

# Dwijendra Narain Pandey

---

CONTACT INFORMATION      Room No. 005, MCA Block      *Voice:* 7579024682  
Department of Mathematics      *Voice:* 091-1332-285735  
Indian Institute of Technology Roorkee,      *E-mail:* dwijpfma@iitr.ac.in  
Roorkee-247667, Uttarakhand, India      *E-mail:* dwij.iitk@gmail.com

**Current Status**      Associate Professor

- Department of Mathematics  
Indian Institute of Technology Roorkee,  
Roorkee-247667, Uttarakhand, India

**Teaching Experience:**

- The LNMIIT Jaipur, Rajasthan, India (July 2010 to Dec 2010).
- BITS Pilani Goa campus, Goa, India (August 2009-July 2010).

RESEARCH INTERESTS

- Functional Differential Equation
- Control Theory
- Theory of Semigroups of Operators
- Fractional Differential equations
- Numerical methods for solving Differential equations

EDUCATION

- Doctor of Philosophy  
Department of Mathematics and Statistics, IIT Kanpur., Kanpur  
Thesis Title: Functional evolution equations of integral and fractional orders  
8.33 CPI, in the year 2010
- M. Sc. (Mathematics)  
Department of Mathematics and Statistics, IIT Kanpur., Kanpur  
8.2 CPI, in the year 2003
- B. Sc. (Mathematics, Physics and Chemistry)  
C.S.J.M.University , Kanpur  
1st Div. (75.6), in the year 2001
- Intermediate (class 10+2)  
U.P. Board, Allahabad  
1st Div.(71.6), in the year 1998
- High School (class 10)  
U.P. Board, Allahabad  
1st Div.(74.3), in the year 1996

## Research Work:

### 2007

1. Advanced type coupled matrix Riccati differential equation systems with Kronecker product by D. Bahuguna, Amit Ujlayan and D.N. Pandey.  
Applied Mathematics and Computation, Volume 194, Issue 1, 2007, Pages 46-53.
2. Second-order integrodifferential equation with nonautonomous operators, by D. Bahuguna, D.N. Pandey, and Amit Ujlayan .  
Differential Integral Equations 20 (2007), no. 6, 681-692.

## 2008

3. Nonlocal Semilinear Hyperbolic Integro-differential Equations in Banach Spaces by D. Bahuguna, D.N. Pandey, and Amit Ujlayan.  
International Journal of Applied Mathematics Statistics Vol. 13; No. S08; 2008; 21-30

## 2009

4. Non autonomous nonlinear integro-differential equations with infinite delay by D.Bahuguna, D.N. Pandey and Amit Ujlayan.  
Nonlinear Analysis: Theory, Methods and Applications, Volume 70, Issue 7, Pages 2642-2653.
5. A comparative study of numerical method for solving integro-differential equation by D. Bahuguna, Amit Ujlayan and D.N. Pandey,  
Computers and Mathematics with Applications, 57(9), 2009, 1485-1493.
6. ADM series solution to a nonlocal one-dimensional heat equation by D. Bahuguna, Amit Ujlayan and D.N. Pandey.  
International Mathematical Forum, 4, 2009, no. 12, 581 - 585
7. On a solution to fractional order integrodifferential equations with analytic semigroups” by D.Bahuguna, D.N. Pandey and Amit Ujlayan .  
Nonlinear Analysis: Theory, Methods and Applications, Volume 71, Issue 9, Pages 3690-3698
8. Method of Kronecker Product to Advanced type Riccati Differential Systems with Quadratic term by D.Bahuguna, Amit Ujlayan and D.N. Pandey.  
Computers and Mathematics with Applications, 58(8), October 2009, Pages 1615-1622

## 2010

9. Semilinear hyperbolic integrodifferential equations with nonlocal conditions by D.Bahuguna, D.N. Pandey and Amit Ujlayan .  
Nonlinear Dynamics and Systems Theory, 10 (1), (2010) 77- 92
10. On a nonlinear abstract neutral differential equations with deviated argument by D.N. Pandey, Amit Ujlayan and D.Bahuguna.  
Nonlinear Dynamics and systems Theory, 10 (2010), no. 3, 283-294.

## 2011

11. Existence of solutions to a non-autonomous abstract neutral differential equation with deviated argument by Haloi, Rajib; Pandey, Dwijendra N.; Bahuguna, D.  
J. Nonl. Evol. Equ. Appl. 2011 (5), pp. 75-90.

## 2012

12. Existence and uniqueness of solutions for quasi-linear differential equations with deviating arguments by Haloi, Rajib; Bahuguna, Dharendra; Pandey, Dwijendra N.  
Electron. J. Differential Equations 2012, No. 13, 10 pp.
13. Existence and uniqueness of a solution for a non-autonomous semilinear integro-differential equation with deviated argument by Haloi, Rajib; Pandey, Dwijendra N.; Bahuguna, D.  
Differ. Equ. Dyn. Syst. 20 (2012), no. 1, 1-16
14. Existence, uniqueness and asymptotic stability of solutions to non-autonomous semi-linear differential equations with deviated arguments by Haloi, Rajib; Pandey, Dwijendra N.; Bahuguna, D.  
Nonlinear Dynamics and systems Theory, 12 (2012), no. 2, 179-191.

## 2013

15. On the new concept of solutions and existence results for impulsive functional differential equations with iterated deviating arguments by Pradeep Kumar, Dwijendra N. Pandey, Dharendra Bahuguna.  
Electron. J. Differential Equations Vol. 2013, No. 241, pp. 1-15.
16. Approximation of a solution of a semilinear evolution equations with a deviated argument by Pradeep Kumar, Dwijendra N. Pandey, D. Bahuguna.  
J. Nonl. Evol. Equ. Appl. 2013 (9), pp. 111-128

## 2014

17. Approximation of a solution for a Sobolev type fractional order differential equation by Alka, Dwijendra N. Pandey  
(Nonlinear Dynamics and Systems Theory, 14 (1) (2014) 11-29
18. Sufficient conditions for the existence and uniqueness of solutions to impulsive fractional integro-differential equations with deviating arguments by Rajib Haloi, Pradeep Kumar, Dwijendra N. Pandey  
Journal of Fractional Calculus and Applications 5(1) (2014), no. 7, 73-84.
19. Impulsive boundary value problems for fractional differential equations with deviating arguments by Pradeep Kumar, D. N. Pandey and D. Bahuguna  
Journal of Fractional Calculus and Applications, Vol. 5(1) Jan. 2014, pp. 146-155.
20. On a new class of abstract impulsive functional differential equations of fractional order by P. Kumar, D. N. Pandey and D. Bahuguna  
The Journal of Nonlinear Science and Applications, 7 (2014), 102-114
21. Existence Results for an Impulsive Neutral Fractional Integrodifferential Equation with Infinite Delay, Alka Chadha and Dwijendra N. Pandey  
International Journal of Differential Equations Volume 2014 (2014), Article ID 780636, 10 pages
22. Existence of the Mild Solution for Impulsive Semilinear Differential Equation, Alka Chadha and Dwijendra N. Pandey  
International Journal of Partial Differential Equations Volume 2014 (2014), Article ID 640931, 8 pages
23. Existence, Uniqueness and Approximation of Solution for the Fractional Semilinear Integro-differential Equation by Alka Chadha and Dwijendra N. Pandey  
Int. J. Appl. Math. Stat.; Vol. 52; Issue No. 3;2014, 73-89.
24. Existence Result for an Impulsive Neutral Integro-differential Equation with Infinite Delay via Fractional operators, by Alka Chaddha and Dwijendra N Pandey,  
Malaya Journal of Matematik : Volume 2, Issue 3, 2014, Pages:203-214
25. Exact Controllability of an Impulsive Semilinear System with Deviated Argument in a Banach Space, by Sanjukta Das, Dwijendra N Pandey and Nagarajan Sukavanam  
Journal of Difference Equations Volume 2014, Article ID 461086, 6 pages.
26. Approximations of solutions to a retarded type fractional differential equation with a deviated argument by Pradeep Kumar, Dwijendra N. Pandey, D. Bahuguna.  
J. Integral Equations Applications Volume 26, Number 2 (2014), 215-242.
27. Existence of a solution for history valued neutral fractional differential equation with a nonlocal condition by Alka Chaddha and Dwijendra N Pandey,  
J. Nonl. Evol. Equ. Appl. 2014 (2), pp. 13-28.

28. Existence of Solution and Approximate Controllability for Neutral Differential Equation with State Dependent Delay by Sanjukta Das, D. N. Pandey and N. Sukavanam  
International Journal of Partial Differential Equations, Hindawi, Volume 2014, Article ID 787092, 12 pages.
29. Existence of Solution for a Second-Order Neutral Differential Equation with State Dependent Delay and Non-instantaneous Impulses by Sanjukta Das, D. N. Pandey and N. Sukavanam  
International Journal of Nonlinear Science, World Scientific, Vol.18(2014) No.2, pp.145-155.
30. Approximations of solutions to a fractional differential equation with a deviating argument, by P Kumar, DN Pandey, D Bahuguna  
Differential Equations and Dynamical Systems 22 (4), 333-352, 2014
31. Approximate controllability of a functional differential equation with deviated argument, by S Das, DN Pandey, N Sukavanam  
Nonlinear Dyn. Syst. Theory 14 (3), 265-277, 2014

## 2015

32. Existence of a mild solution for an impulsive neutral fractional integrodifferential equation with nonlocal conditions by Alka Chaddha and Dwijendra N Pandey,  
(Journal of Fractional Calculus and Applications Vol. 6(1), 2015, pp. 5-20.)
33. Approximations of solutions for a nonlinear differential equation with a deviating argument by D. N. Pandey, P. Kumar and D. Bahuguna  
(Applied Mathematics and Computation, 261, 2015, 242-251).
34. Existence of a Mild Solution for Impulsive Neutral Fractional Differential Equations with Nonlocal Conditions by Chadha, A. and Pandey, D.N.,  
Differential Equations with Applications, 7(2015), 151-168.
35. Existence and Approximation of Solution to Neutral Fractional Differential Equation with Nonlocal Conditions by Chadha, A. and Pandey, D.N. ,  
Computers & Mathematics with Applications, 69(9), 2015, 893-908.(Elsvier publication).
36. Existence of mild solutions for a fractional equation with state-dependent delay via resolvent operators, by A Chadha, DN Pandey  
Nonlinear Studies, 22(1), 2015 71-85.
37. Approximate controllability of an impulsive retarded fractional stochastic differential equation with deviated argument and infinite delay by Sanjukta Das, D. N. Pandey, N. Sukavanam  
Nonlinear Studies, 22(1), 2015 115-130.
38. Approximations of Solutions to Neutral Retarded Integro-differential Equations by Sanjukta Das, D. N. Pandey, and N. Sukavanam,  
Journal of Nonlinear Evolution Equations and Applications, 2015, 4, 47-65.
39. Approximate Controllability of an Impulsive Stochastic Delay Differential Equations by Sanjukta Das, D. N. Pandey, and N. Sukavanam,  
Journal of Advanced Research in Dynamical and Control Systems 09/2015; 7(3):78-95.
40. Approximations of Solutions of a Fractional Stochastic Differential Equations with Deviated Argument by Sanjukta Das, D. N. Pandey, and N. Sukavanam,  
Journal of Fractional Calculus and Applications, 6(2), 2015, pp. 160-170.
41. Approximations of Solutions for a Nonlocal Fractional Integro-Differential Equation with Deviated Argument by Chadha, A. and Pandey, D.N.,  
J. Appl. Math. and Informatics Vol. 33(2015), No. 5 - 6, pp. 699 - 721.
42. Periodic BVP for a class of nonlinear differential equation with a deviated argument and integrable impulses by A Chadha, DN Pandey  
Cubo (Temuco) 17 (1), 11-27, 2015

43. Approximate Controllability of Semilinear Stochastic Control System with Nonlocal Conditions by A Shukla, N Sukavanam, DN Pandey  
Nonlinear Dynamics and Systems Theory 15 (3), 321-333, 2015
44. Approximate controllability of semilinear system with state delay using sequence method by A Shukla, N Sukavanam, DN Pandey  
Journal of the Franklin Institute 352 (11), 5380-5392.
45. Mild solutions for non-autonomous impulsive semi-linear differential equations with iterated deviating arguments, Chadha, A. and Pandey, D.N.,  
Electron. J. Diff. Equ., Vol. 2015 (2015), No. 222, pp. 1-14.
46. Existence results for an impulsive neutral stochastic fractional integro-differential equation with infinite delay by A Chadha, DN Pandey,  
Nonlinear Analysis: Theory, Methods and Applications 128, 2015, 149-175.
47. Existence of solution of impulsive second order neutral integro-differential equations with state delay by S Das, DN Pandey, N Sukavanam  
Journal of Integral Equations and Applications 27 (4), 489-520, 2015
48. Approximate controllability of fractional semilinear control system of order  $\alpha \in (1, 2]$  in Hilbert spaces by A Shukla, N Sukavanam, DN Pandey  
Nonlinear Studies 22 (1), 131-138, 2015
49. Complete controllability of semi-linear stochastic system with delay by A Shukla, N Sukavanam, DN Pandey  
Rendiconti del Circolo Matematico di Palermo 64 (2), 209-220, 2015
50. Approximate controllability of second order semilinear stochastic system with nonlocal conditions by A Shukla, N Sukavanam, DN Pandey  
Annali Dell'Universita' Di Ferrara 61 (2), 355-366, 2015

## 2016

51. Mild solution for impulsive neutral fractional partial differential inclusions with nonlocal conditions by Alka Chadha, DN Pandey  
Collectanea Mathematica 67 (1), 85-111, 2016
52. Monotone iterative technique for neutral fractional differential equation with infinite delay by R Chaudhary, DN Pandey  
Mathematical Methods in the Applied Sciences, 39(15), 4642-4653, 2016.
53. Approximation of Solutions to Stochastic Neutral Fractional Integro-Differential Equation with Nonlocal Conditions by R Chaudhary, DN Pandey  
Int. J. Appl. Comput. Math 1-21, 2016.
54. Complete Controllability of Semilinear Stochastic Systems with delay in both state and control, by Anurag Shukla, N. Sukavanam and D.N.Pandey,  
Mathematical Reports 18, 247-259, 2016.
55. Existence of Solutions to a New Class of Abstract Non-Instantaneous Impulsive Fractional Integro-Differential Equations by P Kumar, R Haloi, D Bahuguna, DN Pandey  
Nonlinear Dynamics and Systems Theory, 16 (1), 73-85, 2016.
56. Approximation of solutions to a delay equation with a random forcing term and non local conditions by R Chaudhary, DN Pandey  
Journal of Integral Equations and Applications 28 (4), 481-507, 2016.
57. Existence Results for Sobolev Type Fractional Differential Equation with Nonlocal Integral Boundary Conditions by R Chaudhary, DN Pandey  
Nonlinear Dynamics and Systems Theory 16 (3), 235-245, 2016.

58. Approximation of solutions to stochastic fractional integro-differential equation with deviated argument by R Chaudhary, DN Pandey  
Differential Equations and Dynamical Systems, <https://doi.org/10.1007/s12591-016-0329-3>, 2016
59. Approximate controllability of a second-order neutral stochastic differential equation with state-dependent delay by S Das, DN Pandey, N Sukavanam  
Nonlinear Analysis-Modelling And Control 21 (6) 2016 , 751-769.
60. Approximate controllability of a second-order neutral differential equation with state dependent delay by Sanjukta Das, Dwijendra N Pandey and Nagarajan Sukavanam  
Differential Equations and Dynamical Systems 24 (2), 201-214, 2016.
61. Existence of a mild solution for an impulsive nonlocal non-autonomous neutral functional differential equation by A Chadha, DN Pandey  
Annali Dell'Universita'Di Ferrara 62 (1)2016, 1-21.
62. Existence of the Mild Solution for Impulsive Neutral Stochastic Fractional Integro-Differential Inclusions with Nonlocal Conditions by Chadha, A. and Pandey, D.N.  
Mediterranean Journal of Mathematics 13 (3)2016, 1005-1031.
63. Approximations of solutions for an impulsive fractional differential equation with a deviated argument by A Chaddha, DN Pandey  
International Journal of Applied and Computational Mathematics 2 (2)2016, 269-289.
64. Existence of a mild solution for Sobolev type stochastic fractional differential equations with nonlocal conditions by A. Chadha, D.N. Pandey, D. Bahuguna  
J. Nonlinear Funct. Anal., Article 23, 2016
65. Existence results for nonlinear fractional differential equation with nonlocal integralboundaryconditions, by R. Chaudhary and D. N. Pandey,  
MalayaJ. Mat.,4(3), 392-403, 2016.
66. Approximate Controllability of Semilinear Fractional Control Systems of Order  $\alpha \in (1, 2]$  with Infinite Delay by Anurag Shukla, N. Sukavanam and D.N.Pandey,  
Mediterranean journal of mathematics 13 (5), 2539-2550, 2016.
67. Approximate controllability of second-order semilinear control system by A Shukla, N Sukavanam, DN Pandey, U Arora  
Circuits, Systems, and Signal Processing 35 (9), 3339-3354, 2016
68. Existence of solution and approximate controllability of a second-order neutral stochastic differential equation with state dependent delay by DAS Sanjukta, D Pandey, N Sukavanam  
Acta Mathematica Scientia 36 (5), 1509-1523, 2016
69. Faedo-Galerkin Approximation of Solution for a Nonlocal Neutral Fractional Differential Equation with Deviating Argument by A Chadha, DN Pandey  
Mediterranean Journal of Mathematics 13 (5), 3041-3067, 2016
70. Controllability of semilinear stochastic control system with finite delay by A Shukla, N Sukavanam, DN Pandey  
IMA Journal of Mathematical Control and Information 35 (2), 427-449, 2016

## 2017

71. Existence results for multi-term time-fractional impulsive differential equations with fractional order boundary conditions by V Singh, DN Pandey  
Malaya Journal of Matematik 5 (4), 619-624, 2017
72. Approximate Controllability of Fractional Semilinear Stochastic System of Order  $\alpha \in (1, 2]$  by A Shukla, N Sukavanam, DN Pandey  
Journal of Dynamical and Control Systems 23 (4), 679-691, 2017

73. Approximation of solutions to stochastic neutral fractional integro-differential equation with nonlocal conditions by R Chaudhary, DN Pandey  
International Journal of Applied and Computational Mathematics 3 (2), 1203-1223, 2017
74. Weighted pseudo Almost periodic solutions for fractional order stochastic impulsive differential equations by V Singh, DN Pandey  
Cubo (Temuco) 19 (1), 89-110, 2017
75. Existence of the Mild Solution for Neutral Fractional Integro-differential Equations with Non-local Conditions by A Chadha, DN Pandey  
International Journal of Nonlinear Science 24 (1), 9-23, 2017
76. Approximations of solutions of a neutral fractional integro-differential equation by A Chadha, DN Pandey  
Differential Equations and Dynamical Systems 25 (1), 117-133, 2017
77. Approximate controllability of a fractional neutral differential system with deviated argument in a Banach space by S Das, DN Pandey, N Sukavanam  
Differential Equations and Dynamical Systems 25 (1), 65-82, 2017

## 2018

78. Approximate controllability of semilinear fractional stochastic control system by A Shukla, N Sukavanam, DN Pandey  
Asian-European Journal of Mathematics 11 (06), 1850088, 2018
79. Existence of mild solutions for fractional non-instantaneous impulsive integro-differential equations with nonlocal conditions by A Meraj, DN Pandey  
Arab Journal of Mathematical Sciences, <https://doi.org/10.1016/j.ajmsc.2018.11.002>, 2018
80. Controllability of multi-term time-fractional differential systems by V Singh, DN Pandey  
Journal of Control and Decision, 1-17, 2018
81. Approximate controllability of a neutral stochastic fractional integro-differential inclusion with nonlocal conditions by A Chadha, DN Pandey  
Journal of Theoretical Probability 31 (2), 705-740, 2018
82. Existence and approximation of solution to stochastic fractional integro-differential equation with impulsive effects by R Chaudhary, DN Pandey  
Collectanea Mathematica 69 (2), 181-204, 2018
83. A Study of Sobolev Type Fractional Impulsive Differential Systems with Fractional Nonlocal Conditions by V Singh, DN Pandey  
International Journal of Applied and Computational Mathematics 4 (1), 12, 2018
84. Monotone iterative technique for impulsive Riemann–Liouville fractional differential equations by R Chaudhary, DN Pandey  
Filomat 32 (9), 3381-3395, 2018
85. Existence of a mild solution for a neutral stochastic fractional integro-differential inclusion with a nonlocal condition by A Chadha, D Bahuguna, DN Pandey  
Journal of Integral Equations and Applications 30 (2), 257-291, 2018

## 2019

86. PC-Mild Solutions to Sobolev-Type Fractional Differential Equations with Non-instantaneous Impulses by V Singh, DN Pandey  
Mediterranean Journal of Mathematics 16 (4), 86, 2019
87. Approximate controllability of nonlocal non-autonomous Sobolev type evolution equations by A Meraj, DN Pandey  
An International Journal of Optimization and Control: Theories and Application, 86-94, 2019

88. Approximate Controllability Of Fractional Integro-Differential Evolution Equations With Non-local And Non-Instantaneous Impulsive Conditions By A Meraj, DN Pandey  
Journal of Fractional Calculus and Applications 10 (2), 3-17, 2019
89. Approximation of solutions to fractional stochastic integro-differential equations of order  $\alpha$  is an element of  $(1, 2]$  by R Chaudhary, M Muslim, DN Pandey  
Stochastics-An International Journal Of Probability And Stochastic Processes, 2019
90. Approximation of solutions to fractional stochastic integro-differential equations of order  $\alpha \in (1, 2]$  by R Chaudhary, M Muslim, DN Pandey  
Stochastics, 1-21, 2019
91. Existence results for a class of impulsive neutral fractional stochastic integro-differential systems with state dependent delay by R Chaudhary, DN Pandey  
Stochastic Analysis and Applications, 1-28, 2019
92. Controllability of second-order Sobolev-type impulsive delay differential systems by V Singh, DN Pandey  
Mathematical Methods in the Applied Sciences 42 (5), 1377-1388, 2019
93. Controllability of fractional impulsive quasilinear differential systems with state dependent delay by V Singh, DN Pandey  
International Journal of Dynamics and Control 7 (1), 313-325, 2019
94. Faedo-Galerkin approximate solutions of a neutral stochastic fractional differential equation with finite delay by A Chadha, DN Pandey, D Bahuguna  
Journal of Computational and Applied Mathematics 347, 238-256, 2019
95. Multi-term Time-Fractional Stochastic Differential Equations with Non-Lipschitz Coefficients by V Singh, DN Pandey  
Differential Equations and Dynamical Systems, 1-13, 2019
96. Controllability Results for Non Densely Defined Impulsive Fractional Differential Equations in Abstract Space by A Kumar, DN Pandey  
Differential Equations and Dynamical Systems, 1-11, 2019
97. Monotone iterative technique for non-autonomous semilinear differential equations with non-local condition by A Meraj, DN Pandey  
Demonstratio Mathematica 52 (1), 29-39, 2019

**Papers in conference**

1. Controllability of semilinear stochastic system with multiple delays in control by A Shukla, N Sukavanam, DN Pandey  
IFAC Proceedings Volumes 47 (1), 306-312,  
3rd International Conference on Advances in Control and Optimization of Dynamical Systems.
2. Chadha, A. and Pandey, D.N.(2014), Existence of the Solution to Initial Value Fractional Differential Equation with Integral Conditions,  
  
International Conference on Mathematical Sciences (ICMS 2014), Chennai, Tamilnadu, India.
3. Approximation of Solutions of a Stochastic Differential Equation by S Das, DN Pandey, N Sukavanam  
Mathematical Analysis and its Applications, 51-62.
4. Existence of a mild solution for impulsive neutral fractional differential equations with nonlocal conditions by A Chadha, DN Pandey  
Mathematical Analysis and its Applications, 319-333
5. Approximate Controllability of Semilinear Stochastic System with State Delay by A Shukla, N Sukavanam, DN Pandey  
Mathematical Analysis and its Applications, 347-357

6. Approximations of Solutions of a Class of Neutral Differential Equations with a Deviated Argument by P Kumar, DN Pandey, D Bahuguna  
Mathematical Analysis and its Applications, 657-676, 2015
7. Approximation of Solutions to Fractional Integro-Differential Equations with Finite Delay by R Chaudhary, DN Pandey  
Mathematical Analysis and its Applications, 677-700
8. Anurag Shukla, N. Sukavanam and D.N.Pandey, Approximate Controllability of Semilinear Fractional Control Systems of Order  $\alpha \in (1, 2]$ , Proceedings of the Conference on Control and its Applications, 175-180, SIAM Conference on Control and Its Applications CT 2015.
9. Complete controllability of impulsive semilinear stochastic retarded system by A Shukla, N Sukavanam, DN Pandey  
7-12, 2015 International Conference on Signal Processing, Computing and Control (ISPPCC)-IEEE

**PhD: Completed**

1. Alka:  
Thesis title: A Study of Some Functional Differential Equations of Fractional Order.
2. Sanjukta:  
Thesis title: A Study on Existence of Solution and Controllability of Delay Differential Systems.  
Co-supervisor: Prof N Sukavanam, Department of Mathematics, IIT Roorkee.
3. Anurag:  
Thesis title: Approximate Controllability of Semilinear Delay Control System.  
Co-supervisor: Prof N Sukavanam, Department of Mathematics, IIT Roorkee.
4. Renu Rana:  
Thesis title: Existence and Approximation of Solutions to some Fractional Evolution Equations.
5. Vikram Singh:  
Thesis title: Existence And Controllability Results To Some Functional Differential Systems.
6. Arsi Meraj:  
Thesis title: Existence of Solutions And Approximate Controllability Of Some Evolution Equations.

**PhD: Ongoing**

7. Hitesh Singh:
8. Ashish Kumar: Ongoing
9. Sarita: Numerical Solution Of Some Fractional Differential Equation With Delay, ongoing.
10. Jitendra Kumar Singh:
11. Mahendra Kumar:

**Dissertations**

**MSc**

1. A Project titled "On Solution of Non-Autonomous Evolution Equation of Parabolic Type Using Semi-Group Theory" By (Kumar Rajeev Ranjan, Roll No. 10614007)[Autumn 11-12].
2. A project titled "On Solution of Some Fractional Differential Equations Using Adomian Decomposition Method" by (Sudhir Kumar, Roll No. 10614014)[Autumn 11-12].
3. Solution of Fractional Differential Equation Using HAM And HPM (Gaurav Goyal, Roll No. 10613003)[Spring 11-12].

4. Existence and Uniqueness of Solution of a Damped Integro-Differential Equation with Integral Boundary Condition(Kumar Rajeev Ranjan, Roll No. 10614007 ) [Spring 11-12].
5. The Comparison of Some Numerical Methods for Solving Fractional Differential Equation (Sudhir Kumar, Roll No. 10614014) [Spring 11-12].
6. On Numerical Solutions of Some Fractional Differential Equations (Sanjay Kumar Roll No.-11613008) [Spring 12-13].
7. Study of Some Impulsive Fractional Differential Equations (Rakhi Bihari, Roll No. 11614006) [Spring 12-13].
8. A study of Adomian Decomposition Method and its Application (Ankita Shukla, Roll No. 12613004), [Spring 13-14].
9. Semigroup Methods for Evolution Problems (Rahul Rai, Roll No. 13613005, [Spring 14-15].
10. Two Coupled Oscillator Models: The Millennium Bridge (Rahul Saini, Roll No. 13613006), [Spring 14-15].

## MCA

1. Backend Monitoring Of Matrimonial Search Engine Using Open source in MVC Architecture (Rahul Upadhyay Roll no. 09811028) [Spring 11-12]
2. Silent Auto-Upgrade of MaaS360 MDM Software Without Customer Intervention (Chaturbhuj Singh, Roll No. 10811008) [Spring-12-13]
3. MaaS Tools and Product Enhancements (Megha, Roll No. 10811021) [Spring-12-13]
4. Implementation and Performance evaluation of supplementary services over IMS network by Himanshu Gupta, [Spring 13-14].

## Paper presented in Seminar/Conference:

1. “ On numerical solution for Sobolev-type integro-differential equations with nonlocal boundary conditions” presented in WCNA-08, Orlando, Florida, USA, during 2nd July to 9th July, 2008.
2. “On a study of non-autonomous integro-differential equation” presented in Open House-08, at Department of Mathematics and Statistics, IIT Kanpur during 4th - 6th April, 2008.
3. “Approximations of solutions to a retarded type fractional differential equation with a deviated argument” presented in National Conference on Evolution Equations: Theory, Methods and Applications -NCEETMA-2012 in IIT Kanpur during 7th-8th December, 2012

## Book

Nonlocal Functional Evolution Equations: Integral and fractional orders, ISBN No. 978-3-8383-4741-7, LAP LAMBERT Academic Publishing AG and Co. KG, Germany.

## Conference / Workshop

1. “National Symposium on Scientific Computing with Application to partial differential equation ” (19th - 21th November, 2005) Indian Institute of Technology, Kanpur - 208016, India. (Sponsored by DST, Govt of India)
2. “Open House” - 08 (4th - 6th April, 2008), Department of Mathematics and Statistics Indian Institute of Technology, Kanpur Kanpur - 208016, India.
3. Symposium on “Nonlinear Evolution Equations” (18th - 19th April, 2008), Department of mathematics, Indian Institute of Science, Bangalore.
4. WCNA-2008, International Federation of Nonlinear Analysts (IFNA), (2nd July - 9th July, 2008) Hyatt Grand Cypress Resort in Orlando, Florida during July 2 through July 9, 2008, USA.
5. “National Meet of Research Scholars in Mathematical Sciences” (NMRSMS-2008) Indian Institute of Technology, Kanpur - 208016, India. (Sponsored by DST, Govt of India).

6. “Homi Bhabha Birth Centenary Symposium on Hyperbolic Partial Differential Equation and related topics Dates”: 20 -24th July 2009 ,Venue : TIFR-CAM, Yelahanka New Town, Bangalore.
7. “Solving Nonlinear Polynomial equations” (7th - 18th June, 2010), Department of mathematics, Indian Institute of Science, Bangalore.
8. National Conference on Evolution Equations: Theory, Methods and Applications -NCEETMA-2012 in IIT Kanpur during 7th-8th December, 2012.

**Projets**

Co-PI for the project “Dynamic modeling for transmission and control of dengue epidemic” with PI Prof Sunita Gakkhar.

**Lecturs**

1. QIP program on Mathematical Computations Using Software Tools, I.I.T. Roorkee during 1.07.2013 to 5.07.2013.
2. QIP program on Orthogonal Polynomials and Special Functions (using Mathematical Software)I.I.T. Roorkee during July 08, 2013 to July 12, 2013.
3. Dynamical Systems and Control, QIP Short Term Course during 29th June to 03 rd July 2015 at IIT Roorkee.

**Courses Done at IIT Kanpur (During PhD):**

- Approximation Theory
- Applied Matrix Theory
- Complex Analytic Dynamics and Fractals
- Analysis
- Numerical solution of Partial Differential Equations
- Fourier Analysis

**Teaching/Tutorials:**

**IITK**

- MTH 102(Complex Analysis and Linear Algebra)  
[4 times in IIT Kanpur as a tutor]
- MTH 203(Elementary Ordinary and Partial Differential Equation)  
[4 times in IIT Kanpur as a tutor]

**BITS-Pilani-GOA**

- Math 2 (Complex Analysis and Linear Algebra)
- Math 3 (Elementary Ordinary and Partial Differential Equation)

**LNMIIT, Jaipur**

Linear Algebra [Autumn 10-11]

## IITR

- MA 001(Mathematics-I)[autumn 13-14]
- MA 101(Mathematics-I)[autumn 11-12,12-13]
- MA 102 (Mathematics-II)[spring 10-11,11-12,12-13]
- MA 506 (Theory of PDE)[spring 12-13, 13-14]
- MA 553 (ODE and PDE)[autumn 12-13]
- MA 501 (Theory of ODE)[Autumn 11-12,12-13,13-14, 14-15]
- MA 613 (Applied Functional Analysis)[Autumn 14-15]
- MA 903 (Theory of ODE and PDE)to PhD students [spring 10-11, autumn 11-12, spring 11-12, spring 13-14, Spring 14-15]
- MAN505/515 Topology
- MAN 615 Measure Theory
- MAN 911 Sobolev space and its applications
- MAN 006 Prob and Stats

### Administrative responsibilities

- Deputy superintendent examination: 2011 to 2014
- Superintendent examination: 2014- 2017
- Dypty OC Time table
- Program Officer, NSS
- Convener, Department Faculty Search Committee (2013-2015)
- Organizing Vice-Chairman, JEE(Advanced) 2019

### Awards:

1. Awarded MCM scholarship by IIT Kanpur in 2003 during M.Sc.
2. Qualified CSIR-JRF examination conducted jointly by Council of Scientific and Industrial Research and UGC, India in December 2005.
3. Awarded CSIR-SRF in December 2007.
4. Qualified Graduate Aptitude Test in Engineering in 2005 (AIR 35).
5. Awarded NBHM Post-Doctoral fellowship in 2009.
6. Awarded University Sains Malaysia(USM) Post-Doctoral fellowship in Sept 2010.

### Computer Skills:

- Language C, Fortran
- Operating Systems WINDOWS, LINUX (elementary)
- Packages Mathematica, MATLAB

### Extra Curricular Activities:

## **Counselling Service, IIT Kanpur**

(This is a student society at IIT Kanpur which helps the needy students to cope up with the emotional/academic/financial/psychological problems.)

- Coordinator, Post Graduate Wing (2005-2006)
- Student Guide, Post Graduate Wing (2002-2003)
- Student Guide, Post Graduate Wing (2004-2005)

## **STAMATICS, Department of Mathematics and Statistics, IIT Kanpur**

(This is a student society at Department of Mathematics and Statistics, IIT Kanpur which is responsible for weekly seminars by students and faculties and all needed to explore and sharpen the over-all talents of students.)

- President, (2002-2003)
- President, (2006-2007)

## **MSWC, SBRA, IIT Kanpur**

(This is a student society at IIT Kanpur which is responsible for welfare of the fellow residents.)

- Secretary (2006-2007)
- Convener (2007-2008)

## **Vivekanand Samiti**

(This is a student club at IIT Kanpur which try to raise its effort for welfare of the society.)

- member, (2002-2003)

**Personal Details:** Name: Dwijendra Narain Pandey

Date of Birth: July 31, 1982

Sex : Male

Marital Status : Married

Citizenship : Indian

Address for Correspondence :

134/1

Vikas Nagar,

IIT Roorkee,

Roorkee-247667 , Uttarakhand, India

Permanent Address :

Dwijendra Narain Pandey

S/O Mr. D.P. Pandey,

111/357, Ashok Nagar,  
(Kanpur), PIN- 208012,  
Uttar Pradesh,  
INDIA

E-mail Id : dwijpfma@iitr.ac.in, dwij.iitk@gmail.com

Phone : +91-7579024682

**References:**

- Prof. Dharendra Bahuguna  
Department of Mathematics and Statistics  
Indian Institute of Technology, Kanpur  
Kanpur - 208016, India.  
Phone - +91-512-2597053  
Fax - +91-512-2597500  
E-mail: dhiren@iitk.ac.in
- Prof Prawal Sinha  
Department of Mathematics and Statistics  
Indian Institute of Technology, Kanpur  
Kanpur - 208016, India.  
Office : FB516  
Phone : 91-512-2597213 (o), 2598457(R)  
Fax : 91-512-2597500  
E-mail : prawal@iitk.ac.in
- Prof N Sukavanam  
Department of Mathematics  
Indian Institute of Technology, Roorkee  
Roorkee - 247667, India.  
Phone : 91-01332-28 5341 (o)  
E-mail : nsukvfma@iitr.ac.in

**Declaration:**

I here by declare that all the information knowledge and belief and I promise to abide all the norms laid down by your esteemed organization. provided here is correct to the best of my knowledge.

Date

Name and Signature