Nidhi Handa

Assistant Professor [stage 3]

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Ph. No.:91-9411788474, 8057909668, 7456000840.

01334-244610

RESUME

Area of Interest

- Ancient Indian Mathematics, Inventory Theory, Wavelets, Statistics.

Educational Details

M.Sc. (1991) in Statistics, Punjab Agricultural University, Ludhiana, Punjab.

Ph.D.(2001) GurukulKangriVishwavidyalaya,Haridwar.

Memberships

- Indian Society of History of Mathematics, Life Member.
- The Indian Science congress Association Haridwar Chapter.
- JAGRITI: Women's Conference,Haridwar Society.HARIDWAR, Life   Member.
- Member of Organising Committee of Literature Society Haridwar "AntahPravah" .

Teaching Engagements

Topology, Fourier Analysis and Wavelet Theory, Functional Analysis, Discrete Mathematics, Operation Research and Mathematical Modelling, Abstract Algebra.

Teaching experience

24 years teaching in M.Sc. classes, 7 years in pre Ph. D classes.

Assistant Prof (stage 3) since Oct. 2015

Ph.D. supervised

- Contribution of Vedic Mathematics to Modern Mathematics. (PadmavatiTaneja)[2008-2012]

- Design and optimization of some Integrated Inventory Models with credit policies. (Sunil Kumar)

- Indeterminate analysis and its applications in Modern Mathematics.

  (TarunK.Gupta)

.   Some aspects of non-linear waves in Gaseous media.[Shakuntala Sept.2020]

Ph.D. in progress {under Supervision}

- Solution of Integral Equations by Operational Matrix Method. [ShivaniSinghal :April 2017]
- Study of reverse logistics inventory models for deteriorating items with shortages. [Chandni : March-2019]
- Modelling and analysis of some green integrated inventory models.   [Neha Punetha:Mar. 2019]
- Stability Analysis of Geodesics and some other differential equations [Pradeep :Mar.2020]

M.Sc. Dissertation:05

1. A rigorous approach and survey towards solving shock waves (Anjuman)[2016-17]
2. Ancient Indian trigonometry. (Sonia)[2016-17]
3. Mathematical aspects in śulba-sūtrās. (Garima Chaudhary) [2016-17]
4. An EOQ Inventory Model for Non-Instantaneous Deteriorating Items with Exponentially Increasing Market Demand Rate and Partially Backlogging. (Drishti) Gupta[2019-20]
5. An EOQ Inventory Model of Items with Power Demand and Shortages under Permissible Delay in Payment .(Neha)[2019-20]

Publications in refereed journals /conference proceedings.

2004-05

1. "Kātyāyanā Śulb Sūtrās"Journal of Natural &Physical Sciences,vol.18, No.2,2004,89-96.ISSN 097-3799(G K V Haridwar).

2010-12

1. Direction And Construction in Śulbas,Maharishi Dayanand Univ. Research Journal,ISSN 0972-706X,Vol. 9 No. 1,(Ap.2010)pp-123-132.

2. Enlargement of Vedis in the Sulbsutras, Indian Journal of History of Science, ISSN 0019-5235,Vol.45,2(June,2010)175-188.

3. The study On Arithmetic of Numbers, International Transactions In Mathematical Sci.& Computer,ISSN:0974-5068,Vol-3,No.-2(July2010),pp.391-398.

4. Journey of Quadratic Equation from Vedic Period to Modern Mathematics, Indian J. of Math. Sci. &Engg. Appls. (IJMSEA)ISSN 0973-9424, Vol.5 No.III (May, 2011), pp.411-428.

5. Katyayana and Sulbsutras: A Study In Identity, The Vedic Path, Vol. LXXXV(No.3&4),July-Sep./Oct.-Dec.2011, ISSN 0970-1443,pp.103-109.

2012-13

1. NidhiHanda, S.R. Singh, Sunil Kumar "A Supply Chain EPQ Model for Deteriorating Items with Multiple Production Setups and Rework with Shortages and Trade Credit" International Journal of Mathematics & Computing Systems Volume 4, Issue 2, 2013, pp. 7-14(ISSN 0976-9048).

2. NidhiHanda, S.R. Singh, Sunil Kumar "An Inventory Model for Perishable Items with Partial Backlogging Under Inflation" International Journal of Trends in Computer Science, Volume 2, Issue 11, 2013, pp. 551-565 (ISSN 7462-8452).

2013-14

1. NidhiHanda and Tarun Kumar Gupta, Computer Applications of Brahmagupta – Bhãskara Equation, International Journal of Computer Applications (IJCA), October and 2013, Vol. 80, No-11, pp.4-10, ISSN: 0975-8887.

2. NidhiHanda and Tarun Kumar Gupta, On the Brahmagupta – Bhãskara Equation $Ny^2+m^2=x^2$, Proceedings of Fifth International Conference "Applications and Challenges in Ancient Indian Mathematics and Astronomy" held at National Institute of Vedic Sciences (NIVS) Bangalore, 20-22 December,2013 pp. 219-228,ISBN: 021-011-435-X.

3. NidhiHanda and Tarun Kumar Gupta, The Principle of Composition " Bhāvanā " and its Higher Applications, Proceedings of ICRTET' 2014 ELSEVIER Science and Technology held at SNJB'S Jain College of Engineering, Chandwad, Nashik, 28-30 March 2014,pp.209-215, ISBN: 978-93-5107-220-1.

4. NidhiHanda, S.R. Singh, Sunil Kumar "Integrated Production-Inventory Model with Imperfect Production Process and Exponential Demand" proceedings of III International Conference on Management Innovations GurukulKangri University, Haridwar, UK February 10-12, 2014, pp 563-577. (Published by McGraw Hill Companies, ISBN-978-93-392-0324-5).

5. NidhiHanda and Tarun Kumar Gupta "On the Non Linear Indeterminate Equation $Ny^2+m^2=x^2$", Research Journal of Mathematical and Statistical Sciences (RJMSS), June 2014, Vol. 2(6), 1-3, ISSN: 2320-6047.impact fac.4.226

Jul.2014-Jun.2015

1. NidhiHanda, S.R. Singh, Sunil Kumar, DharmendraYadav "Single-Manufacturer Multi- Buyer Integrated Model with Backorder Price Discount and Controllable Lead Time under the effect of Learning in Manufacturing Cost" Proceedings of I International

Conference of Science Conference (IEMSCI) Kolkata, pp. 489-503, August 29-30 2014. (Published by ELSEVIER SCIENCE & TECHNOLOGY with ISBN 9789351072485 and INDEXED by ELSEVIER).

2. NidhiHanda and Padma Taneja"Methods of Interpolation in Indian Astronomy" Indian Jour. of History of Science 49 (3),p.251-59,Sept.2014, ISSN:0019-5235.
3. S Kumar, N Handa, S. R Singh, D.Yadav "Production Inventory Model for Two-Level Trade Credit Financing under the Effect of Preservation Technology and Learning in Supply Chain" Journal of Cogent Engineering Production and Manufacturing (Taylor & Francis),ISSN-23311916.(May2015)(ONLINE) (Scopus and ESCI /Web of Science).

2015-16

1. NidhiHanda, Tarun K Gupta, S.L.Singh "Comparative study of Bakshali square root method with Newton'S iterative method" Springer AISC series, (ISSN--2194-5365)Vol.436, 929-938,ISBN-978-981-10-0448-3. DOI 10.1007/978-981-10-0448-3.

2018-19

1. MithileshSingh, NidhiHanda & Shankuntala Sharma: Reliable analysis of Riemann solver in ideal Magnetogasdynamics using arithmetic averaging -three dimensional, International Jour. of advanced scientific research and management(IJASRM),special issue II,Oct.2018, ISSN-2455-6378.

2. NidhiHanda, SinghMithilesh & Sharma Shakuntala : Reliable analysis of Riemann solver in ideal Magnetogasdynamics using arithmetic averaging-two dimensional, International journal of pure and applied Mathematics,(2018) 118 No.22, p1325-1337, ISSN-1314-3395(on line version)**,(Scopus database).**

3. NidhiHanda:Journey of Indian Mathematics from Vedic Era, Essence Int. Jour. Env. Rehab.   Conserv.   IX(I):217-221 doi.org/10.31786/09756272.18.9.127.ISSN(online):0975-6272.

4. Mithilesh Singh, Shakuntala Sharma &NidhiHanda: A Riemann Solver with Arithmatic Averaging for One Dimensional Problem in Dusty Gas, Advances and Application in Mathematical Sciences,issue 1,vol.18,Nov.2018, p141-152. (Web of sciences, Math SciNet, Zentralblatt MATH).

5. Mithilesh Singh, NidhiHanda & Shakuntala Sharma: Reliable Analysis of Riemann Problem in Magnetogasdynamics,International Journal of Mathematical Engineering & Management Sciences(IJMEMS)**[Communicated].**

2019-20

6. M .Singh,S.Singhal, N.Handa, Exact and Numerical Solution of Abel Integral Equations by orthonormal Bernouli polynomials,International journal of applied & computational Mathematics Vol.5,issue 6(2019) 2349-5103(print ISSN), 2199-5796(online ISSN) **(Springer),doi**:1007/s40819-019-0734-8 [**Scopus**]

7. M.Singh, NidhiHanda, & ShivaniSinghal, Exact Solution for mixed integral equations by method of Bernoulli polynomials,chapter in Book ' Mathematical Analysis-II, Optimisation , Differential equations and Graph Theory ICRAPAM 2018,Springer proceedings in Mathematics & Statistics Theory,vol.307,doi:10.1007/978-981-15-1157-8_1(2020) [**Scopus**]

2020-21

8. Handa N.,Singh,S.R.,Punetha,N, and Tayal,S.(2020),A trade credit policy in an EOQ model with stock sensitive demand and shortages for deteriorating items, Int.Jour.of Services Operations and Informatics,vol.10,No.4,pp.350-365.DOI: 10.1504/IJSOI.2020.10032706 [**Scopus**]

Google citation of faculty

S.No.	Teacher's Name	citations	h-index	i-10 index
1.	NidhiHanda	8	2	0

Scopus citation of faculty

S.No.	Teacher's Name	citations	h-index
1.	NidhiHanda	4	1

Books Published[2018] :

1. Kātyāyana Śulbsūtra and modern mathematical interpretation of its sūtrās' Pub Manyata Prakashan (**978-81-936482-6-1**)
2. Ancient Hindu Mathematics: An introduction. Oshina Publisher (**978-81-933987-1-5**)

Workshop Attended/chaired:

2013-14

1. Workshop on the Physics and Mathematics of the Universe, 11-12 March, 2013, Deptt. of Physics and Deptt. of Mathematics, G.K.U., Hardwar.

2016-2017

1. Quality Management in Higher Education for Teacher's Educators' [14th Feb.'17-20th Feb.'17] at Punjab University,Chandigarh.

2017-2018

1. A joint centre of TIFR and IIT Bombay) Teachers Enrichment Workshop on "Group Theory,Analysis and Topology" (9th Oct-14th Oct,2017) At Doon University, Dehradun, Uttrakhand

2019-2020

1. An educator workshop in astronomy and sky watch Sponsored by: Aryabhatta research institute of observational sciences (ARIES), Nainital (DST, Govt. of India) Organized by: IUCAA centre for astronomy research and development (ICARD), Department of Physics, GurukulKangriVishwavidyalaya, Haridwar(Nov. 27, 2019).

2. Chaired a Workshop on Teachers Training Programe at DPS DaulatpurHaridwar(28thDec'19)**Title**: Arithmetic formulae in system of Ancient Mathematics.

Paper presented in the conference

1998-2010

1. 64th Annual Conference and Symposia on Traditions of Vedic Mathematics and Applications and Fixed Point Theory in Nonlinear Analysis and Applications presented the paper entitled "Remarks on Some fire Altars of Śulba s" held at Department of Mathematics and Statistics, GurukulKangriVishwavidyalaya, Haridwar (Dec. 19-22, 1998).

2. International Conference on History of Mathematics presented the paper entitled "Śulbas and Approximation Techniques" held at Department of Mathematics and Statistics, GurukulKangriVishwavidyalaya, Haridwar (Dec. 16-19, 1999).

3. First International Conference of The New Millennium on History of Mathematical Sciences organized by Indian Society for History of Mathematics held at Ramjas College, University of Delhi (Dec. 20-23, 2001).Paper:Study of Directions in KātyāyanāŚulbSūtrās

1. National Seminar on History of Mathematical Science and Applicable Mathematics paper entitled "Transformation of Geometrical Figures" held at GurukulKangriVishwavidyalaya, Haridwar (Mar. 7-9, 2003).

2. National Seminar on Mathematics and Computer Science paper entitled "Role of Mathematics on the Forthcoming Developments in Computer Science" held at S.D.(P.G.) College, Muzaffarnagar (UP) India (Nov. 29-30, 2005).

3. National Conference on History of Mathematics and Recent Developments paper entitled "Some Glimpses of Kātyāyana" held at Department of Mathematics, MaharshiDayanand University, Rohtak (Dec. 20-22, 2006).

4. World-Veda- Conference paper entitled "The Study of Arithmetic of Numbers"Held at GurukulKangriVishvavidyalaya,Haridwar(20-22 Nov.2009).

5.National Meet on History of Mathematical Sciences held at Conference Centre, Deptt. of Maths, University of Delhi(7-9January,2010).Paper:A comparative study on Numbers.

2010-12

1. "Methods of Interpolation in Indian Astronomy". International Congress of Mathematicians, Hydrabad, India, 19-27August, 2010.
2. "Views of Modern Mathematicians On Ancient Mathematics", International Colloquium on History of Mathematical Sciences & Symposium on Non-Linear Analysis, KumaunUniv, S.S.J.Campus ,Almora;16-May,2011

3. "Necessity for Genuine Conservation Moment", Biodiversity and Environmental Governance in Canada and India: Safeguarding Ecosystems for Human Welfare, organised by Centre for Canadian Studies GurukulKangriVishvavidyalaya, 21-23Oct.2010.

4. "A comparative study: Arithmetic of Numbers" National Meet on History of Mathematical Sciences Department of Mathematics, Jan.7-9 -10, University of Delhi.

5. "To study the Mean Distance of Planets and to Draw Geometrical Pictures" International conf.on History And Development of Mathematical sci. & Symposium on Nonlinear Analysis, Nov.21-24, 2012 M D Univ.,Rohtak.

6. "Statistical Analysis of Variability on Air Pollution". National Seminar on Natural Resources & Environment Oct.13-14(2012) Chinmey Deg. College, Haridwar.

2013-14

1. Integrated production - inventory model with Imperfect Production Process & Exponential Demand , 3rd International conference on management innovations.(10-12th Feb,2014),GurukulKangri University,Hardwar.(ISBN-13:978-93-392-0324-5 ISBN-10: 93-392-0324-0) .

2. Presented a research paper entitled "Computer Applications of Brahmagupta –Bhãskara Equation" in "International Conference on History and Development of Mathematics" (ICHDM-13) Organized by Indian Society for History of Mathematics (ISHM) JECRC University Jaipur, India, November 29-30& 1-Dec, 2013

2014-15

1. Trigonometry in Ancient India, "Relevance of the Vedas in perspective of global knowledge systems" at GurukulKangriVishvavidyalya, Haridwar. (Mar 13- 15,2015)

2015-16

1. Brahmgupta In Modern Scenario",National Conference on Science & Technology for Indigenous Development in India,organised by Indian Science Congress Association: Haridwar Chapter and FET Gurukul .KangriVishvavidyalya, Haridwar.(Sept.28-30,2015)

2016-17

1. National Conference on Science and Technology for National development organised by Indian Science Congress:Haridwar Chapter and Deptt. of Chemistry,GKV ,Haridwar(Nov.20-22,2016).

2017-18

1.National Conference on "Advances in Operators Research & Mathematical Sciences (AROMS-2018) 24 -25 Feb'18 Topic: Journey of Indian Mathematics from Vedic Era.[Invited Talk]

2.2nd International Conference on Recent Advances in Mathematical Sciences & its Applications (RAMSA-2017) Dec 12-14,2017 at Deptt. ofMathematics, Jaypee Institute of Information & Technology , Noida, India.Topic: An Analysis of shock waves through arithmetic averaging in dusty gas.

2018-19

3. "Glimpses of Vedic Mathematics" National Vedic Seminar on Vedic literature –origin of Traditional and Modern Science at GKV (25-27 Feb .2019)

2019-20

4.International conference on Vedic Mathematics 2019 Emerging dimensions and applications in science, Technology and Social Sciences Research (22-24 December 2019)Sponsored by: ICSSR& CSIR, New Delhi. Paper entitled **Trigonometry in ancient India**.Organized by: Department of Mathematics, Chaudhary BansiLal University, Bhiwani, Haryana 127021, ShikshaSanskritiUtthanNyas, New Delhi. .[Invited Talk].

2020-21

Development of e-content in 4 quadrants for a Course[2017]

1.Video lectures **epgp.inflibnet**.ac.in (Quantitative Techniques for Management Decisions paper-15:module 09-15)

Social Extension

- Being a responsible member of the most prestigious organisation of the country

Jagriti: Women's conference HaridwarSociety,Haridwar founded in April 1988(now registered in the state of Uttarakhand). I am discharging services to **Swachh Bharat Abhiyan, Treeplantation, Environment related projects** in Kangri village where organisation is running a programme "Mother and Child Care and Day Care centre for the Old"

Presently acting actively on post of joint secretary sinceApril 2018 in the organisation.