

CURRICULUM –VITAE

Prof. P. D. Srivastava
Professor & (Former) Head

DEPARTMENT OF MATHEMATICS
INDIAN INSITUTE Of TECHNOLOGY KHARAGPUR
KHARAGPUR, INDIA - 721302
Ph .No. 03222-277846 ; Mobile: 9434719549
FAX :- 03222-282276 / 255303
E-mail : pds@maths.iitkgp.ernet.in ; pds.jhs@gmail.com

Present Position :- Professor in Mathematics (HAG Scale)

D.O.B. :- July 15,1953

Educational – Attainments :- M.Sc. (Mathematics); Ph.D. (I.I.T.Kanpur)-(Through out 1st Class)

S.N.	Name of the Examination	Year of passing	Division	Board / University
1.	High School	1969	Ist	U.P.Board, Allahabad
2.	Intermediate	1971	Ist	U.P.Board, Allahabad
3.	B.Sc.	1973	Ist	Kanpur University, Kanpur
4.	M.Sc. (Maths)	1975	Ist	Kanpur University, Kanpur
5.	Ph.D. (Mathematics)	1980	C.P.I.-9.56	I.I.T.Kanpur

Specializations :- Functional Analysis , Fuzzy Sequence Spaces, Cryptography

Teaching Experience :- 38 Years ; Research Experience :- 40 Years

Research Guidance :- 13 (awarded); On-going :- 03

Dissertation Guidance :- 50 [B.Sc.- 7, M.Sc.- 42, M.Tech. 01] ; Post Doctoral Guidance :- 01

Number of Publications :- 70 (55 in International journals , 15 in National Journals)

Conference / LNCS papers :- 08

Teaching Interest (Subjects taught/ teaching) :-

PG Level :- *Functional & Complex analysis; Measure theory; Numerical analysis, Topology, Sequence Space*

UG Level :- *Calculus; Real analysis, Engineering Mathematics, Discrete Mathematics*
(Teaching regularly big classes such as Maths I & Math II for B.Tech I students)
sponsored projects:- 03

LAST FIVE YEARS CONTRIBUTIONS since 2012 onward (Publications / Ph.D. Guidance / M.Sc. Project Guidance)

- (a) Number of Research Publications in International / National Journals :- 32
- (b) Number of conference Publications :- 05
- (c) Number of Ph.D. students Supervised :- 04
- (d) Number of On going Ph.D. Students :- 03
- (d) Number of M.Sc. Projects Supervised :-25

Administrative Contributions: -

- **Head, department of Mathematics** – since October 1, 2010 till 30th September, 2013
- **Chairman, Rajbhasha Vibhag, I.I.T.Kharagpur**-since October 1, 2007 till 30thSeptember'10
- **Professor Incharge examination, I.I.T.Kharagpur**-since October 1, 2007 till September'10
- **Chairman, H.M.C** .- During January 1, 2002 to July 31, 2005
- **Co-ordinating Warden (Allotment) & Warden, Gokhale Hall Of Residence** -During July 1, 1998 to December 31, 2001.
- **Warden** in J.C.B. Hall for Four years and **Assistant Warden** in different Hall for 4 Yrs
- **Member** of Departmental PG / UG/ Administrative committee
- **Course Co-ordinator** for Maths I & Maths II(UG courses)

Academic Contributions :-

1. Member of National and International advisory Committee

- 10th international ISSAC 2015 Macau (China) during August 3 – 8 , 2015
- General co- Chair in International conference on Mathematics & Computing 2013 ; 2015 & 2017 at HITS, Haldia (India)
- General co- Chair in International conference on Mathematics & Computing 2018 at IIT BHU (India)
- International conferences NCRTMSA in 2012 at MITS Lakshmanagarh
- International conference on Recent Advances in Pure & Applied Mathematics (ICRAPAM)during November 6 – 9 , 2014 at Antalya , Turkey
- 3rd annual conference of ISMAMS on Emerging areas In Mathematical Sciences, February 2005 at Gorakhpur (India)
- National seminar on Recent Aspects in Mathematics and their Applications, Orissa Mathematical Society, Bhubaneswar ,

2. Invited Talks / Key Note Addresses

- *Invited talk on 'Some results on operator ideals and geometric properties of generalized Musielak-Orlicz sequence space' in 10th international ISSAC 2015 Macau (China) during during August 3 – 8 , 2015.*
- *Invited Talk on ' the fine Spectrum of nth band Triangular Matrix' - In International conference on Recent Advances in Pure & Applied Mathematics , during 6-9 November , 2014 at Antalya ,Turkey*
- *Invited Talk 'On some generalized vector valued paranormed spaces using modulus and Olicz functions' in the conference on Summability & Applications during May 12-13, 2011 at Istanbul Commerce University , Istanbul (Turkey)*
- *Invited Talk on,' Spectrum & fine spectrum of generalized 2nd order difference operator delta - uvw on sequence space' at ISCA 2012, Bhubaneshwar*
- *Key Note address on ' Statistical And Lacunary convergence – its Latest Development from the the sequence point of View " at National conference on Recent Trends in Mathematical Sciences & their Applications during 5-6, November, 2012 at MITS, Lakshmangarh (Rajasthan)*
- *Prof. Bama Charan Das Memorial Lecture on 'Operator Ideals using the concept of s-numbers' In International conference on Industrial Mathematics & Scientific Computing during 4-5, January , 2014 at KIIT university, Bhubaneswar (India)*
- *Key Note Address 'on the Sequence Spaces- An overview of its Developments' at National Seminar on Recent Aspects in Mathematics & their Applications during 25-26, Feb. 2014 at Vidyasagar University, Midnapore (India)*

3. Life member –

- Indian Mathematical Society, Allahabad & Indian Academy of Social Science
- Indian academy of Science ,Allahabad

4. Reviewer :-

- Mathematical Review, D.S.T. and UGC & CSIR Project proposals

5. Referee :-

- Indian Journal of Pure & Appl. Maths & Journal of Orissa Mathematical Society (India)

- Demonstratio Mathematica (Warsa) & Communications in Mathematical Analysis
- Soochow J. Mathematics and Tamkang J. Mathematics (China)
- Thai J. Mathematics (Thailand) and many more

6. External Examiners (Ph.D. thesis) :-

- Sambalpur University, Utkal University & Berhampur University (Orissa)
- Jadavpur University, Gauhati University & Tripura university
- Osmania University , Rothak University & Aligarh University

7. Member of expert committee of :-

- National Board of accreditation (A.I.C.T.E.) & UPSC, New Delhi

8. Member of Faculty Selection committee of :-

- I.I.T. Bhubaneshwar , I.I.T. Ropar , I.I.T. Delhi , I.I.T. Roorkee
- Bihar Public Service commission , Patna , UPSC , New Delhi
- NIT Patna , NIT Silchar
- Burla Engineering College , Sambalpur , BIT, Mesra
- Utkal university (Bhubaneshwar), Sambalpur University (Sambalpur)
- Tripura University (Agartala) , Guwahti university
- RGPV , Bhopal , HIT, Haldia , KITS , Bhubaneshwar

Few Publications (in Good journals):-

1. P.D.Srivastava :- On some study of the fine spectra of n-th band triangular
(& Riddhick Birbonshi) matrices - Complex Analysis and Operator Theory , vol. 11
(2017) , pp.739-753
2. P.D.Srivastava :- Some mth-order Difference Sequence Spaces of generalized
(With Atanu Manna Means and Compact Operators- *Annals of Functional*
& Amit Maji) *Analysis* Vol. 6, No.1 (2015), pp 170-192
3. P.D.Srivastava :- On $B^{(m)}$ -Difference Sequence Spaces using Generalized Means and
(& Amit Majhi) Compact Operators –*Analysis (Berlin)* ,34(3) , (2014) , 257-281
4. P.D.Srivastava :- On some geometric properties of Generalized Musielak -
(& Amit Maji) Orlicz sequence space using infinite matrix and corresponding
Operator ideals- *Banach J. Math. Anal.* 9 (2015) , no. 4, pp 14-33
5. P.D. Srivastava :- On vector valued sequence space
(& Ghosh, D.) $h_N(E_k), \ell_M(B(E_k, Y)) \& \ell_M(E'_k)$ - *Journal of Mathematical*
Analysis & Application , 327 (2007) , pp 1029-1040
6. P.D. Srivastava :- On some vector valued sequence space defined using
(& Ghosh, D.) modulus function - *Indian J. of Pure & Applied Mathematics*,
30(8), (1999), pp 819-826
7. P. D. Srivastava :- Some Geometric Properties of Difference Sequence Spaces
(& Amit Maji) of Order m Derived by Generalized Means and Compact
Operators- *Mathematical Inequalities & Applications* , vol. 18 ,
no. 3 (2015) , pp. 1055-1078
8. P.D.Srivastava :- Some geometric properties of Musielak–Orlicz sequence
(& Atanu Manna) spaces generated by De La Vallee–Poussin mean'- *Mathematical*
Inequalities & Applications – vol. 18 (2) ,2015 pp 687-705
9. P.D.Srivastava :- Bounded Variation of Sequences of Fuzzy numbers by using
(& Sarita Ojha) Generalized weighted Mean - *Journal of Intelligent & Fuzzy*
Systems 29 (1) (2015) , pp 235–240
10. P.D.Srivastava :- Some characterizations on weighted β - γ -
(& Sarita Ojha) statistical convergence of fuzzy functions of order θ - *Journal of*
Applied Mathematics and Computing 53(1-2) (2017) pp. 571–582
11. P.D.Srivastava :- On the space of certain class of analytic functions ,
- *Indian Journal of Pure & Appl. Maths.* 10 (1) (1979) , pp. 84-93

12. P.D. Srivastava :- Certain subspaces of Fre'chet space -Indian J. of Pure & Applied Mathematics 12 (8), (1981) , pp. 971-976
(Nanda , S. & Nayak)
13. P.D. Srivastava :- Multiplication on the generalized analytic sequence & Matrix Transformation - Indian J. of Pure & Applied Mathematics 23 (3), (1992) , pp. 223- 234
(& Ratha, A.)
14. P.D. Srivastava :- A generalized product on some sequences & matrix - Indian J. of Pure & Applied Mathematics, 28(7), (1997) , pp. 943-949
(& Gnanaseelan,C.)
15. P. D. Srivastava :- Fine Spectrum of Generalized Difference Operator Δ_{uv} on Sequence Space ℓ_1 - Applied Mathematics & Computation, vol. 218, (2012) , pp 6407-641
(& Sudhanshu Kumar)
16. P.D.Srivastava :- Weighted beta, gamma summability of fuzzy functions of order theta - FILOMAT (2016)-accepted
(& Sarita Ojha)
17. P.D. Srivastava :- On a Banach Algebra of analytic functions,
(Juneja, O.P.) - Glasnik Matematicki, Vol. 20 (40), (1985) , pp.51-59
18. P.D. Srivastava :- On some vector valued sequence space using Orlicz functions - Glasnik Matematicki Series III, 34(54), (1999) ,no.2,
(& Ghosh, D.) pp 253-61
19. P.D. Srivastava :- Proper basis in a complete linear metric space – Soochow Journal of Mathematics, Vol.23, No.2, (1997), pp 165- 172
20. P.D. Srivastava :- Simultaneous Automorphism in a complete linear metric space - Soochow Journal of Mathematics, Vol.24, No.1, (1998) , pp 51-58.

COMPLETE LIST OF PUBLICATIONS - Total 69 (Year wise)

2017

1. P.D.Srivastava :- On some study of the fine spectra of n-th band triangular matrices (& Riddhick Birbonshi) in Complex Analysis & Operator Theory 11 (2017), pp. 739-753
2. P.D.Srivastava :- Some characterizations on weighted β - γ - statistical convergence of fuzzy functions of order θ - Journal of Applied Mathematics and Computing 53(1-2) (2017) pp. 571–582 (& Sarita Ojha)
3. P.D.Srivastava :- Certain properties of bounded variation of sequences of fuzzy numbers by using generalized weighted mean- International Journal of General Systems,46(3), (2017) pp. 275-286 (& Sarita Ojha)
4. P.D.Srivastava :- Generalized vector-valued paranormed sequence space (& Sudhanshu kumar) using Orlicz function -Journal of Analysis" (ISSN 0971-3611). 2017,

2016

5. P.D.Srivastava :- An Efficient and Robust User Authentication Scheme for Hierarchical Wireless Sensor Networks without Tamper-Proof Smart Card – International Journal of network Security 18 (3) (2016) , pp 553- 564 (T. Maitra , R. Amin & Debasis Giri)
6. P.D.Srivastava :- Fine spectrum of the generalized difference operator (& Sudhanshu Kumar) Δ_{uv} on the sequence space c_0 "- Thai journal of Mathematics,2016
7. P.D.Srivastava :- Weighted beta – gamma summability of fuzzy functions of order θ - FILOMAT 2016-accepted (& Sarita Ojha)
8. P.D.Srivastava :- Some geometric properties of generalized Cesaro Musielak–Orlicz space equipped with Amemiya Norm - Acta Mathematica Vietnamica 41 (1), (2016) 91-102 (& Atanu Manna)

2015

9. P.D. Srivastava :- Difference Sequence Spaces Derived by Using Generalized (Atanu Manna & Amit Maji) Means -Journal of the Egyptian Mathematical Society, vol. 23, Issue 1(2015) , pp. 127-131.
10. P.D. Srivastava :- Some paranormed difference sequence spaces derived by using (Atanu Manna & Amit Maji) generalized means- Kyungpook Math. J. 55(2015),909-931 .
11. P.D.Srivastava :- Some mth-order Difference Sequence Spaces of generalized (Atanu Manna & Amit Maji) Means and Compact Operators- *Annals of Functional*

Analysis Vol. 6, No.1 (2015), pp 170-192.

12. P.D.Srivastava :- On some geometric properties of Generalized Musielak - Orlicz sequence space using infinite matrix and corresponding Operator ideals- *Banach J. Math. Anal.* 9 (2015), no. 4, pp 14-33.
(& Amit Maji)
13. P. D. Srivastava :- Some Geometric Properties of Difference Sequence Spaces of Order m Derived by Generalized Means and Compact
(& Amit Maji) - *Mathematical Inequalities & Applications* , vol. 18 , no. 3 (2015) , pp. 1055-1078.
14. P.D.Srivastava :- Some geometric properties of Musielak–Orlicz sequence spaces generated by De La Vallee–Poussin mean¹-
(& Atanu Manna) *Mathematical Inequalities & Applications* – vol. 18 (2) ,(2015) pp 687-705.
15. P.D.Srivastava :- Some results on fuzzy semi-inner product space - *Annals of Fuzzy Mathematics and Informatics*, volume 10, No. 5, (2015), pp. 681-690.
(& Sarita Ojha)
16. P.D.Srivastava :- Bounded Variation of Sequences of Fuzzy numbers by using Generalized weighted Mean - *Journal of Intelligent & Fuzzy Systems* 29 (1) (2015) , pp 235–240
(& Sarita Ojha)
17. P.D.Srivastava :- I- statistically pre Cauchy Sequences of Fuzzy numbers – *Annals of Fuzzy Mathematics & Informatics* , Volume 9, No. 6, (2015), pp. 1
(& Sarita Ojha)
18. P.D.Srivastava :- Some characterizations on weighted $\beta\gamma$ statistical convergence of fuzzy functions of order θ - *Journal of Applied Mathematics and Computing* 53(1-2) (2015) pp
(& Sarita Ojha)
19. PD Srivastava [An efficient and robust rsa-based remote user authentication for telecare medical information systems](#)
(D.Giri, T Maitra, R Amin) *Journal of medical systems* 39 (1),(2015) pp . 145-

2014

20. P.D.Srivastava :- Some results of operator ideals on s-type $|A, p|$ operators-
(& Amit Majhi) *Tamkang Journal of Mathematics* , Vol. 45, No. 2(2014), pp 119- 136.
21. P.D.Srivastava :- λ -Statistical convergence of fuzzy numbers and fuzzy functions of order θ - *Soft Computing*, 18 (5) 2014, pp 1027- 1032.
(& Sarita Ojha)
22. P D Srivastava: - An Efficient and Robust User Authentication Scheme for Hierarchical Wireless Sensor Networks without Tamper Proof Smart Card- *International Journal of Networks and Security* (2014)
(& Debasis Giri)
23. P.D.Srivastava :- On operator ideals using weighted Cesàro sequence space –

- (& Amit Majhi) *Journal of the Egyptian Mathematical Society*, Vol. 22, No. 3(2014), pp. 446-452.
24. P.D.Srivastava :- On $B^{(m)}$ -Difference Sequence Spaces using Generalized Means and Compact Operators –Analysis (Berlin) ,34(3) , (2014) pp 257-281.
(& Amit Majhi)
25. P.D.Srivastava :- On sequence ideal using Orlicz function and de la Vallee Poussin Mean - Journal of the Egyptian Mathematical Society, vol 22, no.3, (2014), 466- 470.
(& Amit Majhi)
26. P.D. Srivastava :- On (k-NUC)-property in Musielak-Orlicz Spaces defined by de la Vall ee-Poussin Mean and Some Countably Modulated Spaces - Dynamics of Continuous, Discrete and Impulsive Systems Series A: Mathematical Analysis **21 (2014)** pp 187-200.
(& Atanu Manna)

2013

27. P.D.Srivastava :- Some difference sequence space defined by using de- la Vallee-Poussin Mean - Asian-European Journal of Mathematics, vol. 6, No. 2 , (2013)
(& Atanu Manna)
28. P.D. Srivastava :- Some class of operator ideals- International Journal of Pure and Applied Mathematics, Vol. 83, No. 5 (2013), pp 735-740.
(& Amit Majhi)
29. P.D.Srivastava :- Statistical Convergence of Generalized Difference Sequence Space of fuzzy numbers-Taiwanese Journal of Mathematics, vol. 17, No. 5, (2013), pp. 1659-1676.
(& S. Mohanta)
30. P. D Srivastava :- Generalized lacunary Δ^m -statistically convergent sequences of fuzzy numbers using modulus function, - Journal of Inequalities and Applications (2013) , 559
(& S. Mohanta)
31. P.D. Srivastava :- Sequence spaces generated by sequential modulus of second order - International Journal of Pure and Applied Mathematics ,Volume 83 No. 5, (2013), pp 651-660.
(& Atanu Manna)

2012

32. P.D.Srivastava :- Spectrum & Fine Spectrum of Generalized Second order Difference operator Δ_{uvw}^2 on Sequence Space ℓ_1
(& B. L. Panigrahi) - Demonstratio Mathematica Vol. XLV, No.3 , (2012) pp. 593- 609.
33. P. D. Srivastava :- Fine Spectrum of Generalized Difference Operator Δ_{uv} on the sequence Space ℓ_1 - Applied Mathematics & Computation, vol. 218, (2012) , pp 6407-641
(& Sudhanshu Kumar)

2011

34. P. D. Srivastava :- Spectrum and Fine Spectrum of Generalized Second Order (& B. L. Panigrahi) difference Operator Δ_{uv}^2 on Sequence Space c_0 -Thai Journal of Mathematics, Vol 9, No 1 ,2011 pp. 57-74 .
35. P.D.Srivastava :- A new paranormed fuzzy sequence space $N_p^F[E_k, F, \Delta^m, s]$ (& S. Mohanta) - Advanced Fuzzy Mathematics , Vol. 6 , No. 1(2011), pp. 105- 120 .

2010

36. P.D.Srivastava :- Fine spectrum of the generalized difference operator Δ_ν on (& Sudhanshu Kumar) sequence space ℓ_1 - Thai journal of Mathematics, Vol 8, no.2 (2010) ,pp 221-233.
37. P.D.Srivastava :- Generalized vector-valued paranormed sequence space (& Sudhanshu kumar) using modulus function -Applied Mathematics & Computation, Vol. 215 (2010) , pp 4110-4118 .
38. P.D.Srivastava :- A Cryptosystem for Encryption and Decryption of Long Confidential Messages - Information Security & Assurance- Proc. Communications in Computer and Information Science (2010) , Volume 76, pp. 86-96.

2009

39. P.D.Srivastava :- A Hierarchical Access Control-Based Proxy Signature, (& Debasis Giri) -International Journal of Recent Trends in Engineering, Vol. 2 , No.1, (2009)
40. P.D.Srivastava :- On the fine spectrum of the generalized difference (& Sudhanshu Kumar) operator Δ_ν over the Sequence space c_0 - Communications in Mathematical Analysis , Vol. 6 , No.1, (2009) , pp 8-21.

2008

41. P.D. Srivastava :- A Cryptographic Key Assignment Scheme for Access (& Debasis Giri) Control in Poset Ordered Hierarchies with Enhanced Security-International J. of Network Security, Vol. 7 , no. 2, (2008), pp.223-234.

2007

42. P.D.srivastava :- Generalized vector valued double sequence space using (& Basu, A.) modulus function - Tamkang J. of Mathematics, Vol. 38 (4),

(2007), pp 346-366 .

43. P.D.srivastava : - Statistical convergence on composite vector valued
(& Basu, A.) sequence space - J. Mathematics & Applications No. 29,
(2007), pp 75-90.

44. P.D. Srivastava : - On vector valued sequence space
(& Ghosh, D.) $h_N(E_k), \ell_M(B(E_k, Y)) & \ell_M(E_k)$ - Journal of Mathematical
Analysis & Application , 327 (2007) , pp 1029-1040 .

45. P.D. Srivastava : - An Asymmetric Cryptographic Key Assignment
(& Debasis Giri) Scheme for Access Control in Tree Structural Hierarchies –
International J. of Network Security, Vol. 4, No. 3, (2007) ,
pp. 348-354.

2004

46. P.D.srivastava : - Δ - Lacunary strong A- convergent vector valued difference
(& Basu, A.) sequences w. r. t. a sequence of Orlicz functions & some
inclusion relations -International J. of Pure & Applied
Mathematics, vol.11, No.3, (2004) , pp 335-353.

2003

47. P.D. Srivastava : - Generalized sequence space F (X, r) -
(& Ghosh, D.) Tamkang J. of Mathematics, Vol. 34 (2), (2003) , pp 93-98.

2002

48. P.D. Srivastava : - Matrix Transformation of vector valued sequence
(& Ghosh, D.) space F (X, r)- Soochow Journal of Mathematics (2002)

1999

49. P.D. Srivastava : -On some vector valued sequence space defined using
(& Ghosh, D.) modulus function - Indian J. of Pure & Applied Mathematics,
30(8), (1999), pp 819-826 .

50. P.D. Srivastava : - On some vector valued sequence space using Orlicz
(& Ghosh, D.) functions - Glasnik Matematicki Series III, 34(54), (1999) ,no.2,
pp 253-61.

1998

51. P.D. Srivastava : - Simultaneous Automorphism in a complete linear metric
space - Soochow Journal of Mathematics, Vol.24, No.1, (1998) ,
pp 51-58.

1997

52. P.D. Srivastava :- A generalized product on some sequences & matrix

(& Gnanaseelan,C.) - Indian J. of Pure & Applied Mathematics, 28(7), (1997) , pp. 943-949.

53. P.D. Srivastava : - Proper basis in a complete linear metric space – Soochow Journal of Mathematics, Vol.23, No.2, (1997), pp 165- 172.

1996

54. P.D. Srivastava :- On some vector valued difference sequence spaces, (& Gnanaseelan,C.) - Journal of Faculty of Education, 1(2), (1996) , pp.150- 160.

55. P.D. Srivastava : - On some vector -valued sequence spaces $l^{(p)}(E_k, \Lambda)$, (& Ratha, A.) - Ganita, Vol. 47, No.1,(1996) , pp. 1-12.

56. P.D.Srivastava :- α, β, γ duals of some generalized difference Sequence space, (& Gnanaseelan,C) -Indian Journal of Mathematics, vol.38, No. 2,(1996) , pp.111- 120.

1994

57. P.D. Srivastava : - Matrix Transformations between some classes of generalized analytic sequence spaces, - Journal of Faculty of Education , Vol.1, No.1,(1994) , pp. 29-45.

1993

58. P.D. Srivastava : - On certain sequence spaces and their Kothe Toeplitz duals, (Colak, R. & Nanda, S.) -Rendiconti di Matematica, series vii, vol. 13, (1993), pp. 27-39.

1992

59. P.D. Srivastava : - Multiplication on the generalized analytic sequence & Matrix Transformation - Indian J. of Pure & Applied Mathematics (& Ratha, A.) 23 (3), (1992) , pp. 223- 234.

1991

60. P.D. Srivastava : - On the space of class of entire functions - Pure & Applied Mathematical Science, Vol. 34, no.1-2, 1991.

1985

61. P.D. Srivastava : - On the space D_p^Λ of analytic functions –Communication de La Faculte des Sciences series A₁,Tome34,(1985), pp.97-107.

62. P.D. Srivastava : - On the classical interpretation of convergence of a certain Frechet space, -Annales univ. Mariae Curie – Sklodowska, Sec. A 39,(1985) , pp. 151-157.

63. P.D. Srivastava :- On a Banach Algebra of analytic functions,

(Juneja, O.P.) - Glasnik Matemacki, Vol. 20 (40), (1985) , pp.51-59.

64. P.D. Srivastava : - On certain functional equation having solution in $\Gamma_{(p,q)}(\rho)$ & $\Gamma_{(p,q)}(\rho, t)$ of entire functions,- Communications de La Faculte des Sciences series A_1 , Tome34, (1985) , pp.53-63.

1984

65. P.D. Srivastava : - Proper Pinchere basis in the space of entire functions (& Dutta, S.) having fast Growth - Communications de la Faculte des Sciences, series A_1 (33), 1984, pp.83-94.
66. P.D. Srivastava : - A note on certain paranormed function spaces - Rendiconti - (Nanda,S. & Dutta, S.) di Matematica, series vii (3) vol. 4, (1984) , pp. 575-585.

1983

67. P.D. Srivastava : - On certain paranormed function spaces , Rendiconti di (Nanda, S. & Dutta , S.) Matematica Series vii (3) Vol. 3, 1983, pp. 413-425.

1981

68. P.D. Srivastava : - Certain subspaces of Fre'chet space -Indian J. of Pure & (Nanda , S. & Nayak) Applied Mathematics 12 (8), (1981) , pp. 971-976.

1979

69. P.D.Srivastava :- On the space of certain class of analytic functions , - Indian Journal of Pure & Appl. Maths. 10 (1) (1979) , pp. 84-93.

1978

70. P.D.Srivastava : - On the space of entire functions of (p,q) order ρ , (& O.P.Juneja) - Rikkyo Daigaku sugaku zasshi 27 (1) , (1978) pp.71-79.

Papers in Lecture notes / Conferences

71. P.D.Srivastava :- Infinite Matrices Bounded on Weighted c_0 Space - International (Arnav Patra & Riddhick Birbonshi) **conference** on Mathematics and Computing ICMC 2017, Mathematics and Computing, 331-338
72. P.D.Srivastava : - Some Geometric Properties of Generalized Ces`aro- (& Atanu Manna) Musielak-Orlicz Sequence Spaces – (Springer) Proc. Mathematics and Statistics Vol. 91, (2014), pp
73. P.D.Srivastava :- Some new sets of sequences of fuzzy numbers by using

- (& Sarita Ojha) generalized weighted mean – Proc. of International conference on Mathematical Sciences, (2014), pp 407-411
74. P. D. Srivastava :- Applications of the Hausdorff measure of non-compactness
(& Amit Maji) on the space $lp(r; s; t; B(m))$, $1 \leq p < \infty$; Springer
Proc. Mathematics and Statistics Vol. 91, (2014), pp 271-281.
75. P D Srivastava :- An Efficient and Robust RSA-Based Remote User
(& Debasis Giri) Authentication for Telecare Medical Information Systems
Journal of Medical Systems- Springer2014
76. P.D.Srivastava :- Cryptanalysis and Improvement of Kim et. al. Password
(& Debasis Giri) Authentication Schemes - Lecture notes in Computer
Science Vol.4812, Springer Verlag, (2007) , pp.156-166.
77. P.D.Srivastava :- Cryptanalysis and Improvement of Das et.al.'s Proxy
(& Debasis Giri) Signature Scheme – Communication Systems- IEEE Computer
Society Press, (2007) , pp.151-154.
78. P.D.Srivastava :- An Improved Efficient Multi signature Scheme in
(& Debasis Giri) Group ,- Communication Systems - IEEE Computer Society
Press (2007) , pp.447-453.

-

Ph.D. Students guided :- Thirteen

- 1. Dutta, S.** [1983-84] Studies on some aspects of certain Paranormed spaces
(Jointly with Prof. S.Nanda) of analytic functions
- 2. Ratha, A.** [1993-94] A study on some aspects of the generalized analytic and
(Roll No. 8925511) Vector valued sequence spaces
- 3. Gnanaseelan, C.** [1997-98] A study on some vector valued difference sequence
(Roll No. 9125417) spaces
- 4. Ghosh, Dalim** [1998-99] A study on certain aspects of some composite vector
(Roll No.9425434) valued sequence spaces
- 5.Dhara, B.** [2004-05] Prime & semi prime rings satisfying certain functional
(Roll No.0025402) identities
(^Jointly with Prof. R.K.Sharma)
- 6. Basu, A.** [2005-06] Some aspects of statistical & lacunary statistical
(Roll No. 01 MA 9407) convergence over composite vector valued sequence
space using Modulus & Orlicz functions
- 7.Debasis Giri** [2008-09] Cryptanalysis and improvement of protocols for digital
(Roll No. 04MA 9402) signature, smart card authentication and access control
(^Jointly with Prof. A.Das)
- 8.Sudhansu Kumar** [2010-11] Study of some paranormed space and spectrum of
(Roll No. 07MA 9401) generalized difference operators on l_1 & c_0
- 9.Bijoy Laxmi Panigrahi** [2011-12] Spectral approximation of linear operators
(Roll No. 07MA 9405)
(^ jointly with Prof. N. Gnaneshwar)
- 10. Sushomita Mohanta** [2012-13] Some Aspects of scalar & vector valued sequence spaces
(Roll No. 06MA 9403) of Fuzzy numbers using Modulus function
- 11. Atanu Manna** [2013-14] On Modular Sequence Spaces by using de la Vallee –
(Roll No. 09 MA 9704) Poussin Means, generated means and difference operator

12. Amit Maji [2014-15] Some Results on operator ideals and geometric properties of
(Roll No. 10 MA 90R02) difference sequence spaces using generalized means

13. Sarita Ojha [2015-16] Generalized weighted summability and Statistical convergences
for sequences of Fuzzy numbers

9. SPONSORED PROJECTS :-

1st PROJECT

- **Name of the research Project :-**FIST Program Department of Mathematics (FMA)
- **Name of the sponsoring agency:** DST, New Delhi
& sanction letterNo. :- SR/FST/MS11-003/2005,dt.20-12-2005
- **Duration of the project** :- 5 years , w. e. f. 01-03-2006
- **Total project cost** :- Rs. 22,00,000/=
- **Name of the Principal Investigator :-** Prof. P.D.Srivastava as Head since October'10
Department of Mathematics ,IIT KGP
- **Institute Approval No.** :- IT/SRIC/MTH/2005-2006/141

2nd PROJECT

- **Name of the research Project :-**Modernisation of C.L.L.,Department of Mathematics
- **Name of the sponsoring agency :-** HRD Ministry, New Delhi
- **Reference No.** :-F.28-1/2003.TS.V dt.31-3-2003
- **Duration of Project** :- 2 years w.e.f. 1st May,2003
- **Total Project Cost** :- Rs. 7,00,000/=
- **Name of Co-P.I.** :- Prof. P.D.srivastava,Department of Mathematics
- **Institute Approval No.** :- IT/SRIC/MA/2003-2004/48

3rd PROJECT

- **Name of the research Project :-** Advance studies on summability and their
applications
- **Name of the sponsoring agency :-** CSIR, New Delhi,
- **Reference No.** :-25(0225)/13/EMR-II dated September 9, 2013
- **Duration of Project** :- 3 years w.e.f. October 1 ,2013

- **Total Project Cost** :- Rs. 5,82,000/=
- **Name of Co-P.I.** :- Prof. P.D.srivastava, Department of Mathematics
(jointly with H K Nigam, MITS, Laxmangarh as PI)

Brief writeup about research and teaching: -

My work is mainly motivated by the development of the theory of sequence and function spaces in real or complex numbers and fuzzy numbers over the past few decades in one direction and Security weaknesses of protocols for digital signatures, smart-card authentication and access control in other direction. Recently, we have concentrated over Spectrum of $n(> 4)$ band lower triangle matrices.

In the present day, theory of sequence spaces is no more limited to the summability theory alone but has gone much beyond with the applications of functional analysis and structural theory of topological vector spaces. An attempt is made by us to study the theory of sequence spaces in regards to some of recent aspects like the scalar & vector valued sequences, Orlicz & Modulus functions, duality theory, statistical convergence, Spectrum of difference operators etc.

The study of proper basis in a complete linear metric spaces is also made which unifies many known results by earlier workers such as Iyer, Arsove, Krisnamurthy and others. Recently, I have shown interest to introduce and study new sequence spaces using the various type of convergence such as statistical convergence, lacunary convergence etc. In this direction I have extended the concept of statistical convergence in a composite vector valued /scalar valued sequence spaces, double sequence spaces, $\Delta_{n,k}$ -difference double sequence spaces etc. Lacunary convergent double sequence spaces and the dual of some generalized sequence spaces are also studied.

I have studied some existing protocols for digital signatures, smart-card authentication and access control and Security weaknesses are identified in these protocols. Moreover, improvements are proposed to remove these security weaknesses.

Study of some new quasilinear sequence spaces $\lambda^F[u, v, f, r]$ of fuzzy numbers using generalized weighted mean matrix, is introduced. With the help of the difference operator Δ , the class of bounded variation is defined over $\lambda^F[u, v]$. Some topological properties and algebraic inclusion relations are established for these classes. Also to include some non-regular matrix methods, we have introduced weighted $\beta\gamma$ -statistical convergence of fuzzy functions and discussed its classifications (pointwise, uniform and equi-statistical) and related weighted $\beta\gamma$ -summability methods (in both ordinary and absolute sense) are also illustrated. A generalized result analogous to Tauberian theorem is also developed using this summability method.

For the case of 2nd and 3rd band lower triangular matrices $B(r; s)$ and $B(r; s; t)$, only the boundary of the spectrum gives the continuous spectrum while the rest of the entire interior region gives the residual spectrum over the sequence spaces c_0, ℓ_p, bv_p . Here we investigate the possibilities of the occurrence of the similar kinds of behavior for the cases of $n(> 4)$ band lower triangular matrices over the sequence spaces c_0, ℓ_p, bv_p . The outcome depicts that not only the boundary part but a finite set from the interior region of the spectrum is included

in the continuous spectrum while the same set is excluded from the residual spectrum. In this context, we have proved an interesting result regarding the image of the closed unit disk $|z| < 1$ under a polynomial of degree $n(> 1)$ which plays the key role in our study. Similar study is also been done for the sequence spaces $c, \ell_1, bv, \ell_\infty$. Upper triangular matrices have also been investigated for some sequence spaces.

(P.D.Srivastava)