



Name: Dr.Neel Kanth

Designation: Assistant Professor (Senior Grade)

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**Educational Information:**

Ph. D. (Mathematical Modeling and Simulation): from Indian Institute of Technology Roorkee.

M.Sc. (Mathematics) from Indian Institute of Technology Roorkee.

**Experience:** 12 years teaching and administrative experience

**Subjects of interest:** Discrete Mathematics, Numerical Analysis, Operations Research, Mathematical Modeling.

**Membership of Professional Bodies/ National/ International Committees:**

- 1) Life member of Punjab Academy of Sciences
- 2) Life member of Indian society of Industrial and Applied Mathematics

**JOB RESPONSIBILITIES OTHER THAN TEACHING:**

- 1) Deputy Chief Warden
- 2) Deputy Controller of Examinations
- 3) Department Ph.D coordinator
- 4) Member of National Academic Depository(NAD) cell
- 5) Member of IQAC research cell
- 6) Member of Anti Ragging Committee
- 7) Member of selection committee for selection of gender champions
- 8) Member of editorial board of university news letter Hilly Ramblings

## **List of International Publications**

- 1) Neel Kanth and A.K Ray[2008],Simulation of the models of paper mill calenders, International Journal of Hybrid Computational Intelligence (IJHCI),Jan 2008,pp 87-100.(ISBN No:0975-3680)
- 2) Neel Kanth, A.K ray and Riti[2014] ,Mathematical Model to Investigate the effect of design and process parameters on nip width of supercalender, International journal of modeling, simulation and scientific computing ISSN No: 1793-9623(print), 1793-9615(online), Vol 5(4),pp1450021-1-12.,World Scientific publishing, Singapore.
- 3) Neel Kanth, A.K Ray and Riti[2016] ,Effect of Design and Process parameters on Nip width of Soft Calendering, International Journal for Computational Methods in Engineering Science and Mechanics,Vol.17(4),pp247-252, ISSN No:1550-2287(print),1550-2295(online),Taylor & Francis.
- 4) Neel Kanth and B.K Pathak[2016], Artificial Neural Network for Modeling the Uniform Load on Nip Width of Machine, Journal of Information and Optimization Sciences, Vol37(6),pp.861-871, ISSN No: 0252-2667(print) , 2169-0103(online) ,Taylor and Francis.
- 5) Neelam Gupta , Neel Kanth[2018], “Analysis of Nip Mechanics Model for Rolling Calender used in Textile Industry,Journal of the Siberian society for Computational Mechanics,Vol12(2),pp.39-52
- 6) Neelam Gupta , Neel Kanth[2019], Study of Heat Flow in a Rod using Homotopy analysis method and homotopy perturbation Method,AIP conference proceedings,Vol.2061(1),pp.020013(1-8).
- 7) Neelam Gupta , Neel Kanth[2019], Study of Heat conduction inside Rolling Calender Nip for different roll temperature, Journal of physics(cs),Vol.1276(1),pp.012044(1-8).
- 8) Neelam Gupta,Neel kanth[2019], “Numerical solution of diffusion equation using method of lines” , Indian journal of Industrial and Applied Mathematics, Vol 10(2),pp 1-10.

## Book Chapter

Neelam Gupta,Neel Kanth[2021], “Application of Perturbation Theory in Heat Flow analysis”, A Collection of Papers on Chaos Theory and Its Application, Chapter9(12 pages), edited by Paul Bracken and Dimo Uzunov, Intechopen, ISBN:978-1-83962- 875-7

### **Paper Presented in conferences**

- 1) Neel Kanth and A.K Ray ,A Fresh Look at the Model of Nip Mechanics in Calenders for Paper Mill, published in proceedings of conference FACM 2005 held at TIET, Patiala.
- 2) Neel Kanth and A.K Ray ,Modelling and Simulation of Paper Mill Calenders published in proceedings of the conference ETME 2005 held at NIT Kurukshetra.
- 3) Neel Kanth and A.K Ray ,Viscoelastic Modeling of Paper in Calender Nip, published in proceedings of ETME 2006 held at Jamia Milia Islamia,New Delhi.
- 4) Neel Kanth and A.K Ray ,Relationship Between The Variables Effecting the quality of Paper in Calendering Process”,published in NSSA 2007 held at SLIET Longowal.
- 5) Neel Kanth and A.K Ray,Modelling and simulation of paper machine calendars,published in National conference NCDDM 2007 held at SLIET Longowal.
- 6) Neel kanth, A.K.Ray, Modelling and Simulation of Machine Calenders in Paper Mill,14th Punjab Science Congress,SLIET Longowal,7-9 Feb,2011.
- 7) Neel kanth,A.K.Ray, Effect of Equivalent Diameter of Hard Rolls on Nip width in Calendering Machine,ISSRMSE-11,GEU,Dehradun,13-14 May,2011.
- 8) Neelam Gupta,Neel kanth, Nip Mechanics Model for Rolling Calender used in Textile Industry,International conference on frontiers in Industrial and applied mathematics,26-27 April 2018, held at NIT Hamirpur

### **Workshops Attended**

- 1) One week workshop on“Computational Aspects of Mathematics” at Department of Mathematics,. SLIET Longowal, Jan, 2006.
- 2) One week FDP on “Modelling and Simulation of Manufacturing and Dynamical Systems(MSMDS- 2011), held at SLIET Longowal,3-7 Jan,2011.

- 3) Two weeks “ISL in Differential Equations and Computations” at Department of Mathematics, Organized by JUIT, Wagnaghat, Solan (H.P), 04-16 June, 2012.
- 4) One week faculty development program from 14-19 July,2014 held at JUIT Wagnaghat, Solan
- 5) One week short term course on “MATLAB, a tool in research”,24-28 December,2015,held at MNIT,Jaipur.
- 6) One week Workshop on “Statistical Techniques in Biological and Medical Sciences” STBMS-2016,June 13-18,2016,held at JUIT Wagnaghat,Solan .
- 7) One week short term course on Software tools and Scientific Research: Mathematica and Latex, 9-13 January, 2018 held at MNIT Jaipur

### **Workshop organized**

- 1) One day workshop on Business Process Simulation on 2<sup>nd</sup> September, 2014 with an objective to familiarize audience with basic concepts of modelling and simulation and to introduce design and control of business processes through simulation modeling with the help of downloaded version of WEBGPSS, a discrete event simulation language at JUIT Wagnaghat,Solan. This workshop was conducted by Prof D.S Broca, XLRI Jamshedpur.
- 2) One week workshop on Statistical tools in Biological and Medical Sciences from 4-9 June 2018,with an objective to familiarize audience with basic concepts of statistical tools used in biological and medical sciences at JUIT Wagnaghat, Solan.The resource persons for this workshop were prof.Suresh kumar and Prof.Amar nath gill from Panjab university, Chandigarh

### **Resource Person:**

- 1) Taken tutorial classes in advanced training in mathematics workshop in PDE and Mechanics, organized by JUIT Wagnaghat, Solan (H.P), 03-15 June, 2013.
- 2) Delivered two lectures on the topic Linear programming and its Applications at State Council of Educational Research and Training (SCERT) in In-service training program for Lecturers in Mathematics on 2<sup>nd</sup> August, 2017
- 3) Session chair in International Conference on Frontiers in Industrial and Applied Mathematics held at NIT Hamirpur from 26-27 April,2018