

CURRICULAM VITAE OF DR SHYAMAL DEBNATH

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Education

2002–2008 Ph.D in Mathematics, Tripura University, Agartala, India

1996–1999 Master in Mathematics, Tripura University, Agartala, India

1993–1996 Bachelor of Science, M. B. B. College, Agartala, India

1991–1993 $\mathbf{H.S(+2)}$, Science, Ramesh H. S. School, Udaipur, Tripura, India

1986–1991 Class VI- Madhyamik, Barpathari Class XII School, Belonia, Tripura, India

1981–1986 Class I-Class V, Barkashari J.B School, Belonia, Tripura, India

Ph.D Thesis

Title

Study of some preservation of fuzzy aspects with the help of newly defined fuzzy functions and their applications (**Degree awarded-**30.03.2008)

Ph.D Supervisors

Prof. A. Mukherjee (Retired), Department of Mathematics, Tripura University

Experience

3rd January 2021–onwards **Professor**, Tripura University, Agartala, Tripura, India

03.01.2018-

Associate Professor, Tripura University, Agartala, Tripura, India

02.01.2021

Assistant Professor, Tripura University, Agartala, Tripura, India

 $\begin{array}{c} 02.05.2012 - \\ 02.01.2018 \end{array}$

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18.08.2010-

Assistant Professor, National Institute of Technology, Agartala, Tripura, India

01.05.2012

12.02.2009 — Assistant Professor, Govt. Degree College, Udaipur, Tripura, India

17.08.2010

Assistant Professor, Govt. Degree College, Belonia, Tripura, India

03.01.2004 - 11.02.2009

Languages

Bengali Read, Write, Speak

English Read, Write, Speak

Recent Field of interests

Ideal Convergence, Sequence Space, Fuzzy Set, Uncertainty Theory, Rough Convergence.

Scholarship/Award/Recognitions

- 1. Secured 1st class 1st position in M.Sc Mathematics (1999), Tripura University. (High School-1st Division; H.S(+2)-1st Division; B.Sc-1st Class)
- 2. CSIR-UGC (JRF) NET-JUNE-2001.
- 3. ICM (RIO Brazil) Travel Grant-2018 from DST, 2018
- 4. Chebyshev Grant (RUSSIA), ICM-2022.
- 5. Bharat Vikas Award-2022 (Institute of Self Reliance, Orissa).

Publication (Referred or Peer reviewed or indexed journals)

- 1. A.Mukherjee and **S.Debnath**: On fuzzy faintly α- continuous functions, *Indian J. Pure and Appl. Math*, 34(11); 1625-1630 (2003). (**Scopus**)
- 2. A.Mukherjee and **S.Debnath**: On FRSG-continuous and FRSG-irresolute mappings, *Acta Ciencia Indica*, Vol.-XXXI M, No-4, 1221-1224 (2005).(**UGC list- 63803.**)
- 3. A.Mukherjee and **S.Debnath**: Fuzzy strongly semi β -irresolute functions, *Acta Ciencia Indica*, Vol.-XXXII M, No-3, 933-936 (2006)(**UGC list-63803**).
- 4. **S.Debnath**: On fuzzy δ-semi continuous functions, *Acta Ciencia Indica*, Vol.- XXXIV M, No-2, 697-703 (2008)(**UGC list-63803**).
- 5. **S.Debnath**: On fuzzy biminimal structure spaces, *Int. Journal of Math. Analysis*, Vol.6, no. 17, 841 845, (2012). (**UGC list-16177**)
- 6. S.Debnath: On Fuzzy δ-Semi Connectedness, Frontier in Science, Vol.2 (6),133-136, (2012). (MR)
- 7. **S.Debnath**: On semiopen sets and semi-continuous functions in intuitionistic fuzzy topological spaces, *IOSR-JM*, Vol 3(3),35-38, (2012). (**MR**)
- 8. B.C. Tripathy and **S.Debnath**: On generalized difference sequence spaces of fuzzy numbers, *Acta Sinet. Tech.*, Vol. 35(1), 117-121, (2013). (**Scopus**)
- 9. B.C. Tripathy and **S.Debnath**: γ-Open sets and γ-Continuous Mappings in Fuzzy Bitopological Spaces , J. Int. & fuzzy Syst., 24(3) , 631-635 (2013).(**Scopus**)
- 10. **S.Debnath** and J.Debnath: Some generalized statistical convergent sequence spaces of fuzzy numbers via ideals, *Math. Sci. Lett.*,V-2(2), 151-154(2013).(**Google Scholar.**)
- 11. **S.Debnath** and J.Debnath: Some ideal convergent sequence spaces of fuzzy real numbers, *Palestine J. Mathematics*, Vol. 3(1), 27–32 (2014).(**UGC list-48859**)
- 12. **S.Debnath** and S.Saha: Some Newly Defined Sequence Spaces Using Regular Matrix of Fibonacci Numbers, *AKU-J. Sci. and Eng.*, 14 011301 (1-3) (2014). (**UGC list-62452**)
- 13. **S.Debnath** and J.Debnath: On I-statistically convergent sequence spaces defined by sequences of Orlicz functions using matrix transformation, *Proyectiones J Math*, 33(3) 277-285, (2014).(**Scopus**)
- 14. **S.Debnath**, B. Sarma and S.Saha: On Some Sequence Spaces of Interval Vectors, *Afrika Mathematika*, 26(5), 673-678(2015). (**Scopus**)
- 15. **S.Debnath**, A. J.Datta and S.Saha: Regular Matrix of Interval Numbers based on Fibonacci Numbers, *Afrika Mathematika*, 26(7), 1379-1385(2015). (**Scopus**)
- 16. **S.Debnath** and B.C.Das: New Type of Difference Triple Sequence Spaces, *Palestine J. Math*, 4(2), 284-290 (2015).(**UGC list-48859**)
- 17. B.C.Tripathy and **S. Debnath**: On fuzzy b-locally open sets in bitopological spaces, *Songklanakarin J. Sci. & Techol.*, 37(1), 93-96, 2015.(**Scopus**)
- 18. S.Debnath, B.Sarma and B.C.Das: Some Generalized Triple Sequence Spaces of Real Numbers, J.

- Nonlinear Anal & Optimiz., 6(1),71-79 (2015).(MR)
- 19. **S.Debnath** and S. Saha: On some I-convergent generalized difference sequence spaces associated with multiplier sequence defined by a sequence of modulli, *Proeceiones J Mathematics*, 34(2), 137-145, 2015.(Scopus)
- 20. **S. Debnath**, J. Debnath and D. Bhattacharya: On Some Classes of Sequences of Intuitionistic Fuzzy Numbers with respect to Ideals, *J. Indian Academy of Mathematics*, 37(2), 295-304 (2015).(**UGC** list-21013)
- 21. **S. Debnath**, J. Debnath and D. Bhattacharya: On Some Sequence Spaces of IFNs, *Bull. Kerala Math. Association*, 12(2), 125-133 (2015).(**UGC list-64043**)
- 22. **S. Debnath**, J. Debnath and D. Bhattacharya: On rough I- convergent sequence spaces of fuzzy numbers defined by sequences of Orlicz functions and matrix transformation, *New Trends in Mathematical Sciences*, 4(1), 184-192 (2016).(**MR**)
- 23. **S.Debnath** and S. Saha: Matrix Transformation on Statistically Convergent Sequence Spaces of Interval Number Sequences, *Proeceiones J Mathematics*, 35(1), 187-195 (2016) (**Scopus**).
- 24. **S.Debnath** and S. Saha: On Statistically Convergent Sequence Spaces of Two Dimensional Interval Vectors, J. Indian Academy of Mathematics, 38(1), 29-37, (2016). (**UGC list-21013**)
- 25. **S.Debnath** and B.C.Das: Some Generalized Triple Sequence Spaces Defined by Modulus Function, Facta Universitatis, Series of Mathematics and Informatics. 31(2), 373-382, (2016) (**UGC list-48675**, **Web of Science**)
- 26. **S.Debnath** and S. Saha: Some Statistically Convergent Difference Sequence Spaces of Interval Numbers, *ROMAI J*, 12(1), 53-59 (2016)(**MR**)
- 27. **A.Esi, S. Debnath** and S. Saha: Asymptotically Double Lacunary Statistically Equivalent Sequences of Interval Numbers, *Proyectiones J. Mathematics*, 35(4), 469-479 (2016) (Scopus).
- 28. **S. Debnath** and N. Subramanian: The generalized non-absolute type of triple Γ^3 sequence spaces defined by Musielak-Orlicz function, MATHEMATICA, 58 (81), 1-2,51-59 (2016). (**Scopus**)
- 29. **S. Debnath**, J. Debnath and B. C. Das: Basic arithmetic operation on triangular intuitionistic fuzzy number based on α-level sets, J. Fuzzy Mathematics. 25(1), 21-30 (2017)(**UGC list-49340.**)
- 30. **S. Debnath**, M. Mursaleen and D. Rakshit: I statistical limit superior and I statistical limit inferior, *Filomat* .31(7), 2103-2108 (2017) (**IF-0.63**, **Sci-expanded**, **Scopus**)
- 31. **S.Debnath**, **U. Misra** and B.C.Das: On Some Newly Generalized Difference Triple Sequence Spaces, Southeast Asian Bulletin of Mathematics 41(4) 491-499 (2017) (**UGC list-49072**)
- 32. **S. Debnath**, B.C.Das, D. Bhattacharya and J. Debnath: Regular Matrix Transformation on Triple Sequence Spaces, *Boletim da SociedadeParanaense de Matemática*, 35(1), 85-96 (2017). (**Scopus**)
- 33. **S. Debnath**, J. Debnath: On some generalized difference sequence spaces of fuzzy numbers defined by a sequence of moduli; *Facta Universitatis*, *Series of Mathematics and Informatics*, 32(3), 405-412(2017). (UGC list-48675, Web of Science)
- 34. **S. Debnath** and N. Subramanian: The Generalized Non-Absolute Type of Triple Γ^3 Sequence Spaces defined Musielak-Orlicz function; Facta Universitatis, Series of Mathematics and Informatics, 32(3), 413-420(2017).(**UGC list-48675**, **Web of Science**)
- 35. **S. Debnath** and N. Subramanian: Rough statistical convergence on triple sequences, *Proyeeciones J. Mathematics*, 36(4), 685-699, (2017).(**Scopus**)
- 36. **S. Debnath** and N. Subramanian: On Riesz almost Lacunary Cesaro [C, 1, 1, 1] statistical convergence in probabilistic space of $\chi 3\Delta f$, Acta Matematica Academie Paedagogiace Nyíregyháziensis, 33(2), 221-231 (2017). (**Scopus**)
- 37. **S.Debnath** and B.C.Das: Statistically Convergent Triple Sequence Spaces Defined by Modulus Function, J. Indian Academy of Mathematics, 39(1),59-66 (2017). (**UGC list-21013**)
- 38. **S.Debnath** and B.C.Das: Regular Matrix Transformation on Triple Sequence Spaces-I, MATHEMAT-ICA 59 (82), No 1-2, 2017, pp. 124-133(**Scopus**).
- 39. **S. Debnath**, V.N.Mishra and J. Debnath: On Statistical Convergent Sequence Spaces of Intuitionistic Fuzzy Numbers, *Boletim da Sociedade Paranaense de Matemática*, 36(1) 235-242,(2018) (**Scopus**).
- 40. **S. Debnath** and D. Rakshit: On rough convergence of fuzzy numbers based on α-level sets, *J. Indian Math. Society*, 85(1-2),42-52 (2018) (**Scopus**).

- 41. **S. Debnath** and D. Rakshit: On \mathcal{I} statistical convergence, *Iranian J. Math. Sciences and Inform.*, 13(2), 101-109 (2018) (**Web of Science, Scopus**).
- 42. B. C. Tripathy, **S. Debnath**, D. Rakshit: On Multiset Group, *Proyeeciones J. Mathematics*, 37(3), 479-489 (2018) (**Scopus**).
- 43. B.C.Tripathy, **S. Debnath** and S. Saha: On some new difference sequence spaces of interval numbers, *Proyeeciones J. Mathematics*, 37(4), 603-612 (2018) (**Scopus**).
- 44. A.Esi, S. Debnath and S. Saha: Some New Sequence Spaces of Interval Number Based on Zweier Sequences and Fibonacci Numbers, *Divulgaciones Matematicas*, 19(2)(2018) pp 36-42.(SCOPUS)
- 45. **S. Debnath** and D. Rakshit: Rough statistical convergence of sequences of fuzzy numbers, *MATHE-MATICA* 61 (84), No 1, 2019, pp. 33-39(**Scopus**).
- 46. **S. Debnath**, J. Debnath: On Rough Ideal Convergence in Intuitionistic Fuzzy Normed Spaces, *J. Fuzzy Math*, 27(3), 643-650 (2019) (**UGC list-49340.**)
- 47. **S.Debnath** and N. Subramanian: Generalized rough lacunary statistical triple difference sequence spaces in probability of fractional order defined by Musielak-Orlicz function, *Boletim da Sociedade Paranaense de Matemática*, 37(1) 55-62,(2019) (**Scopus**).
- 48. E. Savas, S. Debnath and D. Rakshit: On *I*-Statistically Rough Convergence, *Publications de l'Institut Mathématique*, 105(119), 145-150 (2019) (Sci-E, Scopus)
- 49. E. Savas, S. Debnath: On lacunary statistically φ-convergence, Note Di Matematica 39(2), 2019, 111-120.(Scopus)
- 50. **S. Debnath** and A. Debnath: Study of ring structure from multiset context, *Applied Sciences*, Vol. 21, 2019, pp. 84-90. (**Scopus**)
- 51. B.C.Tripathy, **S. Debnath**, Fuzzy m-structures, m-open multifunctions and bitopological spaces, *Boletim da Sociedade Paranaense de Matemática*, 37(4) 119-128,(2019) (**Scopus**).
- 52. A.Esi, S. Debnath and S. Saha: Asymptotically double λ_2 -statistically equivalent sequences of interval numbers, MATHEMATICA 62(1), 2020, pp. 39-46(Scopus).
- 53. B.C.Tripathy, **S. Debnath** and D. Rakshit: On \mathcal{I} -statistically limit point and \mathcal{I} statistically cluster points of sequences of fuzzy number, MATHEMATICA 63 (86), No 1, 2021, pp. 140-147(**Scopus**).
- 54. **S. Debnath,** C. Choudhury: On *I* statistically φ-convergence, *Proyeeciones.* 40(3), 593-604 (2021) (**Scopus**).
- 55. **S. Debnath,** Bijoy Das: Statistical Convergence of Order α for Complex Uncertain Sequences, J. Uncertainty System, 14(2), 2150012 (2021)(**Scopus**)
- 56. **S. Debnath**, A. Debnath: Statistical convergence of multisequences on **R**, Applied Sciences, 23, 2021, 42-51 (**Scopus**).
- 57. **S. Debnath**, Bijoy Das: On Deferred Statistical Convergence of Complex Uncertain Sequences, Journal of Applied Analysis, 2022. https://doi.org/10.1515/jaa-2022-2006 (**Scopus**, **Web of Science**)
- 58. C. Choudhury, S. Debnath: On \mathcal{I} Convergence of Sequences in Gradual Normed Linear Spaces, Facta Universitatis, Series of Mathematics and Informatics, Vol. 36, No 3 (2021), 595 604 (Web of Science)
- 59. E. Savas, S. Debnath, C. Choudhury: On \mathcal{I} Statistical φ -Limit Superior and \mathcal{I} Statistical φ -Limit Inferior, Southeast Asian Bulletin of Mathematics (2023) 47(2): 279-287 (Web of Science)
- 60. C. Choudhury, S. Debnath: On some properties of $\mathcal{I}^{\mathcal{K}}$ -convergence, Palestine J. Math.Vol. 11(2)(2022), 129-135 (Scopus).
- 61. C. Choudhury, S. Debnath: On \mathcal{I}^{K-st} convergence of sequence of real numbers, Palestine J. Math.Vol. Vol. 11(2)(2022), 505-510 (Scopus).
- 62. **S. Debnath**, C. Choudhury: On \mathcal{I}_{ϕ}^{K} convergence, Journal of Mathematical Extension Vol. 16, No. 10, (2022) (4)1-12 (**ESCI**).
- 63. C. Choudhury, S. Debnath: On A^{I^K} Summability, Ural Math. Jour., 8(1), 13-22 (2022) (Scopus).
- 64. C. Choudhury, **S. Debnath:** On I^K limit Supremum, I^K limit infimum and Related Results, Probl. Anal. Issues Anal. 11(29), No 3, 15-29 (2022) (**Scopus**).
- 65. C. Choudhury, **S. Debnath:** On λ- Statistical Convergence of Sequences in Gradual Normed Linear Spaces, Applied Math. E Notes. 23, 209-219 (2023) (**Scopus**).
- 66. C. Choudhury, S. Debnath, A. Esi: On I^K -convergence of sequences in gradual normed linear spaces, J Anal 30, 1455-1465 (2022) (Scopus).

- 67. C. Choudhury, S. Debnath: On lacunary statistical convergence of sequences in gradual normed linear spaces, Annals of the University of Craiova, Mathematics and Computer Science Series. 49(1), 110-119, 2022 (Scopus).
- 68. C. Choudhury, S. Debnath: On *I*-statistical convergence of sequences in gradual normed linear spaces, Mathematicki Vesnik.74(3), 218-228, 2022, (Scopus).
- 69. C. Choudhury, **S. Debnath:** Further results on *I* and *I**-convergence of sequences in gradual normed linear spaces, Jordan Journal of Mathematics and Statistics (JJMS), 15(4A), 2022, pp 967 982 (**Scopus**).
- 70. C. Choudhury, S. Debnath: On quasi statistical convergence in gradual normed linear spaces, TWMS J. App. and Eng. Math.V.13, N.4, 2023, pp. 1327-1336 (Scopus).
- 71. C. Choudhury, S. Debnath, E. Savas: On λ statistically φ-convergence, J. Applied Analysis, vol. 30, no. 1, 2024, pp. 75-83 (Scopus, Web of Science)
- 72. C. Choudhury, S. Debnath, A. Esi: A new notion of convergence in gradual normed linear spaces, Novi Sad J. Math. DOI: 10.30755/NSJOM.15030 (2023) (Scopus).
- 73. C. Choudhury, S. Debnath: On N_{θ} and lacunary statistical derivative, Applied Sciences (APPS). Vol 24(2022), 62-70. (Scopus).
- 74. **S. Debnath**, B. Das: On Rough Convergence of Complex Uncertain Sequences, Journal of Uncertain Systems, Vol. 14, No. 04, 2150021 (2021) (**Scopus**).
- 75. **S. Debnath**, C. Choudhury, S. Debnath: On Deferred Statistical Convergence of Sequences in Neutrosophic Normed Spaces, Sahand Commun. Math. Anal. 19(4) 81-96 (2022) (**Scopus**).
- 76. **S. Debnath**, B. Das: On λ -Statistical Convergence of Order α for Complex Uncertain Sequences, International J of General Syst. DOI:10.1080/03081079.2022.2132490 (2022) (**Scopus**).
- 77. **S. Debnath**, B. Das: On Rough Statistical Convergence of Complex Uncertain Sequences, New Mathematics and Natural Computation (https://doi.org/10.1142/S1793005722500454 (2022) (**Scopus**).
- 78. **S. Debnath**, C. Choudhury, S. Debnath: On quasi statistical convergence of order α in neutrosophic normed spaces, Advances in Mathematical Sciences and Applications Vol. 32, No. 2 (2023), pp. 237-251 (**Scopus**).
- 79. **S. Debnath**, C. Choudhury, S. Debnath: On quasi statistical convergence in neutrosophic normed spaces, Dynamics of Continuous, Discrete and Impulsive Systems Series A: Mathematical Analysis 31 (2024) 21-33 (**Scopus**).
- 80. A. Halder, S. Debnath: ON *I*-STATISTICAL CONVERGENCE ALMOST SURELY OF COMPLEX UNCERTAIN SEQUENCES, Advances in Mathematical Sciences and Applications, 32(2) (2023) 431-445 (Scopus).
- 81. C. Choudhury, S. Debnath, A. Esi: Further results on I-deferred statistical convergence, FILO-MAT.38(3), 2024 (769-777) (Scopus, SCIE).
- 82. **S. Debnath**, B. Das, S. Debnath, C. Choudhury: On Statistical Convergence of order α in neutrosophic normed spaces, Neutrosophic Sets and Systems 58(2023) 299-310 (**Scopus**).
- 83. **S. Debnath**, S. Debnath: On Statistical Limit Superior and Limit Inferior in Neutrosophic Normed Spaces, Advances in Mathematical Sciences and Applications 33(1) (2024), 97-108 (**Scopus**).
- 84. **S. Debnath**, J. Hossain: ON *I*-CONVERGENCE, *I*-LIMIT POINT AND *I*-CLUSTER POINT OF SEQUENCES OF BI-COMPLEX NUMBERS, Advances in Mathematical Sciences and Applications 33(2) (2024), 303-314 (**Scopus**).
- 85. **S. Debnath**, S. Debnath: A GENERALIZED STATISTICAL CONVERGENCE IN NEUTROSOPHIC NORMED SPACE, Acta Math. Univ. Comenianae XCIII 2 (2024), 79-93 (**Scopus**).
- 86. C. Choudhury, B. Das , S. Debnath: On statistical convergence of order α of sequences in gradual normed linear spaces, J. Appl. Anal. 2024, https://doi.org/10.1515/jaa-2023-0105 (Scopus).
- 87. H. Debbarma, C. Choudhury, S. Debnath: Studies On Some Sequence Spaces In Gradual Normed Linear Space, Applied Mathematics E-Notes, 24(2024), 80-88 (Scopus).
- 88. **S. Debnath**, A. Halder: ON *I*-CONVERGENCE ALMOST SURELY OF COMPLEX UNCERTAIN SEQUENCES, TWMS J. of Apl. and Eng. Math V.14, N.3, 2024, pp. 1166-1178 (**Scopus**).
- 89. A. Halder, S. Debnath: On Lacunary *I*-Convergence Almost Surely of Complex Uncertain Sequences, Annals of the University of Craiova, Mathematics and Computer Science Series, V 51(1), 2024, Pages

- 16-179, (Scopus).
- 90. **S. Debnath**, S. Debnath: Rough Statistical Convergence in Neutrosophic Normed spaces, Southeast Asian Bulletin of Mathematics (2024) 48: 339-353 (**ESCI**).
- 91. B. Das, A. Halder, **S. Debnath**: On *I*-Convergence of Complex Uncertain Sequences, Fasciculi Mathematici (2024)67: 35-48 (**UGC Care**).
- 92. J. Hossain, S. Debnath: ON $\mathcal{I}^{\mathcal{K}}$ CONVERGENCE OF SEQUENCES OF BI- COMPLEXNUMBERS, Probl. Anal. Issues Anal. 13(31) (3), 2024(Scopus).
- 93. M. Et, C. Choudhury, **S. Debnath:** ρ statistical boundedness, TWMS J. of Apl. and Eng. Math V.15, N.1, 2025, pp. 89-97 (**Scopus**).
- 94. A. Halder, S. Debnath, A. Esi: On *I*-Statistical Convergence of Complex Uncertain Sequences, Filomat 38(28) (2024), 9795-9811.(Scie-Scopus)
- 95. **S. Debnath**, S. Debnath: On deferred statistical convergence in fuzzy normed linear spaces, Journal of Fuzzy Extension and Applications (JFEA) 6(1):2025,1-13. (**Scopus**)
- 96. H. Debbarma, S. Debnath: On \mathcal{I} Statistical Convergent Difference Sequence Spaces in GNLS, Advances in Mathematical Sciences and Applications 33(2): (2024) 741-754 (Scopus)
- 97. **S. Debnath**, A. Halder: On *I*-Statistical Convergence of Complex Uncertain Sequences in Measure, Ural Mathematical J. Vol. 10, No. 2, 2024, pp. 69-80 (**Scopus**).
- 98. A. Halder, N. P. Pahari, S. Debnath, : Some More Results on *I*-Convergence of Complex Uncertain Sequences, Annals: Series on Mathematics and Its Applications, Vol. 17, No. 2, (1-8), 2025 (Scopus).
- 99. S. Debnath: On some generalization of statistical boundedness in neutrosophic normed spaces, Advances in Mathematical Sciences and Applications 34(1) (2025): 1-12.(Scopus)
- 100. **S. Debnath**, B. Das: On *p*-Statistical Convergence of Complex Uncertain Sequences, Mathematics in Science, Engineering, and Aerospace (MESA), 16(1), 237-244 (2025) (**Scopus**).
- 101. H. Debbarma, S. Debnath: SOME STATISTICALLY CONVERGENT SEQUENCE SPACES OVER GRADUAL NORMED LINEAR SPACE, Dynamics of Continuous, Discrete and Impulsive Systems (DCDIS), Series A: Mathematical Analysis 32 (2025) 55-65 (Scopus).
- 102. C. Choudhury, S. Debnath: Certain aspects of rough deferred statistical cluster points in normed linear spaces, Filomat 39(11) (2025). (SCIE-Scopus)
- 103. J. Hossain, S. Debnath: On \mathcal{I}_{λ} statistical convergence of sequences of bi-complex numbers, TWMS J. App. and Eng. Math. 15(7),(2025) 1674-1685 (Scopus).
- 104. S. Debnath, A. Halder: On Rough *I*-Convergence of Complex Uncertain Sequences, BSPM. V-43 (2025) (Scopus).
- 105. **S. Debnath**, A. Halder: ON ROUGH *I*-STATISTICAL CONVERGENCE OF COMPLEX UNCERTAIN SEQUENCES, International Journal of Maps in Mathematics, Volume 8, Issue 2, 2025, Pages:346-359 (**Scopus**).
- 106. H. Debbarma, S. Debnath: Studies On Some Quantum Difference Sequence Spaces In GNLS, AMSA(Japan) Vol. 35, No. 1 (2026), pp. 87-97 (Scopus).
- 107. J. Hossain, S. Debnath: ON QUASI STATISTICAL CONVERGENCE OFSEQUENCES OF BI-COMPLEX NUMBERS, J. Indian. Math. Soc.(Accepted 2024).
- 108. C. Choudhury, S. Debnath, A Esi: On Rough ϕ -Convergence, Iranian J. Math. Sci. Inform (Online, 2025) (Scopus).
- 109. J. Hossain, S. Debnath: ON *I*-LACUNARY STATISTICAL CONVERGENCE OF SEQUENCES OF BI- COMPLEX NUMBERS, Iranian J. Math. Sci. Inform.(Online 2025).
- 110. **S. Debnath**, S. Debnath: On Rough Statistical Convergence in Fuzzy Normed Linear Spaces, Palestine J. Math. (**Accepted 2025**) (**Scopus**)..
- 111. Santonu Debnath, S. Debnath, S.Datta: A New Perspective on Deferred Statistical Convergence of Order α in Fuzzy Normed Linear Spaces, FILOMAT(Accepted 2025).
- 112. J. Hossain, S. Debnath, S. K. Paul: ON \mathcal{I}_q^c -CONVERGENCE OF SEQUENCES OF BI-COMPLEX NUMBERS, Probl. Anal. Issues Anal. (Accepted 2025).
- 113. **S. Debnath**, H. Debbarma: On statistically convergent difference sequence spaces over GNLS, Facta Universitatis. Series: Mathematics and Informatics (**Accepted 2025**).

Non-indexing journals with ISBN No

- 1. A.Mukherjee and **S.Debnath**: δ -almost lower semi-continuous functions, *J.Tri. Math. Soc.* 6, 57-60(2004). (ISBN-0972-1320) (*UGC list-63974*)
- 2. A.Mukherjee and **S.Debnath**: δ-semi open sets in fuzzy setting, *J.Tri.Math. Soc.* Vol.- 8, 51-54 (2006). (ISBN-0972-1320) (*UGC list-63974*)
- 3. **S. Debnath** and N. Subramanian: On rough I-convergence of triple sequences, J. Tripura Mathematical Society, 17, 76-85 (2015) (*UGC list-63974*)
- 4. S. Debnath: Prospects of Mathematical Sciences in India, Bulletin of the Tripura Mathematical Society, XXXVII (2016-17) 35-39

Conference Proceeding

- 1. A.Mukherjee and S.Debnath: Fuzzy Strongly Semi α-irresolute Functions, Proc. Nat. Sem. On Recent Trends in Maths & its Appl, 171-176, 2003.
- 2. **S.Debnath** and S. Saha, On Statistically Convergent Sequence Spaces of Interval Numbers, **Proceedings** of IMBIC V-(3), P 178-182 (2014) .(ISSN-978-81-925832-28)
- 3. S. Debnath and B.C.Das, Some Triple Sequence Spaces based on Difference Operator Δ^2 , Proceedings of ICFM2015, p 189-91 (ISSN-978-81-928118-9-5).
- 4. **S. Debnath** and S. Saha, On Some Sequence Spaces of Regular Matrix of Interval Numbers based on Fibonacci Numbers, **Proceedings of ICFM2015**, p 192-93 (ISSN-978-81-928118-9-5)
- 5. **S. Debnath** and D. Rakshit, Rough Convergence in Metric Spaces, **New Trends in Analysis and Interdisciplinary Applications**, Selected Contributions of the 10th ISAAC Congress, Macau 2015, pp 449-454, Publisher: Springer

Seminar/Conference/Workshop/Refresher/Orientations etc Participated:

- 1. National seminar on recent trends in Mathematics & its Applications, April 28-29, 2003, Dept. of Mathematics, Tripura University
- 2. ISI-NERIST Winter School on Soft Computing, Data Mining & Bioinformatics, Feb.14-18, 2005, Dept. of Computer Science, NERIST
- 3. Computer Training Programme on Mathematical Programming in C- Language, 9th to 15th October, 2006, MMD College, Sabroom, South Tripura
- 4. National Seminar on Fuzzy Sets & its Applications, November 25-26, 2006, TMS and School of IT & Computer Science, Tripura University
- 5. UGC Sponsored Orientation Programme, 11th June to 8th July, 2007, ASC, Guwahati University
- 6. UGC Sponsored Refresher Course, 16th Feb. to 7th March, 2009, ASC, Jadavpur University
- 7. International Conference on Rough Sets, Fuzzy Sets and Soft Computing, 5th to 7th November, 2009, Dept. of Mathematics, Tripura University
- 8. Seminar on Contemporary Areas in Physical and Life Sciences, November 26-27, 2009, IQAC, Karimganj College, Assam
- 9. Workshop on Syllabus Preparation for UG Course(TDC and TDCH), Tripura University, 21 March, 2009.
- 10. Seminar on Rough Sets, Fuzzy Sets and their Applications, April 7, 2010, Dept. of Mathematics, Tripura University
- 11. Advanced Instructional School on Numerical Linear Algebra, December 2-22, 2010, Dept. of Mathematics, IIT, Guwahati
- 12. Workshop on Rough Set and its Applications, November 16-17,2012, Dept. of Mathematics, TU
- 13. National Conference on "Recent Trends in Mathematical & Computational Sciences"-28-30, November, 2012 at IASST, Guwahati.r.
- 14. National Conference on "Role of Mathematics in Advancement of Science & Technology" 18th -21st, October, 2013 at B.S.N.V PG College, Lucknow.
- 15. National Conference on Ancient Indian Mathematics, February 8-9,2014, Organized by Tripura Mathe-

- matical Society.
- 16. Winter school on Pattern Recognition and Image Processing, 25-29 March, 2014.
- 17. International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM14), 6-9 November, 2014, ANTALYA, TURKEY.
- 18. International Conference on Current Development in Mathematics and Mathematical Sciences (ICCD-MMS2014), December 19-21, 2014, Organized by CMS, Saltlake City, Kolkata
- 19. 2nd International Conference on Recent Trend in Mathematics and Its Applications (ICRTMA), 18-19 March, 2015, Dept. of Mathematics, Vidyasagar University, West Bengal.
- 20. International Conference on Frontiers in Mathematics (ICFM2015), 26-28 March, 2015, Dept. of Mathematics, Gauhati University, Assam.
- 21. 10th ISAAC 2015 Conference, 3-8 August, 2015, Dept. of Mathematics, University of Macau, Chima SAR.
- 22. Recent Trends in Mathematical Sciences and Applications" (ICRTMSA-2016) at Dept. of Mathematics, Burdwan University during February 9-11, 2016, INDIA.
- 23. 82nd Annual Conference of Indian Mathematical Society" at Dept. of Mathematics, University of Kalyani during December 27-30, 2016, INDIA.
- 24. **Deliver a invited talk** on 'Latex and Beamer' organized by Faculty Development Center, Tripura University during 28-04-2017 to 04-05-2017.
- 25. **Deliver a invited talk** to 'Training Programme of School Teachers under Rastriya Avishkar Abhiyan' organized by Tripura University during 10th-14th July, 2017.
- 26. Attended as a Teachers Participants in MTTS Camp, 2017 at Dept. of Mathematics, IIT Guwahati.
- 27. 20th international mathematics conference 2017 at Dept of Mathematics, University of Dhaka, Bangladesh during 8-10 December, 2017.
- 28. International Congress of mathematician 2018 (ICM 2018), at Rio, Brazil, during 1-9 August, 2018. (T.A sponsored by DST-SERB)
- 29. "85th Annual Conference of Indian Mathematical Society" at Dept. of Mathematics, Indian Institute of Technology, Kharagpur during November 22-25, 2019, INDIA.
- 30. Perform **as a Mentor** for the Online Foundation Course in Mathematics (OFCM-2020) held online during 04 24 October, 2020 organized by MTTS Trust.
- 31. Perform **as a Chairman** in the INTERNATIONAL WEBINAR ON MATHEMATICAL ANALYSIS AND ITS APPLICATIONS (IWMAA-2021) April 8-9, 2021 at Department of Mathematics Tripura University.
- 32. Perform as a Resource Person in a Two Week Online International Faculty Development Programme on "Current Trends in Applications of Mathematics", organized by the Department of Mathematics, School of Sciences and Humanities, Vel Tech Rangarajan Dr.Sagunthala Institute of Science and Technology, Avadi, Chennai-62, Tamil Nadu, India from 21-09- 2022 to 04-10-2022.
- 33. Perform as a Chief Guest in Mathematics Day Celebration, by the Department of Mathematics, ICFAI University on 10.01.2024.

Seminar/ Conference/ Training Programme Organized

- 1. Organized a fifteen days "Training Programme for Under Graduate Students in Mathematics" 5th to 19th July, **2013** sponsored by DST, GOI as a Coordinator.
- 2. Organized a two weeks "Pedagogical Training for Mathematics Teachers 2014 (PTMT)" December 1-14, 2014 sponsored by NBHM, DAE, GOI as a Coordinator.
- 3. Organized "North-East Summer Workshop in Analysis and Probability 2015" Tripura University, Agartala June 27-30, 2015 in Collaboration with ISI-Bangalore as a Coordinator.
- 4. Organized "Mini-Mathematics Training and Talent Search Programme (Mini MTTS Agartala) 2017" Tripura University, Agartala January 19-24, 2017 sponsored by NBHM, DAE, GOI as a Coordinator.
- 5. Organized one week "Pedagogical Training for Mathematics Teachers 2018 (PTMT)" March 26-31, 2018 sponsored by NBHM, DAE, GOI as a Coordinator.
- 6. Organized an international conference titled "International Conference on Recent Advances in

Mathematics and its Applications (ICRAMA-2019)" July 16-18, 2019 at Dept. of Mathematics, Tripura University as joint organizing Secretary.

Membership/Positions in Learned Academic Bodies/Organizations

- 1. American Mathematical Society, (No- DBSHXA)
- 2. Indian Mathematical Society, (No- D-12-118)
- 3. Calcutta Mathematical Society, (LD/86)
- 4. Indian Academy of Mathematics, (LM-280)
- 5. Tripura Mathematical Society, (Ex-Treasurer)
- 6. External Member, BUGS-Dept. of Mathematics, Assam University, Silchar

Research Projects

- 1. Title: Study of some preservation of fuzzy functions and their applications, MRP (UGC-NERO), 2005-2007, Completed
- 2. Title: Some New Sequence Spaces of Interval Numbers, UGC-BSR Startup Grant, Amount: 6.00 Lakhs, (2013-15), Completed
- 3. Title: I-statistically convergent sequences of fuzzy numbers, EMR-II, CSIR (MAJOR), Amount: 8.23 Lakhs, (2014-2017) Completed

Research Supervisions (Scholar's Name, Topic and Status)

- 1. Jayanta Debnath, Title "STUDY ON SOME GENERALIZED CONVERGENT SEQUENCE SPACES OF FUZZY AND INTUITIONISTIC FUZZY NUMBERS" (Awarded, 28th May 2016 under NIT, Agartala)
- 2. Subrata Saha, Title "STUDIES ON SOME GENERALIZED SEQUENCE SPACES" (Awarded, 9th January 2017 under Tripura University, Agartala)
- 3. Bimal Chandra Das, Title "STUDIES ON SOME GENERALIZED TRIPLE SEQUENCE SPACES" (Awarded, 13th February 2018 under Tripura University, Agartala)
- 4. Debjani Rakshit, Title "ON *I*-STATISTICALLY CONVERGENT SEQUENCES" (Awarded, 16th November 2018 under Tripura University, Agartala)
- 5. Bijoy Das, Title "STUDIES ON SOME GENERALIZED CONVERGENCE CONCEPTS OF COMPLEX UNCERTAIN VARIABLES", Awarded on 28.06.2023 under Tripura University.
- 6. Chiranjib Choudhury, Title "STUDIES ON I^K CONVERGENCE AND ITS APPLICATIONS", Awarded on 19.07.2023 under Tripura University.
- 7. Amit Halder, Title "STUDIES ON *I*-CONVERGENCE OF COMPLEX UNCERTAIN SE-QUENCES AND ITS GENERALIZATION", Awarded on 09.04.2025 under Tripura University.
- 8. Santonu Debnath, Title "STUDIES ON STATISTICAL CONVERGENCE CONCEPTS UNDER NEUTROSOPHIC ENVIRONMENT", Awarded on 06.05.2025 under Tripura University.
- 9. Hamari Debbarma, Title "STUDIES ON SOME SEQUENCE SPACES OVER GRADUAL NORMED LINEAR SPACE", Thesis Submitted on 12.11.2025 under Tripura University.
- 10. Juwel Hossain, Title "Studies on some generalized convergence of sequences of bi-complex numbers", Registered on 24.01.2024 under Tripura University.
- 11. Chayan Sarma, Title "Studies on Some Generalisations of Minimum Norm Attaining Operators", Registered on 27.10.2025 under Tripura University.
- 12. Mijanur Rahman, Title "Studies on rough convergence of sequences of bi-complex numbers", Registered on 27.10.2025 under Tripura University.
- 13. Ripan Debnath, Course work completed, under Tripura University.

Ph.D Thesis Evaluated

- 1. Title "STUDIES ON SOME CLASSES OF SINGLE AND DOUBLE SEQUENCES OF FUZZY REAL NUMBERS" (under Gauhati University)
- 2. Title "THE ENTIRE RATE AND DOUBLE ENTIRE SEQUENCE SPACE OF FUZZY NUMBERS

DEFINED BY MODULUS" (under Bharathidasan University)

3. and many more (under Kazi Nazrul University; Manipur University; Manonmaniam Sundaranar University etc)

Reviewer

- 1. Mathematical Reviews (AMS), Reviewer No. 101875, Location: 6-TRIP-M
- 2. ZentralblattMATH, Reviewer No. 17012
- 3. Different reputed journals of international level (indexing by SCOPUS, WOS)

- Book

- 1. Fuzzy Topology, Some Fuzzy Functions and their Applications, Research India Publisher, Delhi, October 2015, ISBN: 978-93-84443-60-3
- 2. Degree Mathematics, V-1; Progressive Publisher, Kolkata, January, 2015; ISBN 978-81-8064-211-1. (Two Co-authors)
- 3. Degree Mathematics, V-3; Progressive Publisher, Kolkata, January, 2016; ISBN 978-81-8064-230-2. (Two Co-authors)
- 4. Book Name: Advances in Functional Analysis and Fixed Point Theory

Chapter Name: Gradual Normed Linear Spaces (pp 121-141)

Authors: Shyamal Debnath, Chiranjib Choudhury

Publisher: **Springer** (**24 April**, **2024**) Online ISBN **978-981-99-9207-2**.

Collaboration

- 1. Prof. Ekrem Savas, Dept. of Mathematics, Istanbul Commerce University, Turkey.(Received an invitation letter to perform as a 'Visiting Scientist' at Usak University, TURKEY)
- 2. Prof. Ayhan Esi, Dept. of Mathematics, Adiyaman University, Turkey.
- 3. Prof. M. Et, Dept. of Mathematics, First University, Turkey.
- 4. Prof. N. P. Pahari, Dept. of Mathematics, Tribhuvan University, Nepal.
- 5. Prof M. Mursaleen, Dept. of Mathematics, Aligarh Muslim University, UP, India.
- 6. Prof. Umakanta Mishra, Dept. of Mathematics, Berhampur University, Orissa, India.
- 7. Prof. N. Subramanian, Dept. of Mathematics, SASTRA University, Tamilnadu, India. (Visited to my lab for two months as a INSA visiting scientist fellow)
- 8. Prof. V. N. Mishra, Dept. of Applied Mathematics and Humanities, S.V. National Institute of Technology, Surat 395007, Gujarat, India.
- 9. Prof. B. C. Tripathy, Dept. of Mathematics, Tripura University, Agartala, India.
- 10. Dr. Bipul Sarma, Dept. of Mathematics, Madhab Chandra College, Barpeta, Guwahati, Assam, India.
- 11. Dr. Amar Jyoti Dutta, Dept. of Mathematics, Pragjyotish College, Santipur, Guwahati, Assam, India.

Country Visited

- 1. 6-9 November, 2014, ANTALYA, TURKEY.
- 2. 3-8 August, 2015, University of Macau, China.
- 3. 8-10 December, 2017, University of Dhaka, Bangladesh.
- 4. 1-9 August, 2018, ICM2018, Rio, Brazil.