

# Dr. Davinder Kumar Garg

*Professor of Statistics*

(Resume)



**TEACHING AND RESEARCH EXPERIENCE:** 24 years

**PRESENT STATUS:** Professor, Department of Statistics, Punjabi University, Patiala, Punjab, IN

**RESEARCH PUBLICATIONS:**

More than **51** research papers published in the areas of **design of experiments** and **sample surveys** in various reputed international and national journals.

**One book** in the area of design and analysis of experiments has also been published.

**RESEARCH GUIDANCE:**

**SIX** students have been awarded **Ph.D. degrees** under my Supervision in the area of **design of experiments and sampling surveys**.

**UGC VISITING FELLOW:**

Visited as **UGC Visiting Fellow** under the UGC SAP(I)-DRS(II) to the Sardar Patel University, Vallabh Vidya Nagar, Anand, GUJARAT from **9/2/2018 to 23/2/2018 for 15 days**.

Besides this, some research discussions with the faculty largely of my field has also been undertaken.

I have also **delivered**

- (I) an Invited Talk on Sudoku Squares and construction of PBIB Designs.
- (II) a popular Lecture entitled " STATISTICS - a science for all "
- (III) a lecture on "Formation of Statistical Package in R-Language" and
- (IV) Two Special Lectures to the audience comprising Faculty, Research Scholars and  
M.Sc.(Statistics), M.Sc.(Applied Statistics) and M.Sc.(Quality, Productive and Management) students of Sardar Patel University, GUJARAT.

**ACTING AS REFEREE:**

I am on the panel of referees for reviewing various research papers/articles of various International and National Journals which include

"Communications in Statistics-Theory and Methods"

"Communications in Statistics-Simulation and Computation"

"Journal of Statistical Theory and Practice"

"Journal of Modern Applied Statistical Methods"

"International Journal of Agricultural and Statistical Sciences"

"International Journal of Statistics and Reliability Engineering"

"Advances and Applications in Mathematical Sciences"

"Journal of the Indian Society of Agricultural Statistics"

"Proceedings of the National Academy of Sciences"

etc.

**CHAIRMANSHIP/MEMBERSHIPS:**

(i) Presently working as **Professor, Department of Statistics**, Punjabi University, Patiala

(ii) Acted as **Head of the Department of Statistics for two terms**

**First Term from** 22/03/2014 to 21/03/2017 and

**Second Term from** 22/3/2020 to 05/08/2021

(iii) Acted as **Co-coordinator** for organizing the **Refresher Course in Mathematics and**

**Statistics** in the UGC-ASC at Punjabi University Patiala in June, 2017.

- (iv) **Member**, Board of Studies (BOS) in Statistics, P.U. Patiala
- (v) **Member**, Administrative Committee of the Department (ACD) of Statistics, P.U. Patiala
- (vi) **Member**, Departmental Research Board (DRB), P.U. Patiala
- (vii) **Member**, Faculty of Physical Sciences, P.U. Patiala
- (viii) **Member**, Board of UG Studies in Statistics, K.U. Kurukshetra
- (ix) **Member**, Board of UG Studies in Mathematics, P.U. Patiala
- (x) **Member**, Board of PG Studies and Research (BPSAR), P.U. Patiala
- (xi) **Member**, Selection Committee, Staff Selection Commission (SSC)
- (xii) **Member**, selection committee of Central University of Haryana, Mahendergarh.
- (xiii) **V.C. Nominee** in various BOS meetings, MGC, Fatehgarh Sahib
- (xiv) **Member**, Board of Studies, Khalsa College Patiala

#### **ON THE PANEL OF VARIOUS SELECTION COMMITTEES:**

Acted as member of Selection Committees of various Universities and Autonomous institutions including

Panjab University Chandigarh, SKUAST Jammu, SMVDU Katra, J&K, CCS University of Meerut, U.P. Central University of Haryana, Mahendergarh etc.

#### **SOCIETIES MEMBERSHIP:**

**Lifetime member** of many societies of international and national repute such as

**Indian Society of Agricultural Statistics (IASRI), New Delhi,**

**Indian Society of Probability and Statistics (ISPS)**

**Forum for Interdisciplinary Mathematics (FIM), USA,**

**Society of Agricultural Statistics and Computer Science (SASCS)**

**Punjab Academy Sciences (PAS), and many more.**

#### **CONFERENCES/ WORKSHOPS:**

Presented research papers/Attended more than **35** international and national conferences/ workshops in **India** and **Abroad**.

**INVITED TALKS/ SESSIONS CHAIRED:**

**Delivered more than 19 invited talks/ lectures as a resource person** in many refresher/ orientation/conferences in India and Abroad.

Also, **chaired more than 15 academic sessions** in the international conferences across India and Abroad.

Also delivered a **Radio Talk** at All India Radio, Jalandhar on World Population Day.

**SOFTWARE (S/W) PACKAGE DEVELOPED:**

Successfully developed (along with my two Ph.D. Scholars) an R extension statistical software package namely "PBIBD" which is available free globally at the following website:

**"[https://CRAN.R-project.org/package= PBIBD](https://CRAN.R-project.org/package=PBIBD) "**

# List of Published Research Papers

(Dr. Davinder Kumar Garg, Professor)

1. Bansal, N., Garg, D.K. & Khattree, R. (2023): Some Results on the Existence or Nonexistence of Constant Block-sum Triangular and Other Related Designs. *J.Stat Theory Pract.*, 17, 1 (2023).  
Link-<https://doi.org/10.1007/s42519-022-00301-8>
2. Namisha Bansal & Davinder Kumar Garg (2022) : Construction of some New Youden m-squares, incomplete Sudoku Squares and PBIB designs, *Communications in Statistics - Simulation and Computation*,  
<https://doi.org/10.1080/03610918.2022.2109674>.
3. Bansal, N., Garg, D.K. (2022): Optimum Covariate Designs for Three Associate PBIB Designs. *J. Stat Theory Pract.*, 16, 36 (2022). Link-<https://rdcu.be/cPF1a>  
<https://doi.org/10.1007/s42519-022-00244-0>, Springer Press, Published on 17th May, 2022.
4. Namisha Bansal & Davinder Kumar Garg (2022) : Construction and existence of constant block sum PBIB designs, *Communications in Statistics - Theory and Methods*, 51:7, 2231-2241, DOI: [10.1080/03610926.2020.1772308](https://doi.org/10.1080/03610926.2020.1772308)
5. Sharma, K and Garg, D.K. (2022): Construction of three-associate class PBIB designs by generating a set of square matrices, *RAFAS-2021 JOP: Conference Series 2267 (2022) 012081* IOP Publishing doi:10.1088/1742-6596/2267/1/012081, pp. 1-11 (2022).
6. Kaur, P., & Kumar Garg, D. (2022): Construction of  $T_m$ -type and  $T_m$ -assisted PBIB designs. *REVSTAT-Statistical Journal*, 20(2), 251–276. Retrieved from <https://revstat.ine.pt/index.php/REVSTAT/article/view/373>
7. Gurinder Pal Singh and Davinder Kumar Garg(2022), Modified partially balanced incomplete block designs having higher associate classes by using the literals of K-Maps, *Far East Journal of Theoretical and Applied Sciences* 1, 25-32. <http://dx.doi.org/10.17654/TAS2022003>.
8. Kush Sharma & Davinder Kumar Garg (2021) : A new technique for comparing PBIBDs, *Communications in Statistics - Simulation and Computation*, 50:4, 1154-1164, DOI: [10.1080/03610918.2019.1577974](https://doi.org/10.1080/03610918.2019.1577974)

9. G. P. Singh and **D. K. Garg (2021)**, Partially balanced incomplete block designs based on bi-partite graph, *Far East Journal of Theoretical Statistics* **63(2)**, 127-134.
10. Singh, G.P. and **Garg, D.K. (2020)**: "Construction of three associate PBIB designs using K - maps" Accepted for Publication in "**Journal of Modern Applied Statistical Methods**", In Press.
11. Kaur, P. and **Garg, D.K. (2020)**: Computer aided construction of rectangular PBIB designs, **International Journal of Agricultural and Statistical Sciences**, Vol.16, Issue 01(June) 81-90, 2020.
12. Singh, G.P. and **Garg, D.K. (2020)**: "PBIB designs constructed through Edges and Paths of Graphs, **International Journal of Maths. Trends & Technology**, Vol.66, Issue 5, PP.70-74, ISSN:22315373.
13. Parneet Kaur & **D. K. Garg (2019)**: Construction of incomplete Sudoku square and partially balanced incomplete block designs, **Communications in Statistics - Theory and Methods**, **49:6**, 1462-1474, DOI: [10.1080/03610926.2018.1563177](https://doi.org/10.1080/03610926.2018.1563177)
14. Sharma, K. and **Garg, D.K. (2019)**: Modified Systematic Sampling and the PBIB Designs "**Utilitas Mathematica**, Vol.113, Date 1/11/2019, 243-263.
15. Sharma, K. & **Garg, D.K. (2018)**: m-Associate PBIB designs using Youden-m squares, **Communications in Statistics - Theory and Methods**, **47:7**, 1653-1662, DOI: [10.1080/03610926.2017.1324990](https://doi.org/10.1080/03610926.2017.1324990)
16. Singh, G.P. and **Garg, D.K. (2018)**. Construction of PBIB Designs by using Boolean Algebra, **Journal of Computer and Mathematical Sciences**, Vol.9, No. 2, pp. 56-62, February, 2018. DOI: <http://dx.doi.org/10.29055/jcms/731>.
17. Sharma, K. and **Garg, D.K. (2017)**: Construction of Three associate PBIB designs using some sets of initial blocks, **International Journal of Agricultural and Statistical Sciences(IJASS)**, Vol. 13, No. 01, 2017 pp. 55-60.

18. Singh, G.P. and **Garg, D.K. (2017)**: Partially balanced incomplete block designs having three associate classes by using symmetric differences, **Aryabhata Journal of Mathematics and Informatics, Vol. 09, Issue 01, Jan.-June, 2017 pp. 811- 815.**
19. Kaur, P. and **Garg, D.K. (2016)**: Construction of Some higher associate class PBIB designs using symmetrical repeated differences, **Aryabhata Journal of Mathematics and Informatics, Vol. 08, Issue 02, July-dec.,2016 pp. 65-78.**
20. **Garg, D.K.** and Singh, G.P. (2015). General Solution of Normal Equations in the Intra-block Analysis of PBIB Designs with any ( $m \geq 2$ ) number of associate classes, **American Journal of Sustainable Cities and Society, Issue 4, Vol. 1, January-Dec., 2015, pp. 196-202.**
21. **Garg, D.K.** and Farooq, S.A.(2015):Construction of PBIB designs based on Magic Square of Odd and Doubly Even Order, **Indian Journal of Applied Research, Vol. 05, Issue 09, pp. 27-29.**
22. **Garg, D.K** and Farooq, S.A (2014).Construction of PBIBDs through chosen lines and triangles of graphs.  
**International Journal of Mathematics Trends and Technology, 8(1), 25 - 32.**
23. **Garg, D.K.** and Singh, G.P. (2014). Construction of Three Associate Class PBIB Designs using Method of Juxtapositions, **Indian Journal of applied Research (IJAR), Vol. 4, Issue 05, pp. 616-618.**
24. **Garg, D.K.** and Singh, G.P. (2014). Construction of Three Associate Class PBIB Designs with three replicates using pairing in triplets system, **Paripex - Indian Journal of Research (PIJR), Vol. 3, Issue 2, pp. 287-289.**
25. **Garg, D.K.** and Singh, G.P. (2014). Construction of Four associate class Partially Balanced Incomplete Block (PBIB) Designs using Pairing in triplets System. **Advances and Applications in Statistics,vol.41 No.1.pp 11-20.**

26. **Garg, D.K** and Farooq, S.A (2014). Construction of PBIB designs using Magnificent ( $M_n$ ) matrices. *Far East Journal of Theoretical Statistics*, vol.48, No.1, pp 87-99.
27. **Garg, D.K.** and Singh, G.P. (2014). Construction of Higher associate class Partially Balanced Incomplete Block (PBIB) Designs using Factorial Combinations, *China, Journal of Probability and Statistical Science (JPSS)*. vol.12, No.2, pp 165-171.
28. **Garg, D.K** and, Farooq, S.A (2014). Construction of PBIB designs using Triplets and Quadruplets generated from Polygons and Polyhedrons, *Indian Journal of Applied Research*, vol.4, Issue 09, 536-539.
29. **Garg, D.K** and, Farooq, S.A (2014) Construction of PBIB designs using Factorial Treatment combinations, *International Journal of Scientific Research*, vol.3, No.10, 525-531.
30. **Garg, D.K.** and Singh, G.P. (2014). Analysis and General Solution of Normal Equations for Five Associate Class PBIB Designs, *Global Jour. for Research Analysis*, Vol.3, Issue 11, Nov., 90-93.
31. **Garg, D.K** and, Farooq, S.A (2014). Construction of Partially balanced incomplete block (PBIB) Designs with  $(s-1)^2$  replicates", *Global Journal for Research Analysis*, vol.3, Issue 12, Dec.2014, 126-128.
32. **Garg, D.K.** and Singh G.P.(2014) : Construction of Three associates class Partially Balanced Incomplete Block(PBIB) Designs with three replicates using pairing in triplets system, *Paripex- Indian Journal of applied Research (IJAR)*, Vol 3, No.2, Feb, 2014.
33. **Garg, D.K.** and Farooq, S.A (2014): Construction of PBIB designs using Modified Magnificent ( $M_n$ ) Matrices of type-III. *Indian Journal of applied Research (IJAR)*, Vol. 4, Issue 2, Feb, 2014.
34. **Garg,D.K.** and Mishra,G. (2013): General solution of Normal equations in the Intra-block analysis of PBIB designs with four

associate classes, *Journal of Mathematics and System Sciences (JMSS)*, vol.3, 2013, pp. 412-416.

35. **Garg, D.K.** and Singh G.P. (2013): Construction of Partially balanced incomplete block designs by using partial geometry with finite graphs and Boolean algebra, *American Journal of Applied Maths and Mathematical Sciences (AJAMMS)*, vol. 2, No.1,2013, pp.81-89.
36. Jhajj, H.S., **Garg, D.K.**, and Mishra,G. (2012): An Efficient Estimator of Population Mean Using BIB Design Under Controlled Simple Random Sampling Without Replacement, *American Journal of Pure and Applied Mathematics (AJPAM)*, vol.1, No.1-2, Jan-Dec, 2012, 33-38.
37. **Garg, D.K.** and Singh G.P. (2012): Construction of Two Series of Higher Associate class Partially Balanced Incomplete Block Designs Using symmetric Differences, *Far East journal of Theoretical Sciences*, vol.38, No.2, pp.87-89.
38. Jhajj, H.S. **Garg, D.K.**, and Mishra,G. (2011): Almost Unbiased Estimator of Finite Population Mean in survey Sampling, *International Journal of Appl. Mathematics (IJAM)*, Vol.2, No.1, 211-221.
39. **Garg, D.K.** and Singh G.P. (2011): Construction of Three and Four Associate class PBIB Designs using method of Duality, *International Journal of Agricultural and Statist. Sciences (IJASS)*, Vol.7, No.2, 579-587.
40. **Garg, D.K.**, Jhajj,H.S. and Mishra,G. (2011): Construction of Some New Triangle and Four Associate class PBIB Designs with two replicates, *International journal of Mathematical Sciences and Applications (IJMSA)*, Vol.1, No.2, pp.807-819.
41. **Garg, D.K.**(2010): Combinatorial Non-Existence, Block Structure Properties and applications of NMLi and Pseudo (NML(m)) Type Designs, *Journal of Combinatorics, Information and System Sciences (JCIS)*, vol.35, No.3-4, pp.429-438.
42. Jhajj, H.S., **Garg, D.K.**,and Mishra,G. (2010): Almost Unbiased Ratio-type Estimators of Finite Population Mean Using Linear

Transformation on Auxiliary Variable, **Arya Bhatta Journal of Mathematics and Informatics, Vol.2, No.2, 305-318.**

43. **Garg, D.K. (2010)** : Pseudo New Modified Latin Square ( $NML_m(m)$ ) Type PBIB Designs,  
**Communications in Statistics - Theory and Methods, 39:19, 3485-91,**  
*DOI:10.1080/03610920903308448*
44. **Garg, D.K., Jhaggi, H.S. and Mishra, G. (2009)**: Patterned Construction of Partially Balanced Incomplete Block Designs by Juxtaposing Some Associations, **International Review of Pure and Applied Mathematics, Vol.5, No.1, 59-65.**
45. **Garg, D.K. (2009)**: A New Method of Construction of EL2 Designs, **International Journal of Agricultural and Statistical Sciences (IJASS), Vol.5, No.1, pp. 289-295.**
46. **Garg, D.K. (2008)**: Modified Hyper Cubic (MHC) Type PBIB Designs, **International Journal of Agricultural and Statistical Sciences (IJASS), Vol.4, No.1, 83-89.**
47. **Garg, D.K. (2008)**: New modified Latin square ( $NML_i$ ) type PBIB designs, **Journal of Mathematics and System Sciences (JMSS), vol4, No.1, 83-89.**
48. **Garg, D.K. (2006)**: A New Inequality Based on Parameters of Balanced Incomplete Block Designs. **Journal of Punjab Academy of Sciences (JPAS), Vol.3, No.1&2, pp.56-59.**
49. **Garg, D.K. (2005)**: A Note on Construction of New PBIB Designs, **Journal of Mathematics and System Sciences (JMASS), Vol.1, No.2, 53-61.**
50. **Garg, D.K. (2005)**: A New method of Constructing Cubic Designs, **Journal, Punjab Academy of Sciences, Vol.2, No.(1 &2), pp. 17-19.**
51. Singla, S.L. and **Garg, D.K. (1992)**: On some  $\alpha$  resolvable PBIB Designs, **Calcutta Statistical Association Bulletin, Vol.42, No.167-168, pp. 271-275.**

**Presentations/Invited Lectures/Participation in  
Conferences/Workshops/Seminars**

**Dr. Davinder Kumar Garg**

**Professor**

**Department of Statistics**

**Punjabi University Patiala**

**44. Delivered an Invited Lecture on the topic "Block Designs: Basic to Research Level "at Department of Statistics, Central University of Haryana, Mahendergarh, Haryana on Feb.10,2023.**

**43. Attended a Two Day online National Workshop on "Research Methodology-Concepts and Applications" organised by Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan during June 26-27, 2020.**

**42. Delivered an Invited Talk on the topic "A Popular Lecture on Statistics" at Mata Gujri College, Fatehgarh Sahib, Punjab. on Feb.5, 2019.**

**41. Delivered an Invited Talk on the topic "Statistics: A Science for all " at Central University of Punjab, Bathinda on Sept.28, 2018.**

**40. Delivered an Invited Talk on the topic "Construction of incomplete Sudoku Squares and PBIB Designs" during Feb.10-11,2018 held at Sardar Patel University, Gujarat during my visit as a Visiting Professor during Feb.9-23,2018**

**39. Delivered an Invited Talk in the 3rd International Conference on "Recent Advances in Fundamental and Applied Sciences" (RAFAS-2021) on June 25 – 26, 2021 (in online mode).**

**38. Presented a research paper in the Ist National conference on Innovation in Applied Science and Engineering (NCIASE 2019) from April 27-28, 2019 held at NIT, JALANDHAR, Punjab.**

**37. Delivered an Invited Talk on June 29, 2019 on the occasion of "National Statistics Day" Celebrated at Himachal Pradesh University, Summer Hill, SHIMLA, Himachal Pradesh.**

**36. Attended ONE WEEK module on "Official Statistics" conducted at National Statistical Systems Training Academy (NSSTA) during May 27 to 31, 2019 at GREATER NOIDA, U.P. (India)**

**35. Presented a research paper in "International Conference on Emerging Innovations in Statistics and O.R." held at Department of Statistics, M.D. University, ROHTAK during Dec.27-28, 2018.**

**34.** Presented a research paper in “**UGC Sponsored (SAP) National Seminar on Recent Advances in Statistics for Industries and Corporates**” held at **Sardar Patel University (SPU), ANAND, Gujarat, India** during Feb. 10-11, **2018**.

**33.** Delivered **Three Invited Lectures** in the area of "**Design and Analysis of Experiments** " during April 13-14, 2017 in the Department of Statistics, **M. D. University, Rohtak, Haryana** .The Three topics were

**(i) Fundamentals of Design of Experiments**

**(ii) General Theory of Block Designs**

**(iii) PBIB Designs and MOLS**

**32.** Presented a research paper in “**National Conference on Statistics and Informatics in Agricultural and Allied Sciences**” held at Shere-e-Kashmir University of Agricultural Sciences and Technology (SKUAST) of **JAMMU, Jammu & Kashmir, India** March 06-08, **2017**.

**31.** Presented a research paper in “**National Conference on Statistics and Optimization Techniques**” held at **Department of Statistics, M.D. University, ROHTAK** during Feb.11-13, **2017**

**30.** Presented a research paper in “**National Conference on recent Trends and Developments in Statistics**” held at **Department of Statistics, M.D. University, ROHTAK** during Feb.21-23, **2015**

**29.** Presented a research paper in “**International Conference on Statistics and Information Technology for a growing nation**” held at **Department of Statistics, Sri Venkateswara University, TIRUPATI, Andhara Pradesh** during Nov.30, **2014**

**28.** Presented a research paper in “**International Conference on Operations Research**” held at Department of Statistics, **S.V. University, TIRUPATI, Andhara Pradesh** during Dec.1-3, **2014**

**27.** Presented a research paper in “**National Conference on Recent Advances in Statistical and Mathematical Sciences and their Applications**” held at Kumaun University, S.S.J. Campus, **Almora, NAINITAL, UttraKhand** during Oct.4-6, **2014**

**26.** Presented a research paper in “**International Conference on Innovative Approach in Applied Physical, Mathematical/Statistical (APMSCSET)** held at **J.N.U., NEW DELHI** during Sept.27-28, **2014**

**25.** Presented a research paper in “**International Conference on Mathematics and Engineering Sciences (ICMES-2014)**” held at **Chitkara University, Himachal Pradesh, INDIA** during Mar.20-22, **2014**

**24.** Presented a research paper in “**International Conference on Interdisciplinary Mathematics, Statistics and Computational Techniques**” held at **Kitakyushu, JAPAN** during Nov.10-12, **2013**

23. Presented a research paper in “**International Conference** on Information and Mathematical Sciences” held at Baba Farid College of Engineering and Technology, **BATHINDA** during Dec.24-26, **2013**
22. Presented a research paper in “**International Conference** on Operations Research, Data Analytics and Decision Analysis” held at **University of Kashmir, SRINAGAR**, J and K during October 19-23, **2013**
21. Delivered an **Invited Lecture** at ASC, PUP on the topic '**Fundamentals of Statistics**' on 22/05/2013
20. Presented a research paper in “**International Conference** on Statistics and Informatics in Agricultural Research” held at Indian Agricultural Statistics Research Institute (**IASRI**), **NEW DELHI** during Dec.18-20, **2012**
19. Presented a research paper in “**International Conference** of FIM on Interdisciplinary Mathematics, Statistics and Computational Techniques” held at **Punjab University, CHANDIGARH** during Dec.15-17, **2012**
18. Presented a research paper in “**International Conference** on Optimization Modeling and Applications” held at **University of Delhi, DELHI** during Nov.29-Dec01, **2012**
17. Presented a research paper in “**International Conference** on Probability, statistics and related Areas” held at **Cochin University of Science and Technology, COCHIN, KERALA** during Dec.19-22, **2011**
16. Presented a research paper in “**International Conference** on Development and Application of Statistics in the Emerging Areas of Science and Technology” held at **University of Jammu , JAMMU** during Dec 8 – 10, **2010**
15. Delivered an **Invited Lecture** at ASC, Punjabi University Patiala on the topic '**Fundamentals of Basic Statistical Techniques**' at GSSS, Ghanour, Patiala on 13/09/2010
14. Attended a National Training School Program on Design , Modeling and Analysis of Experiments through Taguchi Philosophy and its Applications held at **MSRIT, BANGALORE** during 23 – 27 Aug, **2010**
13. Delivered an **Invited Lecture** at ASC, Punjabi University Patiala on the topic '**Elementary Statistical Techniques**' at GSSS, Ghanour, Patiala on 14/05/2010
12. Attended a National Workshop on Applicable Statistics held **M.D. University, ROHTAK** during 28 – 30 Mar, **2010**
11. Presented a research paper in Eighteenth "International Conference of FIM for Interdisciplinary Mathematics and Statistical Techniques” held at Jay Pee University of Information Technology, **WAKNAGHAT, HIMACHAL PRADESH**, during Aug.2-4, **2009**
10. Participated in a two day workshop on “Statistical Analysis and Interpretation for Research” held at SGGGS College, **CHANDIGARH**, during May 9-10, **2009**

9. Presented a research paper in the “**International Conference on New Trends in Statistics and Optimization**” held at **University of Kashmir, SRINAGAR**, Jammu and Kashmir during October 20-23, **2008**
8. Participated in a Workshop on the topic “**Research Methodology**” held at **CMC and Hospital, LUDHIANA**, during May 12 & 14, **2008**
7. Attended one day workshop on “**Advanced Computing for Statistics and Optimization For Young Statisticians and Scientists using S/W**” held at **GULMARG, Jammu and Kashmir** in October, **2008**
6. Presented a research paper in “**9<sup>th</sup> Punjab Science Congress**” held at GND College and Res. Institute, **SUNAM** during February 7-9, **2006**
5. Presented a research paper in the “**National Conference on Applications of Mathematics in Engineering and Technology**” held at **MIMIT, MALOUT** during March 26-28, **2005**
4. Presented a research paper in the “**8<sup>th</sup> Punjab Science Congress**” held at **Punjabi University, PATIALA** during February 7-9, **2005**
3. Participated in a “**National Seminar on Access to Scholarly Electronic Journals/Databases under UGC-InfoTech**” held at **University of Delhi, DELHI** during December 14-15, **2004**
2. Presented a research paper in the “**81<sup>st</sup> Indian Science Congress**” held at **University of Rajasthan, JAIPUR** during January 3-8, 1994
1. Presented a research paper in the “**80<sup>th</sup> Indian Science Congress**” held at **National Institute of Oceanography, GOA** during January 3-8, 1993