

Somnath Paul

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Education

Ph. D. (Mathematical Sciences)	2014, Tezpur University, Assam, India. Thesis Title: <i>On distance spectral radius and Laplacian matrices of graphs</i> . Supervisor: Professor Milan Nath . Area of Study: Spectral Graph Theory.
M. Sc. (Mathematics)	2008, Gauhati University, Assam, India 1 st class 1 st position with 85% marks.
B. Sc. (Mathematics)	2006, Bholanath College (Under Gauhati University), Dhubri, Assam. 1 st class 11 th position with distinction and 63.4% marks in Honors.
H.S. (Science)	2003, Sishupathsala H.S. School (Under AHSEC), Dhubri, Assam. 2 nd division with 54.6% marks.
H.S.L.C.	2003, Vivekananda Vidyapith High School (Under SEBA), Dhubri. 1 st division with 70% marks.

Professional Experience

Assistant Professor (Level 11)	from 09/08/2021 till date, Department of Applied Sciences, Tezpur University, Assam
Assistant Professor (Level 10)	from 16/12/2019 to 08/09/2021, Department of Applied Sciences, Tezpur University, Assam
Assistant Professor (Level 10)	from 09/08/2017 to 15/12/2019, Department of Mathematics, Pandit Deendayal Upadhyaya Adarsha Mahavidyalaya, Behali, Assam
Assistant Professor (contractual)	from 17/12/2015 to 08/08/2017, Department of Mathematical Sciences, Tezpur University, Assam
Assistant Professor (ad-hoc)	from 05/02/2014 to 15/12/2015, Department of Mathematical Sciences, Tezpur University, Assam
Assistant Professor (on contract)	August 2013 – January 2014, Department of Mathematics, NIT Silchar, Assam
Lecturer (ad-hoc)	01/09/2008 – 15/07/2010, Department of Computer Science, North Eastern Regional Institute of Management, Guwahati, Assam,

Research Impact

Citation Index (2021)

Google Scholar: 251  <https://scholar.google.com/citations?user=pLQq2RYAAAAJ&hl=en>

SCOPUS: 214  <https://www.scopus.com/authid/detail.uri?authorId=56303050700>

h-Index (2021)

Google Scholar: 8

SCOPUS: 8

Research Publications in Referred Journals

1. J. Kalita, S. Paul, On the spectra of non-commuting graphs of certain class of groups, *Asian-European Journal of Mathematics*, <https://doi.org/10.1142/S1793557123500936C> (Publisher:-World Scientific, Impact Factor: 0.709).
2. S. Paul, Conjugate Laplacian eigenvalues of co-neighbour graphs, *Algebra and Discrete Mathematics*, 33 (2022), 108-117 (Publisher:-Institute of Applied Mathematics And Mechanics of the National Academy of Sciences of Ukraine, Impact Score: 0.26).
3. S. Paul, Distance Laplacian spectra of joined union of graphs, *Asian-European Journal of Mathematics*, 15 (2022), 2250039 (Publisher:-World Scientific, Impact Factor: 0.709).
4. A. Alhevaz, M. Baghipur, S. Paul, New Bounds and Extremal Graphs for Distance Signless Laplacian Spectral Radius, *Journal of Algebraic Systems*, 8 (2021), 231-250. (Publisher:- Shahrood University of Technology, Impact Score: 0.21) [Cited by-1, Source: Google scholars]
5. A. Alhevaz, M. Baghipur, S. Paul, H. S. Ramane, Bounds for peripheral distance signless Laplacian eigenvalues of graphs, *Asian-European Journal of Mathematics*, 13 (2020), 2050113 (Publisher:-World Scientific, Impact Factor: 0.709).
6. A. Alhevaz, M. Baghipur, S. Paul, Spectrum of graphs obtained by operations, *Asian-European Journal of Mathematics*, 13 (2020), 2050045 (Publisher:-World Scientific, Impact Factor: 0.709). [Cited by-2, Source: Google scholars]
7. A. Alhevaz, M. Baghipur, E. Hashemi, S. Paul, On the sum of the distance signless Laplacian eigenvalues of a graph and some inequalities involving them, *Discrete Mathematics, Algorithms and Applications*, 12 (2020), 2050006 (Publisher:-World Scientific, Impact Factor: 0.796). [Cited by-2, Source: Google scholars]
8. S. Paul, Conjugate Laplacian matrices of a graph, *Discrete Mathematics, Algorithms and Applications*, 10 (2018), 1850082 (Publisher:-World Scientific, Impact Factor: 0.796). [Cited by-1, Source: Google scholars]
9. S. Paul, The spectra of a new join of graphs, *Discrete Mathematics, Algorithms and Applications*, 10 (2018), 1850074 (Publisher:-World Scientific, Impact Factor: 0.796). [Cited by-3, Source: Google scholars]
10. A. Alhevaz, M. Baghipur, S. Paul, On the distance signless Laplacian spectral radius and the distance signless Laplacian energy of graphs, *Discrete Mathematics, Algorithms and Applications*, 10 (2018), 1850035 (Publisher:-World Scientific, Impact Factor: 0.796). [Cited by-18, Source: Google scholars]
11. S. Paul, On distance and distance Laplacian spectra of corona of two graphs, *Discrete Mathematics, Algorithms and Applications*, 8 (2016), 1650007 (Publisher:-World Scientific, Impact Factor: 0.796). [Cited by-1, Source: Google scholars]

12. M. Nath, **S. Paul**, On the spectra of graphs with edge-pockets, *Linear and Multilinear Algebra*, 63 (2015), 509–522 (**Publisher:-Taylor & Francis, Impact factor: 1.178**) [Cited by-6, Source: Google scholars].
13. M. Nath, **S. Paul**, On the distance Laplacian spectra of graphs, *Linear Algebra and its Applications*, 460 (2014), 97–110 (**Publisher:-Elsevier, Impact factor: 1.401**) [Cited by-41, Source: Google scholars].
14. M. Nath, **S. Paul**, On the distance spectral radius of trees, *Linear and Multilinear Algebra*, 61 (2013), 847–855 (**Publisher:-Taylor & Francis, Impact factor: 1.178**) [Cited by-31, Source: Google scholars].
15. S. S. Bose, M. Nath, **S. Paul**, On the maximal distance spectral radius of graphs without a pendent vertex, *Linear Algebra and its Applications*, 438 (2013), 4260–4278 (**Publisher:-Elsevier, Impact factor: 1.401**). [Cited by-18, Source: Google scholars].
16. **S. Paul**, On the maximal distance spectral radius in a class of bicyclic graphs, *Discrete Mathematics, Algorithms and Applications*, 4 (2012), 1250061 (**Publisher:-World Scientific, Impact Factor: 0.796**) [Cited by-9, Source: Google scholars].
17. S. S. Bose, M. Nath, **S. Paul**, On the distance spectral radius of cacti, *Linear Algebra and its Applications*, 437 (2012), 2128–2141 (**Publisher:-Elsevier, Impact factor: 1.401**) [Cited by-18, Source: Google scholars].
18. M. Nath, **S. Paul**, On the distance spectral radius of bipartite graphs, *Linear Algebra and its Applications*, 436 (2012), 1285–1296 (**Publisher:-Elsevier, Impact factor: 1.401**) [Cited by-43, Source: Google scholars].
19. S. S. Bose, M. Nath, **S. Paul**, Distance spectral radius of graphs with r pendent vertices, *Linear Algebra and its Applications*, 435 (2011), 2828–2836 (**Publisher:-Elsevier, Impact factor: 1.401**) [Cited by-45, Source: Google scholars].
20. M. Nath, **S. Paul**, On the minimal distance spectral radius in the class of bicyclic graphs, *Discrete Mathematics, Algorithms and Applications*, 6 (2014), 1450014 (**Publisher:-World Scientific, Impact Factor: 0.796**). [Cited by-2, Source: Google scholars]
21. M. Nath, **S. Paul**, A note on the distance spectral radius of some graphs, *Discrete Mathematics, Algorithms and Applications*, 6 (2014), 1450015 (**Publisher:-World Scientific, Impact Factor: 0.796**). [Cited by-6, Source: Google scholars]
22. M. Nath, **S. Paul**, Graph transformation and distance spectral radius, *Discrete Mathematics, Algorithms and Applications*, 5 (2013), 1350014 (**Publisher:-World Scientific, Impact Factor: 0.796**).

Book Chapters

1. **S. Paul**, *A note on integral graphs*, Current Topics in Mathematics, Mahaveer Publications, Assam. Ed. P. D. Goswami, A. Doley. ISBN No. 978-93-91064-75-4, pp. 260 (2022).

Papers presented in international & national conferences

1. “On the maximum A_α -spectral radius of graphs with given connectivity and minimum degree” presented at the National Conference on Advances in Mathematical Sciences (NCAMS-2022), organized by Department of Mathematics, Gauhati University, Assam, India, during 22-23 December 2022.
2. “On Distance & Distance Laplacian Integral Graphs” presented at the International Conference on Algebra and Discrete Mathematics (ICADM-2022), organized by PG Department of Mathematics, Fatima Mata National College (Autonomous), Kollam, Kerala, India, during 14-15 March 2022.
3. “On the distance & distance (signless) Laplacian spectra of central graph” presented at International Conference on Mathematical Modelling, Applied Analysis and Computational Intelligence (ICMMAACI-2022), organized by the Department of Mathematics, The Gandhigram Rural Institute (Deemed to be University), Gandhigram, Tamil Nadu, India, during 2-4 March 2022.
4. “On the Distance Spectra of Central Graph” presented at the 36th Annual Conference of Ramanujan Mathematical Society, organized by Department of Mathematics, Amrita Vishwa Vidyapeetham, Coimbatore, India, during 5-7 August 2021.
5. “Distance Laplacian Spectra of graphs obtained by generalization of join and lexicographic product” presented at the International Webinar on The Role of Applied Mathematics in Present Global Crisis, organized by the Department of Applied Mathematics with Oceanology and Computer Programming, Vidyasagar University, West Bengal, India, during 5-7 August 2020.
6. “Some constructions of distance Laplacian integral graphs” presented at the National Conference on Advances in Science, Engineering & Technology, held at Girijananda Chowdhury Institute of Management and Technology, Tezpur, during 10-11 November 2017.
7. “On the spectra of a new join of graphs” presented at the National Conference on Linear Algebra and its Applications, held at the Department of Mathematics, Sikkim Manipal Institute of Technology, Sikkim, during 9-10 January 2017.
8. “Conjugate Laplacian eigenvalues of co-neighbour graphs” presented at the 82nd Annual Conference of Indian Mathematical Society, held at Department of Mathematics, Kalyani University, Nadia, during 27-30 December 2016.
9. “On conjugate Laplacian matrices of a graph” presented at the National Conference on Mathematics and its Applications-2016, held at the Department of Mathematics, Cotton College, Guwahati, during 21-22 October 2016.

Invited Talks

1. March 4, 2022: Delivered a talk on “Graph Theory - Introduction and Applications”, at the Association of Mathematics, Shift-II, Sacred Heart College (Autonomous), Thirupatur, Tamil Nadu.
2. March 1, 2022: Delivered a talk on “Integral Graphs-History & Recent developments”, at Division of Mathematics, School of Advanced Sciences, Vellore Institute of Technology, Chennai, Tamil Nadu.
3. July 16, 2021: Delivered a talk on “A note on Integral Graphs”, at the weekly e-seminar on “Graphs, Matrices and Applications”, organized by the Department of Mathematics, IIT Kharagpur, Kharagpur, West Bengal.
4. July 27, 2020: Delivered a talk on “Linear Algebra-A Geometric Approach”, at a National Webinar, organized by the Department of Mathematics, Dhemaji College, Dhemaji, Assam.

5. October 1, 2016: Delivered two talks on “*Graph Theory-History and Development*” and “*Linear Algebra-A Geometric Approach*”, organized by the Department of Mathematics, Kaliabor College, Nagaon, Assam.

International & National Webinars Attended

1. National Webinar on “*Some Emerging areas in Pure Mathematics*”, organized by the Department of Mathematics, St. Anthony’s College, Shillong, during 16 – 17 September 2022.
2. International Webinar on “*Empowering knowledge on ethical publishing: Mastering the art of identifying predatory, fake and cloned journals*”, organized by Research Academy On Campus, Elsevier at APAC Customer Success Hub, on 8 June 2022.
3. National Webinar on “*Recent Advances in Mathematics and its Applications (RAMA-2022)*”, organized by the Department of Pure Mathematics, University of Calcutta, during 10 – 11 March 2022.
4. National Webinar on “*Research Methodology and Publication Ethics*”, organized by the Department of Mathematics, Central University of Kerala, on 3rd September 2021.
5. National Webinar on “*Fractional Calculus*”, organized by the Department of Mathematics, R.B. Attal College, Beed on 31st August 2021.
6. National Webinar on “*Learning Mathematics*”, organized by the Department of Mathematics & IQAC, THB College, Sonitpur on 20th July, 2021.
7. National Webinar on “*Implementation of NEP 2020 in HEIs*”, organized by IQAC, B.S. Abdur Rahman Crescent Institute of Science & Technology, Chennai on 16th June 2021.
8. National Webinar on “*Quality Assessment in Higher Education for NAAC Evaluation*”, organized by IQAC, Diphu Government College, Diphu on 20th December 2020.
9. International Webinar on “*MATHEMATICAL MODELLING IN THE CONTEXT OF COVID-19 AND THE GLOBAL CRISES*”, organized by Department of Mathematics & IEEE student branch, NIT Agartala, Tripura during 12th – 14th September, 2020.
10. Digital International Conference on “*Advances in Computational Methods-2020*”, organized by Department of Mathematics, Gujarat University, Ahmedabad, during 26th – 27th September 2020.
11. International Conference on “*Nature Inspired Dynamical Systems-2020*”, organized by Department of Mathematics, Gujarat University, Ahmedabad, on 12th September 2020.
12. National Webinar on “*Differential Equations: Reality, Appreciation and Applications*”, organized by Department of Mathematics & IQAC, THB College, Sonitpur, Assam on 9th September, 2020.
13. National Webinar on “*Online education and its amalgamation with classroom education: opportunities and challenges*”, organized by Maharaj Singh College, Saharanpur, on 3rd September 2020.
14. National Webinar on “*Advances in Mathematical Modelling of Infectious Diseases*”, organized by Department of Applied Sciences, Tezpur University, Assam on 31st August 2020.
15. National Webinar on “*COVID-19 Pandemic: Sensitization and it’s Management Strategies for Students*”, organized by PDUAM Eralgool, karimganj, Assam on 26th August, 2020.
16. Panel Discussion on “*National Education Policy 2020 and North East India: Exploring the Roadmap*”, organized by Department of Education, Tezpur University, Assam on 26th August 2020.
17. International Webinar Series on “*Applications of Mathematics*”, organized by Department of Mathematics, Gurucharan College, Silchar, Assam during 20th – 22nd August 2020.

18. International Webinar on “*Cyber Security*”, organized by Department of Mathematics and Information Technology, SNG College of Commerce, Chembur, Mumbai on 2nd August 2020.
19. National Webinar on “*Ramanujan and A Glimpse of his Mathematics*”, organized by Royal School of Applied & Pure Sciences, Royal Global University, Guwahati, Assam on 29th July 2020.
20. International Webinar on “*Recent Trends in Mathematical Sciences*”, organized by IQAC, Hans Raj Mahila Maha Vidyalaya, Jalandhar, Punjab on 28th July, 2020.
21. National Webinar on “*Uncertain Science, Uncertain Mathematics: Uncertain World*”, organized by Department of Mathematics, DR College, Golaghat, Assam on 22nd July 2020.

Induction Programme/ Orientation Programme/ FDP/Refresher Course attended

1. MHRD sponsored Two-week Refresher Course in “MATHEMATICS” [Online Mode], organized by Department of Mathematics & Teaching Learning Centre, Ramanujan College, Delhi University during 16th – 30th March 2021.
2. UGC sponsored Guru-Dakshita Faculty Induction Program (FIP-03) [Online Mode], organized by UGC-HRDC, Gauhati University during 10th February to 11th March 2021.
3. Ministry of Education sponsored Online FDP on Development of E-Module with Four Quadrant Approach, organized by Teaching Learning Centre, Tezpur University during 11th – 21st December 2020.
4. Online International FDP on Tools for Technical Writing and Research Data Analysis-2020, organized by Department of Computer Science, NERIM Group of Institutions, Guwahati, Assam during 1st – 5th September 2020.
5. MHRD sponsored Induction Training of Faculty-I, organized by Teaching Learning Centre, Tezpur University during 23rd November to 22nd December 2017, at Tezpur University, Assam.

Awards and Recognitions

1. Best Paper Presentation Award by the Indian Mathematical Society at the 82nd Annual Conference of Indian Mathematical Society, held at Department of Mathematics, Kalyani University, Nadia, during 27-30 December, 2016.
2. Qualified SLET (NE Region), 2014.
3. Awarded INSPIRE Fellowship (JRF) by the Department of Science and Technology, New Delhi, India, June 2011.
4. Recipient of the Institutional Fellowship at Tezpur University, Tezpur, Assam, India, from August 2010 to March 2011.
5. 6th Dr. Amala Bezbaruah Memorial Award-2007 given by Dr. Amala Bezbaruah Trust, Gauhati University, 2008.

Workshops / Schools Attended

1. Instructional School for Teachers on Partial Differential Equations, organized by National Centre of Mathematics and Department of Applied Sciences, Tezpur University during 21st November to 3rd December, 2022.

2. Weeklong Online Workshop on Assessment and Evaluation, organized by TLC, Tezpur University during 24th – 29th August, 2020.
3. Effective and Efficient Online Teaching in the Age of Corona, A hands On Workshop, a 3 days online workshop, organized by ICT at IIT Bombay, completed on 17th May 2020.
4. Online basic Training on Use of ICT in Teaching, a 2 day workshop, organized by TLC, Tezpur University on 20th and 23rd April, 2020.
5. Pedagogical Training for Mathematics Teachers, organized under the aegis of MTTTS TRUST, during 25th to 30th December 2019, at Department of Mathematical Sciences, Tezpur University, Assam.
6. National Workshop on Matrices and Graphs, organized by Department of Mathematics, Sikkim Manipal Institute of Technology, during 2nd to 7th January 2017, at Sikkim Manipal Institute of Technology, Sikkim.
7. Workshop on Massive Open Online Courses, organized by Teaching Learning Centre of Excellence for Curriculum and Pedagogy, Tezpur University during 24th to 25th November 2016, at Tezpur University, Assam.
8. National Workshop on Innovating India, organized jointly by NIT Silchar, CSIR-NISTADS, New Delhi and IIM Kashipur during 25th to 26th November 2013, at NIT Silchar, Assam.
9. Workshop on Analysis, organized jointly by Theoretical Statistics and Mathematics Unit (SMU), Indian Statistical Institute, Kolkata & Department of Mathematical Sciences, Tezpur University during 3rd to 9th January 2012, at Tezpur University, Assam.
10. North East ISI-TU spring school on selected topics in algorithms, organized jointly by Advanced Computing and Microelectronics Unit (ACMU), Indian Statistical Institute, Kolkata & Department of Computer Science and Engineering, Tezpur University during 21st to 23rd March 2011, at Tezpur University, Assam.

Online Quizzes Attended

1. Scored 76% at *Online Covid-19 Awareness Quiz 2020*, organized by SWAYAM & IQAC, B.H.B. College, Sarupeta, Assam on 30th June, 2020.
2. Scored 95% at *Online Quiz on Group Theory*, organized by Department of Mathematics, SR&BGNR Arts and Science College(A), Khammam, Telangana, on 25th June, 2020.

Membership of Professional Bodies

1. Life Member of Indian Mathematical Society.
2. Life Member of Assam Academy of Mathematics.
3. Life Member of Operation Research Society of India.

Reviewing Experience

1. Served as a *Referee* of research articles for
 - Linear Algebra and its Applications (Elsevier),
 - Linear and Multilinear Algebra (Taylor & Francis),

- Discrete Applied Mathematics (Elsevier),
 - Electronic Journal of Linear Algebra (International Linear Algebra Society),
 - Mathematische Nachrichten (WILEY-VCH Verlag GmbH & Co.),
 - Asian European Journal of Mathematics (World Scientific),
 - Indian Journal of Pure and Applied mathematics (Springer),
 - Ars Combinatoria,
 - Journal of Mathematical Research with Applications.
2. Serving as a *Reviewer* for Mathematical Reviews, published by the American Mathematical Society, since 2014.

Skill Set

1. Programming Languages & Miscellaneous Tools:
 - MATHEMATICA, MATLAB, \LaTeX , C, Microsoft Office.
2. Operating System Environments:
 - Microsoft Windows family.

PERSONAL DETAILS

1. Date Of Birth:- 26th January, 1986.
2. Gender:- Male.
3. Languages Known:-
 - (i) Bengali (R-W-S) (ii) English (R-W-S) (iii) Assamese (R-W-S) (iv) Hindi (R-S).
4. Marital Status:- Married.
5. Father's Name:- Sri Subhas Ranjan Paul.
6. Mother's Name:- Smt. Bina Paul.
7. Spouse Name:- Smt. Simi Bora.
8. Permanent Address:- Shantinagar, Pallimangal, Ward No-13, PO Box 783323, Dhubri, Assam, India.

Last updated on: 28/12/2022