

RESUME

OF

DR. AJENDRA KUMAR

ASSISTANT PROFESSOR

DEPARTMENT MATHEMATICS & STATISTICS

GURUKULA KANGRI (Deemed to be University)

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RESUME

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Research Area	:	<ul style="list-style-type: none">• Mathematical Modelling, Group Theory.
Educational Qualification	:	<ul style="list-style-type: none">• Ph.D. in Mathematics, Thesis title “A Study of some aspects of Environmental Studies through Mathematical Modelling” (2007)• M.Sc. in Mathematics (2001)• B.Sc. (Physics, Chemistry, Mathematics) (1999)
Teaching Experience	:	10 Years
Research Experience	:	15 Years
Research Projects (as Co-PI)		01(DST – DST/TM/WTI/2K12/34) Impact of Industrialization and human risk with special reference to Heavy metals
Dissertation Guided at P.G. Level		03

Research Guidance		03
Research Publications	:	- Enclosure “A”
Υ Research Papers (Published)	:	(25)
Books	:	- Enclosure “B”
Υ Edited	:	(04)
Conferences/ Seminars		- Enclosure “C”
Υ Research Papers Presented	:	(13)
Workshops	:	(6) - Enclosure “D”
Orientation/Refresher Course	:	(3) - Enclosure “E”
Member of Editorial Board	:	01
		Journal of Applied and Natural Science, Haridwar

Enclosure “A”

Research Publications -	
S. No.	Research Paper – Published (from 2011)
1.	Gupta Manu, Kumar Ajendra , Rani Babita (2011). Damped Vibrations of Exponentially Non-Homogeneous Isotropic Elastic Rectangular Plates of Parabolically Varying Thickness Resting on Elastic Foundation. <i>International Transactions in Mathematical Sciences and Computer</i> , 4(1), 113-122.[ISSN 0974-5068]
2.	Purohit L.P., Gupta H., Pal Pankaj K., Kumar A. , Kumar R., Mehra R.M.,(2013) . Optical Dispersion In Annealed Thin films of S-doped a-Si:H Alloys. <i>Journal of Nano-and Electronics Physics</i> , 5(1) pp 01020(2pp).[ISSN 2077-6772]
3.	Gupta Himanshu, Purohit L.P., Pal Pankaj K., Kumar Ajendra , Gill F.S., Mehra R.M, (2014). Electronic Transport in Se-doped a-Si:H Under Annealing. <i>Invertis Journal of Renewable Energy</i> , 4(2), 69-73.[ISSN 2231-3419]
4.	Arora, T., Mishra, A., Matta, G., Chopra, A. K., Kumar, A. , Khanna, D. R., & Kumar, V. (2014). Human health risk assessment of temporal and spatial variations of ground water quality at a densely industrialized commercial complex at Haridwar, India. <i>Journal of Applied and Natural Science</i> , 6(2), 825-843.[ISSN :

	0974-9411]
5.	Matta Gagan, Kumar Ravindra, Kumar Avinash and Kumar Ajendra (2014): Effect of industrial effluent on ground water quality with special reference to DO, BOD and COD. <i>Journal of Sustainable Environmental Research</i> , 3 (2): 183-186. [ISSN:2278-196X]
6.	Matta G. and Kumar A. (2015): Monitoring and Evaluation of River Ganga System in Himalayan Region with Reference to Limnological Aspects - <i>World Applied Sciences Journal</i> , 33 (2): 203-212. (IM Factor 0.23)[ISSN 1818-4952]
7.	Matta Gagan, Kumar Ajendra , Srivastava Sachin, Singh Vikas and Dhingra Gulshan K. (2015): Impact assessment on water quality of Ganga Canal System in Himalayan Region. <i>International Journal of Scientific & Engineering Research</i> , 6(5), 1524 – 1531. (IM Factor 3.02) (ICV: 5.27)2 [ISSN 2229-5518]
8.	Pathak, Trilok Kumar; Pal, Pankaj K.; Gupta, Himanshu; Matta, Gagan; Kumar, Ajendra ; Kumar, R. and Purohit, L. P.(2015): Synthesis and Characterization of ZnO Thin Films Fabricated by Sol-Gel Method, <i>International Journal for Environmental Rehabilitation and Conservation</i> , 6(2), 184-188. [ISSN 0975 - 6272]
9.	Gupta Manu, Kumar Ajendra, Jain Gesu(2015); Damped Vibrations of Exponentially Non-Homogenous Isotropic Elastic Rectangular Plates of Linearly Varying Thickness Resting On Elastic Foundation, <i>international Journal of Education and Science Research Review</i> ,2(6), 1-10 [ISSN 2348 - 1817]
10.	Matta Gagan, Kumar Mahesh, Kumar Sachin, Walia Aayoosh, Kumar Avinash and Kumar Ajendra (2016): Impact assessment of Dhampur sugar mill effluent on water quality of Bijnor district (U.P.), <i>researcher</i> , 8(10), 46-70 [ISSN 1553-9865]
11.	Matta Gagan, Chauhan Amit, Kumar Avinash and Kumar Ajendra .(2016): Impact of industrial effluent on ground water and surface water quality- A case study of Dhampur region (U.P.), India, <i>Journal of Chemical and Pharmaceutical Sciences</i> , 9(2),709-713.[ISSN 0974-2115]
12.	Arora, T., Mishra, A., Matta, G., Chopra, A. K., Kumar, A. , Khanna, D. R., & Kumar, V. (2017). Pollution load assessment and potential environmental risk of composite industrial effluents discharge from SIDCUL integrated industrial state Haridwar (Uttarakhand), <i>Journal of Environmental Biology</i> , 38, 205-216. [ISSN 0254-8704]
13.	Matta, Gagan; Kumar, Avinash; Uniyal, D. P.; Singh, Prashant; Kumar, Amit; Dhingra, Gulshan K.; Kumar, Ajendra ; Naik, Pradeep K. and Shrivastva, Naresh Gopal (2017): Temporal assessment using WQI of River Henwal, a Tributary of River Ganga in Himalayan Region. <i>ESSENCE Int. J. for Env. Rehab. And Conser.</i> VIII(1): 187-204. [ISSN 0975 - 6272]
14.	Verma S, R., Kumar, Ajendra(2017); Mehler-Fock Wavelet Transforms, <i>IJMS, Vol. 16, Nos. 1-2, 135-143</i> [0972-754X]
15.	Vinod Kumar, A.K. Chopra and Ajendra Kumar., <i>A review on sewage sludge (Biosolids) a resource for sustainable agriculture</i> , Archives of Agriculture and Environmental Science, Vol. 2 No. 4, Nov 2017, pp 340-347
16.	Matta, Gagan; Kumar, Ajendra; Bhatnagar. S.; Kumar, Avinash; Nayak, Anjali; Kumar, Pawan (2018); Repercussions of tourism on water quality of River Ganga in Lower Himalayas, <i>ESSENCE Int. J. for Env. Rehab. And Conser.</i> IX(SP2): 90-103. [ISSN 0975 - 6272]

17.	Kumar, Ajendra; Gupta, Manu and Kumar, Ankit (2018); Analysis of Damping and Non-homogeneity through spline interpolation technique of an isotropic Rectangular plate of Parabolically varying thickness resting on Elastic foundation, ESSENCE Int. J. for Env. Rehab. And Conser. IX(2): 112-124. [ISSN 0975 - 6272]
18.	Verma S, R., Kumar, Ajendra(2019); A New Mehler-Fock Wavelet On The Space T_a , <i>IJMS</i> , Vol. 18, Nos. 1-2, 155-161. [0972-754X]
19.	Verma S, R., Kumar, Ajendra(2019); An Expansion of Eigenfunction Transform for Convolution on The Test Function Spaces, <i>International Journal of Applied Mathematics and Applications</i> , Vol. 11, Nos. 1, 73-83 [ISSN 0973-5844]
20.	Gupta, Manu and Kumar, Ajendra (2019); Damped vibrations of an elastic homogenous infinite plates of linearly varying thickness resting on elastic foundation, ESSENCE Int. J. for Env. Rehab. And Conser., XI(1): 15-22[ISSN 0975 - 6272]
21.	Kumar Ajendra, Singh Preet Pal, Joshi Pawan (2019); Travelling Salesman Problem Using Genetic Algorithm and Fuzzy C-Mean Clustering Algorithm, <i>International Journal of Scientific & Technology Research</i> , 8(8), 1391-1397.[ISSN 2277-8616]
22.	Kumar A., Singh P.P., Sharma D. and Joshi P. (2019); Grid Computing Model to Solve Job Shop Scheduling and Flow Shop Scheduling by Fuzzy C-Mean Algorithm. <i>International Journal of Engineering and Advanced Technology</i> , 9(1), pp.170-179.) [ISSN: 2249-8958]
23.	Kumar A., Singh P.P., Sharma D. and Joshi P., (2020); Grid neural network to solve voice recognition problems. <i>Proceedings of the Second International Conference on Frontiers in Industrial and Applied Mathematics (FIAM-2019): AIP Conference Proceedings</i> , 2253(1), pp.020015-1–020015-8.
24.	Kumar A., Singh P.P., Sharma D. and Joshi P., (2020); Utilization of Grid Neural Network model and RT-PCR test to detect the COVID-19 patients and to avoid the spreading of SARS-CoV-2. <i>International Journal of Recent Technology and Engineering (IJRTE)</i> , 9(3). pp.44-50. [ISSN: 2277-3878]
25.	Ajendra Kumar, Ajay Kumar, Vipin Kumar and Anuj Kumar (2020); Some new aspects of graph labeling in dental arch structure, materials today: Proceedings ,pp 1-5.[ISSN: 2214-7853]

Enclosure “B”

Books
Edited – (as Co-editor)
Environmental Technology. ISBN: 9788170358237 . Published by Astral International (P) Ltd., New Delhi. (2013)
Environmental Management. ISBN 9788170358220 , Published by Astral International (P) Ltd., New Delhi. (2013)
Climate Change Effects on Agriculture and Economy. ISBN: 9788176222785. <i>Biotech Books, New Delhi.</i> (2013)
Environmental Pollution assessment and control techniques. ISBN: 9788176222792. <i>Biotech Books, New Delhi,</i> (2013).

Enclosure “C”

Conferences/ Seminars	
S. No.	Research Papers Presented – International
1.	A review of phytoremediation of heavy metals from soil environment, <i>International Conference on Global Climate Change & Biodiversity Conservation</i> , Department of Zoology & Environmental Science, G.K.V., Haridwar
2.	A three dimensional mathematical model for atmospheric dispersion of toxic pollutants, <i>International conference on Green technologies for Environmental Rehabilitation</i> , FET, GKV, Haridwar, 11-13, February 2014.
3.	Ecological risk assessment in surface water quality of river Ganga using HPI indexing vis-à-vis heavy metal toxicity, <i>International conference on Advances in the field of health, safety, fire, environment, allied sciences and Engineering (HSFEA 2016)</i> , University of Petroleum and Energy Studies, Dehradun, 18-19, November 2016.
4.	The study of Gaussian Plume Model, <i>International conference on Recent Advances at Interfaces of Physical and Life Sciences</i> , University of Rajasthan, Jaipur, 28-30 January, 2018.
S. No.	Research Papers Presented – National
1.	Air pollution modelling : Production of possible impact of atmospheric pollutants and their management, <i>National Seminar on Innovations and Applications in Engineering & Applied Sciences</i> , Faculty of Engineering and Technology, G.K.V., Haridwar, 9-10 November 2011.
2.	Mathematical Modelling and Environmental Problems in India, <i>National Conference on Emerging Trends in Engineering & Science</i> , FET, GKV, Haridwar, 9-10, November, 2013
3.	Characterisation of water Quality of River Yamuna using Statistical Analysis, <i>National Seminar on Economic Up gradation: Environmental Degradation</i> , OMIT, Rishikesh, 24-25 January 2014.
4.	Two dimensional mathematical model for point source secondary pollutants, <i>National Symposium on Innovation in science and technology for inclusive development</i> , Haridwar Chapter of the Indian Science Congress Association, 16 February 2014
5.	A study on physico-chemical characteristics to assess the pollution status of river ganga in Uttarakhand, <i>National Conference on Environmental conservation and clean India programme</i> , ASC, Nainital, 07 Dec. 2014

6.	Heavy metal analysis of industrial effluent associated with groundwater, <i>National Conference on Science & Technology for Indigenous Development in India</i> , Haridwar Chapter of the Indian Science Congress Association, 28-30 September 2015.
7.	Environmental Pollution its effects on Human life and its remedies, <i>National Conference on Recent Advances in Science and Technology</i> , Uttarakhand University, Dehradun, 27-28 February 2017.
8.	Assessment of Water Quality in Upper Ganga Canal by using Comprehensive pollution Index, <i>National Conference on Current Trends in Applied Sciences</i> , J.V.Jain College Saharanpur, 18-19 March 2017.
9.	Basic aspect of air pollution dispersion modeling and its relevance in Uttarakhand region. <i>National Conference on Future India: Science & Technology</i> , Haridwar Chapter of the Indian Science Congress Association, G.B. Pant University, Pant Nagar, 13-14 October 2018.
S. No.	Organized
1.	Two-day workshop on “The Physics and Mathematics of Universe” from 11-12 March 2013 at the Gurukula Kangri Vishwavidyalaya, Haridwar.

Enclosure “D”

WORKSHOPS/FDP ATTENDED:
1. International workshop on wavelets, frames and applications, Kirorimal College, DU, 15-21 December 2011.
2. National Workshop on Research Methodology for Researchers and young faculty members, Adult continuing Education, GKV, Haridwar, 22-28, February 2012.
3. Workshop on Scientific Computing : Theory and Practice, Department of Mathematics, FET, GKV, Haridwar, 8-13 October, 2012.
4. International workshop on wavelets, frames and applications, Kirorimal College, DU, 24-30 December 2014
5. Faculty Development Program on ‘Teaching and Soft Skills’, Faculty of Engineering and Technology, GKV, Haridwar during 3-4, October 2018.
6. National Workshop on Research Methodology, Faculty of Health Science, GKV, Haridwar, 14-24 December, 2018.

Enclosure “E”

ORIENTATION/ REFRESHER COURSE:
1. Academic Staff College, Kumaon Univeristy, Natital, 03-30 April 2012. (Orientation Programme)
2. Academic Staff College, Kumaon Univeristy, Nainital, 19 November 14 to 09 December 14. (Refresher Programme)
3. HRDC University of North Bengal, Darjeeling, 01 March 2019 to 21 March 2019.