Conference, NADPA-2008, held at IIT, Roorkee during 11-13 December, 2008.

52. Participated at International Conference on Radiation Effects in Insulators (REI-15) held at Padua, Italy during 30 Aug.-04 Sept. 2009.

53. Invited Talk at International Workshop on Nanotechnology and Advanced Functional Materials held at NCL, Pune during 9-11 July, 2009.

54. Presented a Paper "Fabrication of nanoparticles and nanowires using reverse micelles and template synthesis techniques" at International Conference NATCHEE-2010 held at Dyalbagh, Agra during 7-9 Jan. 2010.

55. Delivered Invited Talk "Our Road Map from Ion Tracks to Nanotechnology" at SHIMEC-2010 International Conference held at IUAC, New Delhi during Oct. 6-9, 2010.

56. Delivered Invited Talk at International Conference on Nano Sensors & Technology (ICNST-2010) held at CSIO Chandigarh during 28-30 October, 2010.

57. Delivered Invited Talk at International Conference on Emerging Trends in Chemistry held at Chemistry Department, PU Chandigarh during Feb. 11-12, 2011.

58. Invited Talk on "Concept of Waves in Sri Guru Granth Sahib (SGGS)" at Internnational Symposium "Discovery of Gravitational Waves and its Impact on Religion" held at Gnan Vidyapeeth, Pune in Feb. 2017.

59. Invited Talk on "Concept of Mind and Soul in Sri Guru Granth Sahib (SGGS)" at Internnational Symposium held at St. Xavier College, Mumbai in Feb. 2018.

60. Invited Talk on "Sikh View of Creator & Creation in Sri Guru Granth Sahib (SGGS)" at Internnational Symposium "Creation without a Creator: Critical Perspectives on Hawking's God" held at St. Xavier College, Ahmedabad in Feb. 2019.

Section K: Participation in National Conferences/Seminars/Workshops etc.

1. Attended UGC Summer School on Theory of Relativity held at University of Allahabad (April, 1968).

2. Attended Training School in Molecular Biophysics held at Indian Institute of Science, Bangalore (April, 1974)

3. Attended INSA Workshop on History of Science organised by National Commission on History of Science, New Delhi (Sept. 1975).

4. Invited Talk at Indian Science Congress (History of Science Section) held at Utkal University, Bhubaneshwar (Jan. 1976).

5. Participated in First Indian Geological Congress held at Delhi University, Delhi (Sept. 1976).

6. Participated in Exploration/Nuclear Geophysics Symposium held at University of Roorkee (Feb. 1979).

7. Invited Talk at First SSNTD Seminar cum Workshop held at BARC, Trombay (March, 1979).

8. Participated in Second SSNTD Seminar held at PRL Ahmedabad (March, 1981).

9. Convened UNESCO Regional Seminar on Ibn-Sina, G.N.D. University, Amritsar. (March, 1981).

10. Participated in UNESCO Regional Seminar on Ibn-Sina held at Kashmir University, Srinagar (July, 1982).

11. Participated in Eighth Exploration Geophysics Seminar held at B.H.U. Varanasi (Nov. 1982).

12. Convened Third SSNTD Seminar held at G.N.D. University, Amritsar (March, 1983).

13. Invited Talk at Indian Science Congress (History of Science) held at S.V. University, Triputi (Jan. 1984).

14. Participated in National Symposium of Instrument Society of India held at Kashmir University, Srinagar (April, 1984).

15. Attended First National Convention of IAPT held at HBTI, Kanpur (Oct. 1984).

16. Participated in National Symposium on University-Industry Interaction held at Vigyan Bhawan, New Delhi (Oct. 1985).

17. Invited Talk at Fourth National SSNTD Seminar held at WIHG, Dehradun Nov. 1985).

18. Participated in IARP National Symposium held at BARC, Trombay (Feb.1986).

19. Participated in Fifth National SSNTD Seminar held at SINP, Calcutta (March, 1987).

20. Invited Talk at National Seminar on Atomic Physics held at Punjabi University, Patiala (Feb. 1988).

21. Workshop on Science and Technology held at Punjabi University, Patiala (Feb. 1988).

22. Attended National Conference of State Councils for Science & Technology held at Chandigarh (March, 1988).

23. DST Workshop on Bihar - Nepal Earthquake held at I.I.T. Kanpur (Dec. 1988).

24. Participated in National Symposium on Recent Advances in Seismology held at Bangalore (July, 1990).

25. Chaired a session at 5th IAPT Convention held at G.M.N. College, Ambala Cantt. (Oct. 1990).

26. Participated in 78th Indian Science Congress held at Devi Ahilya Vishwavidalaya, Indore (Jan. 1991).

27. Invited Talk at Seventh National Seminar on Particle Tracks in Solids held at DRL, Jodhpur (Oct. 1991).

28. Invited Talk at DST sponsored Seminar on Uttarkashi Earthquake held at University of Delhi (Nov. 1992).

29. Invited Talk at 18th Seminar on Exploration Geophysics held at University of Rajasthan, Jaipur (Dec. 1992).

30. Participated in 8th National Seminar on SSNTDs held at AMU, Aligarh (Oct. 1993).

31. Invited lecture at International Natural Disaster Reduction Decade (INDRD) Seminar held at Chandigrah (Oct. 1993).

32. Chaired a session at 8th IAPT Convention held at Vijaywade (Dec. 1993).

33. Invited Lecture 'Earthquake Prediction using Radon Monitoring' at Int. Training Course on Seismology held at University of Roorkee (Dec. 1993).

34. Participated in 21st IARP Conference held at BARC, Trombay (Feb. 1994).

35. INSA Diamond Jubilee Seminar on Geological Hazards in Himalayan Region held at WIHG, Dehradun (March, 1994).

36. National Seminar on Environmental Pollution held at Jamia Hamdrad University, New Delhi (March,1994).

37. Invited lecture at National Conference on Ubiquitous Radon held at BARC, Trombay (Nov. 1994).

38. Convened 9th IAPT convention held at G.N.D. University, Amritsar (Dec. 1994).

39. UNESCO Regional Workshop on Renewable Energy Engg. Education held at I.I.T. Delhi (Jan. 1995).

40. Participated in 82nd Indian Science Congress held at Jadavpur University, Calcutta (Jan. 1995).

41. Key-note Address at State Seminar on Science Writing held at Sivalik College, Nagnal (Jan. 1995)

42. Participated in DST National Workshop on Latur Earthquake held at WIHG, Dehradun (March, 1995).

43. National Seminar on Environment and Development held at G.N.D. University, Amritsar (March, 1995).

44. Participated in Workshop on " Curriculum for Renewable Energy" organised by Waterfall Institute of Technology Transfer, held at New Delhi (April, 1995).

45. Invited lecture at DST sponsored Seminar on "Ruchi Ram Sahni : A Science Polulariser of Punjab" held at Punjab University, Chandigarh (May, 1995).

46. Participated in National Seminar on Science Writing in Indian Languages held at Central Institute of Indian Languages (C.I.L) , Mysore (July, 1995).

47. Participated in Indian Association of Physics Teachers (IAPT) Annual meeting held at NCERT, New Delhi (July, 1995).

48. Participated in 83rd Indian Science Congress held at Punjabi University, Patiala (Jan. 1996).

49. Invited lecture at X National Seminar on SSNTDs held at Kurukshetra University, Kurukshetra (Oct. 1996).

50. Participated in XI IAPT Convention held at Marthwada University, Aurangabad (Dec. 1996).

51. Participated in DST sponsored Seminar on Geodynamics of North-East India held at Manipur University, Imphal (Nov. 1997)

52. National Seminar on Recent Advances in Environmental Sciences held at G.N.D. University, Amritsar (March, 1998).

53. Invited lecture at XI National SSNTD Seminar held at G.N.D. University, Amritsar (Oct. 1998).

54. Participated in Science Communicators Workshop(sponsored by PSCST Chandigarh) held at G.N.D. University, Amritsar (Feb. 1999).

55. Participated in Fourth Training Workshop on Earthquake Disaster Mitigation held at IIPA, New Delhi (Aug. 1999).

56. Participated in Workshop on Chamoli Earthquake held at WIHG, Dehradun (Oct. 1999).

57. Participated in XIV IAPT Convention held at Lucknow (Oct. 1999).

58. Participated in Indo-Italian Workshop on recent Advances in Material Science held at I.I.T. Delhi (Nov. 1999).

59. Participated in 23th National Symposium on Radiation Physics (NSRP-13) held at Mangalore University, Mangalore (Dec. 1999).

60. Participated in 87th Indian Science Congress held at Pune University, Pune (Jan. 2000).

61. Participated in National Seminar on Structure and Tectonics of Indian Plate held at Punjab University, Chandigarh, July 31-Aug.2, 2000.

62. Participated in Regional Symposium on Radiation Physics held at Punjabi University, Patiala, March 26-27, 2001.

63. Delivered Key-note Address and Chaired a Session at XII National Symposium on Solid State Nuclear Track Detectors (SSNTDs) held at D. A. V. College, Jalllandhar, from 29-31 Oct., 2001.

64. Delivered Invited Talk and Chaired a Session at 14th National Symposium on Radiation Physics (NSRP-14) held at G.N.D. University, Amritsar, from Nov.1-3, 2001.

65. Delivered Invited Talk and Chaired a Session at 14th National Symposium on Role of Science Practicals in improvement of Scientific Manpower in India held at INSA, New Delhi on 26 Dec., 2001.

66. Participated in Annual IAPT Convention held at Gulbarga, Karnatka on 15-17 Jan. 2003.

67.Delivered Invited Talk and Chaired a Session at 12th National Symposium on Environment held at Garhwal University, Tehri Garhwal , from June 5-7, 2003.

68. Delivered Invited Talk and Chaired a Session at annual IAPT Convention held at HMV, Jallandhar from Dec. 18-20, 2003.

69. Delivered Invited Talk in National Conference on Natural Disasters organised by MGSIPA, Chandigarh on March 25-26, 2004.

70. Delivered Invited Talk at Regional Workshop on Nanomaterials held at Jamia Milia Islamia, New Delhi on March 11, 2004.

71. Delivered Invited Talk in National Workshop on Accelerator and Environmental Radiation held at Nuclear Science Centre, New Delhi on April 22-23, 2004.

72. Chaired Plenary session at XIX National Convention of IAPT at Jiwaji University, Gwalior, Oct. 28-31,2004.

73. Delivered Invited Talk at Kangra Earthquake Centenary Seminar (KECS) held at Palampur, HP, April 4-6, 2005.

74. Participated as Advisor in National Seminar on Attracting Young People to Careers in Science, IIT, New Delhi, March 31, 2005.

75. Delivered Invited Talk at National Seminar cum XXI IAPT Annual Convention held at SGTB Khalsa College, Jabalpur during Oct. 2006.

76. Participated in Colloquium on Earthquake Studies and Neotectonics in N-W Himalaya held at Geology Department, PU Chandigarh on 7 June, 2007.

77. Invited Talk at XV SSNTD National Conference held at Tehri Campus, Garhwal University, Uttaranchal during June 21-23, 2007.

78. Invited Talk at Workshop on National Program on Earthquake Precursors organised by IMD, MoES, New Delhi on 28-29 June, 2007.

79. Invited Popular Talk on Prediction of Earthquakes delivered at NCSM, Pargati Maidan, New Delhi on 12 Oct. 2007.

80. Participated in Panel Discussion on Role of IISER during XII IAPT Annual Convention held at HP University, Shimla on 27 Oct. 2007.

81. Participated in the Workshop for the launch of National Alliance for Disaster Risk Reduction (NADRR) held at Habitat Centre, New Delhi during 3-4 Nov. 2007.

82. Invited Talk at National Seminar, "Guru Nanak and his Religious Contemporaries" held at GND University, Amritsar on 22-23 Nov. 2007.

83. Chaired a session at National Workshop organised by Inter-University Accelerator Centre (IUAC), New Delhi on 25th August, 2008.

84. Invited Talk "Scientific Vision in Sri Guru Granth Sahib" delivered at Institute of Sikh Studies (IOSS), Chandigarh on 8th November, 2008.
85. Invited Talk "Scientific Vision of Guru Nanak in Sri Guru Granth Sahib" at Regional Seminar held at GND University, Amritsar during 22-23 November, 2008.

86. Invited Talk delivered at UGC National Seminar "Nanotechnology: The Next Revolution" held at DAV College, Dasuya on 4th December, 2008.

87. Invited Talk delivered at UGC National Seminar "Recent Trends in Material Sciences" held at DAV College, Amritsar on 10-11 February, 2009.

88. Invited Talk delivered at National Conference "Advanced Materials and Radiation Physics" held at SLIET, Longowal on March 9-10, 2009.

89. Invited Talk at National SSNTD Conference held at GND University, Amritsar during 9-11 Nov. 2009.

90. Invited Talk at XXIV Gujarat Science Congress held at GU Ahmedabad on 21st March, 2010.

91. Participated and Chaired a Session in National Workshop on XRD Techniques & Applications held at Saurashtra University, Rajkot during March 17-19, 2010.

92. Delivered an Invited Lecture on Disaster Mitigation & Management at Institute of Seismological Research (ISR) at Gandhinagar (Gujarat) on March 16, 2010.

93. Delivered Dr MR Sahni Memorial Lecture "Natural Hazards & Disaster Management" in Geology Department, PU Chandigarh on 25th March, 2010.

94. Delivered Invited Talk at 3rd National Conference on Nanomaterials and Nanotechnology held at Amity University, Lucknow during 21-23 Dec. 2010.

95. Delivered Invited Talk "Concept of God (Ultimate Reality) in Guru Granth Sahib" at Guru Nanak Dev University, Amritsar, during Feb. 26-29, 2011.

96. Delivered Invited Talk at 17th National Symposium on SSNTD held at MS University of Baroda on 17-19 October, 2011.

97. Delivered Invited Lecture at 7th National ISCAS Conference held at Jamia Milia Islamia University, New Delhi on 24-26 Nov., 2011.

98. Invited Talk at National Symposium on "Concept of *Surat* "Consciousness" in Sri Guru Granth Sahib (SGGS) held at Jawaddi Taksal, Amarkot (Amritsar) in October, 2018.

99. Invited Talk on Nanotechnology at National NSTC Seminar held at Noida, UP, in Nov. 2018.

100. Invited Talk on "Scientific Vision of Guru Nanak" delivered at Annual Conference of Punjab Academy of Sciences held at Sant Longowal Institute of Engineering & Technology (SLIET), Longowal in December, 2019.