Curriculum Vitae



Name:	Prof. Kallol Paul
Designation:	(i) Vice-Chancellor
_	Kalyani University
	(ii) Vice-Chancellor (authorised)
	Sadhu Ram Chand Murmu University of Jhargram
	West Bengal
	India
	(iii) Professor of Mathematics
	Jadavpur University (on lien)
	West Bengal

- e-mail : kalloldada@gmail.com vc_kalyani@klyuniv.ac.in vcsrcmuj@gmail.com kallol.paul@jadavpuruniversity.in
- Mobile : 8240208997 9433207354

Date of birth: 9th December, 1969

Educational Qualification :

Name of	University	Year of Passing	Division/Class
Examination			
Class X (H.S.L.C.)	B.S.E.A	1984	1st Div.
Class XII (H.S.)	A.H.S.E.C.	1987	1st Div.
B.Sc.(Math) Major	Gauhati University	1990	1st Class 1st
			Best Graduate
M.Sc.	Jadavpur University	1993	1st Class 1st
(Mathematics)			Gold Medalist
			Best Post Graduate
NET	UGC-CSIR	1993	N.A.
Ph.D.	Jadavpur University	1999	N.A.

Research Interests :	: Functional Analysis :		
	Orthogonality in normed spaces,		
	Geometry of Banach space, Operator Inequality.		
ORCID id :	https://orcid.org/0000-0002-7637-0812		
Researchgate :	https://www.researchgate.net/profile/Kallol-Paul		
	Google Scholar : $h-index : 27, i-10 index : 71$		
	Researchgate : h-index : 28, Citations : 2404		

Administrative/Teaching Experience :

Total : 27 Years 8 months As Professor: 12 Years 8 months .

Sl. No.	Positions held	Employer/Organization	Period/ Duration
			of the position/work
1	Vice-Chancellor	Kalyani University	17.12.2024 -
			till date
2	Vice-Chancellor	Sadhu Ram Chand Murmu	14.05.2024 -
		University of Jhargram	till date
3	Professor (on lien)	Jadavpur University	14.05.2024 -
			till date
4	Professor	Jadavpur University	30.05.2012 -
			13.05.2024
5	Associate Professor	Jadavpur University	30.05.2009 -
			29.05.2012
6	Reader	Jadavpur University	30.05.2006 -
			29.05.2009
7	Senior Lecturer	Jadavpur University	17.01.2005 -
			29.05.2006
8	Senior Lecturer	New Alipore College	30.05.2001 -
		(aff. to University of Calcutta)	16.01.2005
9	Lecturer	New Alipore College	30.05.1997 -
		(aff. to University of Calcutta)	29.05.2001

Awards/Recognitions:

- Senate member of National Institute of Technology, Raipur.
- Delivered 15th Ganesh Prasad Memorial Award Lecture in the 87th Annual Conference of the Indian Mathematical Society (IMS) an International Meet held under the auspices of the Mahatma Gandhi Mission (MGM) University, Aurangabad, Maharashtra, India during December 4-7, 2021.
- Best research paper award (Subhash Bhatt Award 2021) for the paper "Characterization of k-smooth operators between Banach space", published in Linear Algebra and its Applications, 586 (2020) 296-307, awarded by Indian Mathematical Society in the year 2021.
- Awarded **INSA Bilateral Exchange program fellowship** to visit Bolyai Institue, University of Szeged, Hungary for one month during 2019.

- Awarded D. N. Dutta Memorial **Gold-centered Silver Medal** for securing highest aggregate of marks among all the courses of M.Sc Examination, 1993.
- Awarded S. N. Bando Memorial **Gold Medal** for securing the highest aggregate of marks among all the courses in the Master of Science Examination, 1993.
- Awarded **University Medal** for standing first in order of merit in the Master of science Examination in Mathematics, 1993.
- Awarded Dr S. K. Banerjee Memorial **Silver Medal** for securing the highest aggregate of marks at the Post Graduate Examination, 1993.

Post Doctoral Supervision:

Dr Kalidas Mandal is working as a Post doctoral fellow under DST-SERB project titled "Local preservation of geometric properties and its application to the study of isometries on Banach spaces" w.e.f. 28.03.2024.

PhD Supervision :

Total: 23 (Awarded: 17, Going on: 06)

Sl	Name	Title of the thesis	Date of joining /	Status
No.			Year of completion	
1	Reepa Datta	Geometry of Banach space	01.07.2024	Going on
2	Somdatta Barik	Operator theory in functional	03.06.2022	Going on
		analysis		
3	Jayanta Manna	Geometry of Banach space	03.06.2022	Going on
4	Shamim Sohel	Study of the best coapproximation	13.01.2021	Going on
		properties in a Banach space using		
		Birkhoff-James orthogonality		
5	Souvik Ghosh	Study of various geometric	18.12.2020	Going on
		properties of normed linear spaces		
		using orthogonality notions		
6	Anirban Sen	Study of Berezin number	27.08.2020	Thesis
		inequalities of operators on		submitted
		reproducing kernel Hilbart space		
7	Suvendu Jana	Euclidean operator radius	2023	Awarded
		inequalities of Hilbert space		
		operators and their applications		
8	Subhrajit Dey	k-smoothness of bounded linear	2023	Awarded
		operators and related topics		
9	Pintu Bhunia	Numerical radius inequalities	2022	Awarded
		of Hilbert space operators		
		and their applications		

Sl	Name	Title of the thesis	Date of joining /	Status
No.			Year of completion	
10	Raj Kumar Nayak	A-Numerical radius inequalities of	2022	Awarded
		semi-Hilbertian space operators		
11	Jeet Sen	Study of approximate orthogonality	2022	Awraded
		and related properties in normed		
		linear spaces		
12	Kalidas Mandal	A study of orthogonality	2022	Awarded
		and related concepts in normed		
		linear spaces		
13	Aniket Bhanja	Inequalities related to Davis-	2022	Awarded
		Wielandt radius and (α, β) -norm		
		of a bounded linear operator		
14	Arpita Mal	Role of Birkhoff-James orthogonality	2021	Awarded
		in the study of the geometry of		
		operator spaces		
15	Anubhab Ray	Study of geometric properties	2019	Awarded
		using norm inequalities in		
		Banach spaces		
16	Shibashis Karmakar	On J-frames and J-fusion	2018	Awarded
		frames for Krein spaces		
17	Puja Ghosh	Study of Birkhoff-James	2018	Awarded
		orthogonality in normed linear		
		space X and in operator space $B(X)$		
18	Snehasish Bose	Solving Nonlinear matrix equations	2017	Awarded
		using fixed point theory		
19	Shyamasree Ghosh	Some properties of optimal	2016	Awarded
	Dastidar	distance vectors, numerical		
		radius and related topics		
20	Santanu Bag	Operator Inequalities involving	2015	Awarded
		Numerical radius and its applications		
21	Debmalya Sain	Birkhoff-James Orthogonality	2015	Awarded
		in the study of Geometry		
		of Normed Linear Spaces		
22	Gopal Das	Operator Inequalities Pertaining	2011	Awarded
		to the Spectrum		
23	Sk Monowar	Some results on Operator	2005	Awarded
	Hossein	Inequalities		

Research Projects :

Sl	Title of the project	Funding Agency with	Year of	Completed
No.		amount approved (in Rs)	duration	
1	Local preservation of	Core Research Grant	2024-2027	Started on
	geometric properties and its	SERB, DST		08.03.2024
	application to the study of	28,79,340		
	isometries on Banach spaces P.I.			
2	On numerical radius	RUSA 2.0, JU		
	and its application	4,00,000	2019-2021	Completed
	P.I.			
3	Source of non conventional	RUSA $2.0, JU$		
	Analytic and algebraic Study	$17,\!49,\!200$	2019-2021	Completed
	P.I.			
4	Birkhoff-James orthogonality	MATRICS		
	and its application in	SERB, DST	2018-2021	Completed
	the geometry of Banach spaces	$6,\!60,\!000$		
	P.I.			
5	Birkhoff-James orthogonality	UGC-DRS	April 2012	Completed
	and Rectangular constant	(Centrally funded)	-	
	P.I.		March 2017	
6	On inequalities			
	involving numerical	DST-PURSE, JU	2009-14	Completed
	radius & related concepts	(Centrally funded)		
	P.I.			
1	Investigation of some	JU under seed support		
	Operator Inequalities	with Potential for	0005 00	
	P.1.	Excellence	2005-06	Completed
		50,000		Q (: 1
ð	Operator Inequalities	UGU Minon Dogozach andiest	2005	Sanctioned
	on filbert spaces	Minor Research project	2005	
	F.I.	80,000		completed
				of institute
				or institute

<u>Peer Reviewer</u>: For reputed journals from top publishing house like Elsevier, Springer Nature, Taylor & Francis, John Wiley and many more.

Editorial Board member : For Journal "Mathematics Letters" published by Science Publishing Group, USA.

Member (Present/Past) of academic bodies :

- (1) Senate member, National Institute of Technology, Raipur.
- (2) Member of Board of Studies, Narendrapur Ramkrishna Mission Residential College.
- (3) Member of Governing Body of Sanmiloni Mahavidyalaya, BaghaJatin, Kolkata.
- (4) Member of Board of Post Graduate Studies, Murshidabad University, West Bengal.
- (5) Member of Board of Post Graduate Studies, Tripura University.
- (6) Member of Board of Post Graduate Studies, Assam University.
- (7) Member of Board of Studies, Midnapore College (Autonomous), Midnapore, West Bengal.
- (8) Member of Governing Body of New Alipore College, Kolkata.
- (9) Member of American Mathematical Society.
- (10) Life member of Ramanujan Mathematical Society.
- (11) Life member of Indian Mathematical Society.
- (12) Life member of Calcutta Mathematical Society.
- (13) Life member of Assam Academy of Mathematics.
- (14) Life member of G C College Alumni Association.
- (15) Syllabus committee member of UG Mathematics(Hons) Syllabus of WBHSEC.
- (16) Syllabus committee member of UG Mathematics(Hons) Syllabus of Jadavpur University.
- (17) Syllabus committee member of PG Mathematics(Hons) Syllabus of Jadavpur University.
- (18) Syllabus committee member of Mathematics Syllabus (both UG and PG) of Aliah University.
- (19) Member of Academic Board of JBNSTS, Kolkata.

International Activities:

- (1) Collaboration with Prof F. Kittaneh, Department of Mathematics, The University of Jordan, Amman, Jordan on Numerical Radius Inequalities.
- (2) Collaboration with Prof S. S. Dragomir, College of Engineering and Science, Victoria University, Melbourne, VIC, Australia on Numerical Radius Inequalities.
- (3) Collaboration with Prof M. S. Moslehian, Department of Pure Mathematics, Ferdowsi University of Mashhad, Mashhad, Iran on Numerical Radius Inequalities.
- (4) Awarded INSA Bilateral Exchange program fellowship to visit Bolyai Institue, University of Szeged, Hungary for one month during 2019.
- (5) Visited Department of Mathematics, Shanghai University during July 14 July 28, 2018.
- (6) Visited Department of Mathematics, Pedagogical University of Krakow, Poland during April 10 - April 30, 2018.
- (7) Collaboration with Professor Jacek Chmielinsky of Pedagogical University of Krakow, Poland.
- (8) Collaboration with Professor Abhijit Dasgupta of Department of Mathematics, College of Engineering and Science, University of Detroit Mercy, USA on "Birkhoff-James orthogonality and its characterization".

- (9) Collaboration with Professor(Retd.) Lokenath Debnath of Department of Mathematics, University of Texas-Pan America on "Anti-eigenvalues of accretive operators and related topics".
- (10) Collaboration with Professor Kanhaiya Jha of Department of Natural Sciences(Mathematics group), Kathmandu University, Nepal on "Strictly convex spaces and Birkhoff-James orthogonality".
- (11) Collaboration with Professor V. Kadets of Department of Mathematics and Informatics, Kharkiv V.N. Karzain National University, Ukraine on "Farthest point problem in normed linear spaces".
- (12) Program Committee member of Annual International Conference on Computational Mathematics, Computational Geometry & Statistics (CMCGS) held at Singapore organised by Global Science and Technology Forum, Singapore for seven years 2012-2018.
- (13) Program Committee member of 1st International Conference on Functional Analysis held during July 19 - July 21 in Shanghai, China.
- (14) **Referee** of International Journals published by Elsevier, Taylor & Francis, Springer and many other reputed publishers.

Visiting Faculty (International / National) :

- Visited Department of Mathematics, Pedagogical University of Krakow, Poland supported by Pedagogical University of Krakow during Septemebr 11 to September 17, 2022.
- (2) Visited Bolyai Institute of Mathematics, University of Szeged, Hungary supported by Indian National Science Academy and Hungarian Academy of Sciences during November 01 to November 30, 2019.
- (3) Visited International Research Center for Tensor and Matrix Theory of Shanghai University (IRCTMT), China, supported by IRCTMT, during 14 July to 27 July, 2018.
- (4) Visited Indian Statistical Institute, Bangalore, India during June 18 June 30, 2018.
- (5) Visited Department of Mathematics, Pedagogical University of Krakow, Poland, supported by Pedagogical University of Krakow, during April 10 to April 30, 2018.
- (6) Visiting Faculty in the Department of Mathematics, Aliah University, Kolkata during odd semester of 2016.
- (7) Visiting Faculty in the Department of Mathematics, Assam University, Silchar, Assam during the period 15th September 2011 to 30th September 2011.

List of Publications : Total - 153

(During last five years 2024-2019)

- (i) **<u>Book</u>**:
- A. Mal , K. Paul and D. Sain, Birkhoff-James orthogonality and geometry of operator spaces, Infosys Science Foundation Series, Springer Singapore, (2024). ISBN 978-981-99-7110-7. https://doi.org/10.1007/978-981-99-7111-4.

- (2) P. Bhunia, S. S. Dragomir, M. S. Moslehian and K. Paul, Lectures on numerical radius inequalities, Infosys Science Foundation Series in Mathematical Sciences, Springer Cham, (2022), XII+209 pp. https://doi.org/10.1007/978-3-031-13670-2.
- (ii) Book Chapter :
- (3) K. Paul and D. Sain, Birkhoff-James Orthogonality and Its Application in the Study of Geometry of Banach Space, Advanced Topics in Mathematical Analysis. Boca Raton, FL: CRC Press, (2018) Chapter 8, 245–285. ISBN 9780815350873 - CAT# K345827. https://doi.org/10.1201/9781351142120
- (4) K. Paul, D. Sain and P. Ghosh, Symmetry of Birkhoff-James Orthogonality of Bounded Linear Operators. In: Brzdęk J., Popa D., Rassias T. (eds) Ulam Type Stability. Springer, Cham. (2019) Chapter 15, 331-344. ISBN 978-3-030-28972-0. https://doi.org/10.1007/978-3-030-28972-0
- (iii) <u>Communicated</u> :
- (5) M. Guesba, S. Barik and K. Paul, Weighted Berezin number inequalities for 2×2 operator matrices, JAMC, Communicated, 2025.
- (6) A. Sen, S. Halder, R. Birbonshi and K. Paul, Numerical range of Toeplitz and Composition operators on weighted Bergman spaces, arXiv:2502.02833
- (7) K. Mandal, J. Manna, K. Paul and D. Sain, On approximate preservation of orthogonality and its application to isometries, Results Math., arXiv:2501.10719
- (8) S. Barik, P. Bhunia and K. Paul, A-numerical radius inequalities using Ageneralized Cartesian decomposition, Afrika Matematika, 2025.
- (iv) Under Review :
- (9) S. Barik, P. Bhunia and **K. Paul**, Norm inequalities in p-Schatten class and its application, Linear Multilinear Algebra, Under Review, 19.01.2025.
- (10) K. Paul, S. Roy, D. Sain, and S. Sohel, A unified approach to a family of optimization problems in Banach spaces, arXiv:2501.10718
- (11) K. Paul, D. Sain and S. Sohel, On symmetric functions and symmetric operators on Banach spaces, Rev. R. Acad. Cienc. Exactas Fís. Nat. Ser. A Mat. RACSAM, Under Review, 24.06.2024.
- (v) **Research Paper :**
- (12) J. Chmieliński, S. Ghosh, K. Paul and D. Sain, Smoothness and approximate smoothness in normed linear spaces and operator spaces, Annals of Functional Analysis, 2025, Preprint.

- (13) S. Ghosh, K. Paul and D. Sain, Orthogonality induced by norm derivatives : A new geometric constant and symmetry, Aeq. Math., (2025). https://doi.org/10.1007/s00010-025-01154-9
- (14) M. Guesba, S. Barik and K. Paul, Further Berezin number and Berezin norm inequalities for sums and products of operators, Complex Anal. Oper. Theory, 19:32 (2025). https://doi.org/10.1007/s11785-025-01659-w
- (15) J. Manna, K. Mandal, K. Paul and D. Sain, On directional preservation of orthogonality and its application to isometries, Bull. Des. Math. Sci., 199 (2025) 103575.
- (16) S. Jana, P. Bhunia and K. Paul, Euclidean operator radius and numerical radius inequalities, Oper. Matrices, 18(4) (2024) 925–939.
- (17) A. Sen, R. Birbonshi and K. Paul, A note on the A-numerical range of semi-Hilbertian operators, Linear Algebra Appl., 703 (2024) 268-288.
- (18) P. Bhunia, S. Jana and K. Paul, *Refined inequalities for the numerical radius* of *Hilbert space operators*, Rocky Mountain J. Math., (2024), in Press.
- (19) D. Sain, S. Sohel and K. Paul, On k-smoothness of operators between Banach spaces, Bull. Sci. Math., (2024) 103486.
 doi: https://doi.org/10.1016/j.bulsci.2024.103486
- (20) M. Guesba, S. Barik, P. Bhunia and K. Paul, A-Davis-Wielandt radius bounds of semi-Hilbertian space operators, Bull. Iranian Math. Science, 50:85 (2024).
- (21) P. Bhunia, S. Jana and K. Paul, Estimates of Euclidean numerical radius for block matrices, Proc. Indian Acad. Sci.(Math. Sci.), 134(20) (2024). https://doi.org/10.1007/s12044-024-00788-0
- (22) D. Sain, J. Manna and K. Paul, On local preservation of orthogonality and its application to isometries, Linear Algebra Appl., 690 (2024) 112-131. https://doi.org/10.1016/j.laa.2024.03.004.
- (23) M. Guesba, P. Bhunia and K. Paul, Berezin number inequalities via positivity of 2 × 2 block matrices, Oper. Matrices, 18(1) (2024) 83-95. http://dx.doi.org/10.7153/oam-2024-18-06
- (24) S. Sohel, S. Ghosh, D. Sain and K. Paul, On some special subspaces of a Banach space, from the perspective of best coapproximation, Monatsh. Math. (2024) https://doi.org/10.1007/s00605-023-01930-2
- (25) S. Jana, P. Bhunia and K. Paul, Euclidean operator radius inequalities of dtuple operators and operator matrices, Math. Slovaca, 74(4) (2024) 947-962. https://doi.org/10.1515/ms-2024-0070
- (26) P. Bhunia, A. Sen, S. Barik and K. Paul, Berezin number and Berezin norm inequalities for operator matrices, Linear Multilinear Algebra, (2024) 1-20. https://doi.org/10.1080/03081087.2023.2299388
- (27) P. Bhunia, S. Jana and K. Paul, Refinements of generalized Euclidean operator radius inequalities of 2-tuple operators, Filomat, 38(8) (2024) 2587-2599.
- (28) P. Bhunia, A. Sen and K. Paul, Generalized Cartesian decomposition and numerical radius inequalities, Rend. Circ. Mat. Palermo II, 73(3) (2024) 887-897. https://doi.org/10.1007/s12215-023-00958-5
- (29) M. Guesba, P. Bhunia and K. Paul, A-numerical radius of semi-Hilbert space operators, J. Convex Anal., 31(1) (2024) 227-242.

- (30) P. Bhunia and K. Paul, Corrigendum to "Development of inequalities and characterization of equality conditions for the numerical radius" [Linear Algebra Appl., 630 (2021) 306-315], Linear Algebra Appl., 679 (2023), 1-3. https://doi.org/10.1016/j.laa.2023.08.019
- (31) D. Sain, A. Mal, P. Bhunia and K. Paul, Corrigendum to "On numerical radius and Crawford number attainment sets of a bounded linear operator" [J. Convex Anal., 28 (2021) 67-80], J. Convex Anal., 30(1) (2023) 401-402.
- (32) P. Bhunia, K. Paul and S. Barik, Further refinements of Davis-Wielandt radius inequalities, Oper. Matrices, 17(3) (2023) 767–778. http://dx.doi.org/10.7153/oam-2023-17-50
- (33) A. Sen and K. Paul, Berezin number and numerical radius inequalities, Vietnam J. Math., (2023). https://doi.org/10.1007/s10013-023-00658-8
- (34) P. Bhunia, and K. Paul, A-numerical radius : new inequalities and characterization of equalities, Hacet. J. Math. Stat., 52(5) (2023) 1254-1262. DOI : 10.15672/hujms.1126384
- (35) R. K. Nayak, P. Bhunia and K. Paul, Improvements of A-numerical radius inequalities of semi-Hilbertian space operators, Hokkaido Math. J., 52(3) (2023) 517-544.

doi:10.14492/hokmj/2022-603.

- (36) P. Bhunia, M.T. Garayev, K. Paul and R. Tapdigoglu, Some new applications of Berezin symbols, Complex Anal. Oper. Theory, 17(96) (2023). https://doi.org/10.1007/s11785-023-01404-1.
- (37) S. Ghosh, D. Sain, A. Mal and K. Paul, On symmetric points with respect to the numerical radius norm, Banach J. Math. Anal., 17(4) (2023). https://doi.org/10.1007/s43037-023-00290-1.
- (38) A. Sen, P. Bhunia and K. Paul, Davis-Wielandt-Berezin radius inequalities of Reproducing kernel Hilbert space operators, Afr. Mat., 34(3) (2023). https://doi.org/10.1007/s13370-023-01089-x
- (39) P. Bhunia, K. Paul and A. Sen, Numerical radius inequalities of sectorial matrices, Ann. Funct. Anal., 14(3) (2023). https://doi.org/10.1007/s43034-023-00288-8.
- (40) P. Bhunia, M. Gürdal, K. Paul, A. Sen and R. Tapdigoglu, On a new norm on the space of reproducing kernel Hilbert space operators and Berezin radius inequalities, Numer. Funct. Anal. Optim., 44(9) (2023) 970-986.
- (41) S. Sohel, D. Sain and K. Paul, On subspaces of l_∞ and extreme contraction in L(X, l_∞ⁿ), Monatsh. Math., 202(3) (2023), 621-636. https://doi.org/10.1007/s00605-023-01867-6.
- (42) P. Bhunia, S. Jana and K. Paul, Numerical radius inequalities and estimation of zeros of polynomials, Georgian Math. J., 30(5) (2023) 671–682. https://doi.org/10.1515/gmj-2023-2037.
- (43) P. Bhunia and K. Paul, Numerical radius inequalities of 2×2 operator matrices, Adv. Oper. Theory, 8(1) (2023). https://doi.org/10.1007/s43036-022-00237-7.

- (44) P. Bhunia and K. Paul, Refinement of numerical radius inequalities of complex Hilbert space operators, Acta Sci. Math.(Szeged), 89(3-4) (2023) 427-236. https://doi.org/10.1007/s44146-023-00070-1
- (45) A. Sen, P. Bhunia and K. Paul, Numerical radius inequalities for tensor product of operators, Proc. Indian Acad. Sci. Math. Sci., 133(1) (2023). https://doi.org/10.1007/s12044-022-00722-2.
- (46) D. Sain, S. Ghosh and K. Paul, On T-orthogonality in Banach spaces, Colloq. Math., 172(2) (2023) 231-241.
- (47) M. Guesba, P. Bhunia and K. Paul, A-numerical radius inequalities and A-translatable radii of semi-Hilbert space operators, Filomat, 37(11) (2023) 3443–3456. https://doi.org/10.2298/FIL2311443G
- (48) P. Bhunia, S. Jana, M. S. Moslehian and K. Paul, Improved inequalities for the numerical radius via Cartesian decomposition, Funct. Anal. Appl., 57(1) (2023) 18–28.
- (49) P. Bhunia, A. Sen and K. Paul, Development of the Berezin number inequalities, Acta Math. Sin.(Engl. Ser.), 39(7) (2023) 1219-1228. https://doi.org/10.1007/s10114-023-2090-1.
- (50) J. Sen and K. Paul, (ε, A)-approximate numerical radius orthogonality and numerical radius derivative, Math. Slovaca, 73(1) (2023) 147–158.
- (51) P. Bhunia, K. Paul and A. Sen, Inequalities involving Berezin norm and Berezin number, Complex Anal. Oper. Theory, 17(1) (2023). https://doi.org/10.1007/s11785-022-01305-9.
- (52) S. Dey, A. Mal and K. Paul, Geometric properties of operator space endowed with numerical radius norm, Ann. Funct. Anal., 14(1) (2023). https://doi.org/10.1007/s43034-022-00239-9.
- (53) S. Jana, P. Bhunia and K. Paul Euclidean operator radius inequalities of a pair of bounded linear operators and their applications, Bull. Braz. Math. Soc. (N.S.), 54(1) (2023). https://doi.org/10.1007/s00574-022-00320-w.
- (54) P. Bhunia, F. Kittaneh, K. Paul and A. Sen, Anderson's theorem and A-spectral radius bounds for semi-Hilbertian space operators, Linear Algebra Appl., 657 (2023) 147-162.
- (55) D. Sain, S. Ghosh and K. Paul, On isosceles orthogonality and some geometric constants in a normed space, Aequationes Math., 97(1) (2023) 147–160. https://doi.org/10.1007/s00010-022-00909-y
- (56) D. Sain, S. Sohel and K. Paul, Extreme contractions on finite-dimensional Banach spaces, Colloq. Math., 172(1) (2023) 65-83.
 DOI: 10.4064/cm8803-7-2022.
- (57) A. Sen, P. Bhunia and K. Paul, Bounds for the Berezin number of reproducing kernel Hilbert space operators, Filomat, 37(6) (2023) 1741-1749. https://doi.org/10.2298/FIL2306741S
- (58) P. Bhunia, A. Bhanja, D. Sain and K. Paul, Numerical radius inequalities of operator matrices from a new norm on \$\mathcal{B}(\mathcal{H})\$, Miskolc Math. Notes, 24(2) (2023) 653-664.
 DOI: 10.18514/MMN.2023.3934

- (59) D. Sain, S. Sohel, S. Ghosh and K. Paul, On best coapproximations in subspaces of diagonal matrices, Linear Multilinear Algebra, 71(1) (2023) 47-62. https://doi.org/10.1080/03081087.2021.2017835
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(iv) **Popular Articles :**

- (164) D. Paul Ghosh and K. Paul, Numbers: Rational, Irrational or transcendental?, Sutra-International Journal of Mathematical Science Education, 3 (2010) 24-30.
- (165) K. Paul and D. Paul Ghosh, How to Define a Real Number Through the Concept of Dedekind Cut?, Int. J. Latest Trend Maths., 3 (2014) 153-160.
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Role as an organizer at International level:

- (1) Joint Organizing Secretary of 2nd International Conference on Mathematical Analysis and Modelling 2023 organized at Jadavpur University during October 9-11, 2023.
- (2) Organized (jointly with Prof Jacek Chmielinski and Dr Debmalya Sain) a special session on "Geometry of linear operators and applications" at the International Workshop on Operator Theory and its Applications (IWOTA 2022) held in Krakow, Poland during September 6-10, 2022.
- (3) Organizing Secretary of "International Conference on Analysis, Algebra, Combinatorics and their Applications "(ICAACA 2020) held at Jadavpur University during January 20-22, 2020 sponsored by SERB, DST and RUSA 2.0, JU.
- (4) Organized a special session titled "Geometry of linear operators and operator algebras" in the 30th International Workshop on Operator Theory and its Applications (IWOTA 2019) held during July 22 - July 26, 2019 at Instituto Superior Tecnico at University of Lisbon, Portugal.

- (5) Program Committee member of 2nd Annual International Conference on Computational Mathematics, Computational Geometry & Statistics (CMCGS) organised by Global Science and Technology Forum, Singapore for the year 2013, 2014, 2015, 2016, 2017, 2018.
- (6) **Program Committee member** of Annual International Conference on Computational Mathematics, Computational Geometry & Statistics (CMCGS 2012) held during January 30-31, 2012 at Singapore organised by Global Science and Technology Forum, Singapore.

Organized Seminar / Training Programme at National level:

- (1) **Co-ordinator** of UGC-HRDC JU sponsored Refresher course on "Mathematics and its applications" held at Department of Mathematics, JU during 02.01.2017-21.01.2017.
- (2) **Joint Convenor** in the "National Conference on Number Theory" organised by Department of Mathematics, Jadavpur University, Kolkata during December 12-14, 2012.
- (3) **Co-ordinator** of UGC-ASC, J.U. sponsored Two Day Short Term Course on "Mathematical Analysis and its applications" held from 22.03.2011 to 23.03.2011 at the Department of Mathematics, Jadavpur University.
- (4) Organized "National Conference on Mathematics and its Applications: State of the Art"as a member of the Organizing committee held during 14-16 January 2010 at Jadavpur University sponsored by DST and Jadavpur University.
- (5) Organized "Refresher Course on Mathematical Analysis and its applications" as a Coordinator (jointly with Dr P Das) in the Department of Mathematics, Jadavpur University, Kolkata 700032, India held during the period Feb.16 -March 07, 2009.
- (6) Organized "National Seminar on Integration of Mathematics with interdisciplinary subjects" as a member of Organizing committee held on 27-28 March 2008 at the Department of Mathematics, Jadavpur University, Kolkata 700032, India.
- (7) **Organized** "National Seminar on Mathematics" as a **Convener** (jointly with Dr S Banerjea) held on 22-23 March **2007** at the Department of Mathematics, Jadavpur University, Kolkata-700032, India.
- (8) **Organized** "Retraining of College Teachers under UGC sponsored University with potential for excellence scheme" as a training **co-ordinator** (jointly with Dr S Banerjae) at the Department of Mathematics, Jadavpur University, Kolkata 700032, India in the year of **2006**.
- (9) Organized "National Conference on Applicable Mathematics" as a member of Organizing committee held on 23-24 March 2006 at the Department of Mathematics, Jadavpur University, Kolkata 700032, India.
- (10) Organized "Retraining of College Teachers under UGC sponsored University with potential for excellence scheme" as a training coordinator (jointly with Dr I SenGupta) at the Department of Mathematics, Jadavpur University, Kolkata 700032, India in the year of 2005.

Plenary/Special/Invited talk in International conference/seminar:

- (1) Delivered talk as Keynote Speaker in the International Conference on Algebra, Analysis, Dynamics and their Applications (ICAADA 2025) organized by Department of Mathematics, Midnapore College to celebrate 100 years of its inception, sponsored by NBHM and DST-SERB, Govt. of India held during 22-25 January 2025.
- (2) Delivered an **Invited talk** at International Seminar on Physical and Mathematical Sciences held during March 02-03, 2024 at Calcutta Mathematical Society organized by Calcutta Mathematical Society.
- (3) Delivered **Plenary talk at the 38th Annual Conference** of Ramanujan Mathematical Society to be held at IIT, Guwahati during December 22-24, 2023.
- (4) Delivered a special invited talk at the 20th International Conference on Functional Equations and Inequalities (20th ICFEI) to be held at Mathematical Research and Conference Center of the Institute of Mathematics of the Polish Academy of Sciences, Będlewo, Poznan, Poland during September 17-24, 2023.
- (5) Delivered an **invited talk** on "Distance formulae and best approximations in the space of compact operators" at the International Workshop on Operator Theory and its Applications (IWOTA 2022) held in Krakow, Poland during September 6-10, 2022.
- (6) Delivered 15th Ganesh Prasad Memorial Award Lecture at the 87th Annual Conference of Indian Mathematical Society - An International meetorganised by Jawaharlal Nehru Engineering College, MGM University, Aurangabad during December 04-07, 2021.
- (7) Delivered an invited talk online at "International Conference on Functional Equations and Inequalities" organized by Department of Mathematics of the Pedagogical University of Krakow, held in the Mathematical Research and Conference Center in Będlewo, Poland, during September 12-18, 2021.
- (8) Delivered an **invited talk** online at International Conference on "Approximation Theory and Application" Organized by the Laboratory of High-Dimensional Approximation and Applications of the Lomonosov Moscow State University during September 5 - 11, 2021.
- (9) Delivered an invited talk at "International Conference on Analysis and its Applications- 2020 (ICAA-2020-NEPAL)" organized by Nepal Mathematical Society (NMS) in collaboration with Tribhuvan University (TU), Nepal; Kathmandu University (KU), Nepal; South Asian University (SAU), India; Nepal Sanskrit University (NSU) and Association of Nepalese Mathematicians in America (ANMA), USA during April 9-11, 2021.
- (10) Delivered an **invited talk** at "International Webinar on Mathematical Analysis and its Applications 2021" organized by Department of Mathematics, Tripura University during April 8-9, 2021.
- (11) Delivered an invited talk at "International Webinar Series on Applications of Mathematics" organized by Gurucharan College, Silchar, Assam during August 20-22, 2020.
- (12) Delivered an **invited talk** at International Seminar on "Systematic Approach to Modern Sciences and Its Philosophical Impacts" organized by Bajkool Milani

Mahavidyalaya, Purba Medinipur, West Bengal held during Febuary 06-08, 2020.

- (13) **Invited talk** delivered at International Conference on "Recent advances in Operator Theory and Operator Algebras 2018" organized at Indian statistical Institute, Bangalore Centre during Dec 13-19, 2018.
- (14) Delivered an **invited talk** at International conference on Banach Algebras, Harmonic Analysis and Operator Theory held during Nov. 20 - 22, 2018, at Sardar Patel University, Vidyanagar, Gujarat, India.
- (15) Delivered an **invited talk** at 2018 International workshop on Operator Theory and its Applications held during July 23 - July 27, 2018, at East China Normal University, Shanghai, China.
- (16) Delivered an **invited talk** at 2018 International workshop on Matrices and operators held during July 15-July 18, 2018, at Shanghai University, China.
- (17) Invited talk delivered in the International Conference on Mathematical Sciences and Applications (ICMSA 2018) held during February 23-25, 2018 at Guru Ghasidas Vishwavidyalaya, Bilaspur, India.
- (18) Chaired a session in the International Conference on Mathematical Analysis and Application in Modelling (ICMAAM-2018) held during January 9-12, 2018 at Jadavpur University, Kolkata.
- (19) **Invited talk** delivered in the International Conference on Nonlinear dynamics, Analysis and Optimization (ICNDAO 2015) held during December 9-11, 2015 at Jadavpur University.
- (20) **Invited talk** delivered in the 24th International Workshop on Operator Theory and its Applications (IWOTA 2013) held during December 16-20,2013 at IISc Bangalore, India.
- (21) Delivered an invited talk titled "On different aspects of antieigenvalues of a bounded linear operator" in the International Conference on recent development in mathematical sciences and their applications (ICRDMSA - 2010) organized by Calcutta Mathematical Society from 09-11 December 2010.
- (22) **Invited talk** delivered in the 21st International Workshop on Operator Theory and its Applications (IWOTA 2010) held from July 12 to July 17, 2010 at Technical University of Berlin, Germany.

Resource Person/Expert/Chairperson etc. at National level:

- (1) Resource Person for Awareness Programme on Anti-Ragging organized by Midnapore College (Autonomous) on 14.08.2024.
- (2) Resource Person for the Interdisciplinary Refresher Course in Physical Sciences under the aegis of MMTTC-Assam University, Silchar from 05.08.2024 to 19.08.2024, the title of the talk being "Topological properties of the points of continuity and discontinuity of a real valued function".
- (3) Resource Person for Staff Development Program on 31.07.2024 at 11.30 pm at Victoria Institution (College), Kolkata 700009, the title of the topic being " Discussion on Measures to Address the Issue of Ragging".
- (4) Resource Person at Centre for Professional Development in Higher Education (CPDHE), UGC-HRDC, University of Delhi, conducted Refresher Course in Mathematics/ Operational Research/ Statistics and Computer Science on the theme "Algebra, Analysis and Applications" for University and College teachers

on 07.02.2024, the title of the talk being "Compact sets in R : How far from / close to being a finite set?".

- (5) Resource Person at Centre for Professional Development in Higher Education (CPDHE), UGC-HRDC, University of Delhi, conducted Refresher Course in Mathematics/ Operational Research/ Statistics and Computer Science on the theme "Algebra, Analysis and Applications" for University and College teachers on 06.02.2024, the title of the talk being "A deep look at the points of continuity of a real valued function".
- (6) Resource Person at the UGC Malaviya Mission Teacher Training Centre, North Bengal University, organized Refresher Course titled "Mathematics and Computer Science" on 18th January 2024, the title of the talk being "Insight view of points of continuity of real valued function".
- (7) Resource Person for the UGC Malaviya Mission Teacher Training Centre, North Bengal University, organized Refresher Course titled "Mathematics and Computer Science" on 19th January 2024, the title of the talk being "Insight view of points of continuity of real valued function".
- (8) Syllabus Committee member of Department of Mathematics, Jadavpur University for implementing NEP 2020 with effect from the year 2023.
- (9) Resource Person on 30th November 2023 for the Interdisciplinary Refresher course titled "Development in Mathematics and It's Applicability" held during 28th November to 11th December 2023, organized by Department of Mathematics, Jadavpur University, the title of the talk being "Compact sets in R and in a metric space : Why do they differ?".
- (10) Resource Person on 1st December 2023 for the Interdisciplinary Refresher course titled "Development in Mathematics and It's Applicability" held during 28th November to 11th December 2023, organized by Department of Mathematics, Jadavpur University, the title of the talk being "Insight view of points of continuity of real valued function".
- (11) Resource Person at Assam Mathematics Olympiad (AMO) Workshop on 18th July 2023 organized by Assam Academy of Mathematics, Cachar branch and Department of Mathematics, Gurucharan College, Silchar. on 18th July 2023.
- (12) Series of lectures delivered at the workshop on Advanced functional analysis and its applications 2022, held at IIT Hyderabad during December 12–16, 2022.
- (13) Resource Person at UGC-HRDC, NBU sponsored Refresher Course on Mathematics during 08.01.2021 to 21.01.2021.
- (14) Resource Person for UGC-HRDC sponsored Refresher course on Mathematical Sciences organized by Department of Mathematics and Statistics, DDU Gorakhpur University, Gorakhpur, during 29-12-2020 to 11-01-2021.
- (15) Delivered inaugural talk at One-Week Short Term Course on "Linear Algebra and its Applications in Engineering Sciences (LAAES 2019)" organized by Dibrugarh University Institute of Engineering and Technology (DUIET), Dibrugarh University during August 12-16, 2019 under TEQIP-III project.
- (16) Expert Committee member of UG Syllabus committee for the updation of the syllabus of Deprtment of Mathematics, Raja N. L. Khan Women's College, Midnapur, West Bengal in the year of 2019.

- (17) Resource Person for UGC-HRDC, North Bengal University organized Refresher Course in Mathematics during December 07-27, 2018 at North Bengal University, the title of the talk being "On Hahn Banach Theorem and its Applications in Geometry of Banach space".
- (18) Resource Person at Teachers' Enrichment National Level Workshop on "MATH-EMATICS AND ITS RECENT ADVANCEMENT" held during Oct 30-31, 2018 at Midnapore College, West Bengal.
- (19) Resource Person at National Level Teachers' Enrichment Workshop in Mathematical Sciences (NLTEWMS-2018, 23rd May - 6th June) at Calcutta Mathematical Society on Functional Analysis on 28th May 2018 and 31st May 2018.
- (20) Resource Person for UGC sponsored "Refresher Course in Mathematical Sciences" at the Department of Pure Mathematics, University of Calcutta, Kolkata, India held during the period March 8 - March 29, 2017.
- (21) Resource Person for UGC-HRDC JU organized 64th orientation program held at Salt lake campus of Jadavpur University during 06.02.2017-26.02.2017.
- (22) Expert Committee member to revise the syllabus of different course of Department of Mathematics, Aliah University in the year of 2017.
- (23) Resource Person for UGC-HRDC Jadavpur University organized 63rd orientation program held at Salt lake campus of Jadavpur University during 15.11.2016-06.12.2016.
- (24) Chaired a session in the "National Workshop and Conference on Discrete Mathematics and its Applications" held at Jadavpur University, Kolkata during March 10 - 14, 2014.
- (25) Resource Person for UGC sponsored "Refresher Course (Thrust area: Analysis, Algebra, Geometry and Discrete Mathematics)" at the Department of Pure Mathematics, University of Calcutta, Kolkata 700032, India held during the period January 02 - January 22, 2014.
- (26) Resource Person for DST sponsored Science Camp held at JB-Centre of Excellence,1300 Rajdanga Main Road, Kolkata 700107 during January 7 - January 11, 2014 for Students ranked within top 1% of Class X examinations.
- (27) Chaired a session in the National Conference titled "Non-linear Dynamics, Analysis and Optimization" held at Jadavpur University during January 9-10, 2014.
- (28) Resource Person for UGC sponsored "Refresher Course on Mathematical Methods, Techniques and applications" at the Department of Mathematics, Jadavpur University, Kolkata 700032, India held during the period November 18- December 7, 2013.
- (29) Resource Person for DST sponsored "Training Programme for Under Graduate Students in Mathematics" held at the Department of Mathematics, Tripura University, India during July 5 - 19, 2013.
- (30) Chaired a session in the National Conference entitled "Recent Trends in Mathematical and Computational Sciences" held at Institute of Advanced Study in Science and Technology (IASST) Guwahati during November 28 - 30, 2012.
- (31) Resource Person for the "Refresher Course on Algebra, Analysis, Discrete Mathematics and its applications" at the Department of Mathematics, Jadavpur University, Kolkata 700032, India held during the period August 27 - September 15, 2012.

- (32) Resource Person for UGC-ASC, J.U. sponsored Two Day Short Term Course on "Mathematical Analysis and its applications" held from 22.03.2011 to 23.03.2011 at the Department of Mathematics, Jadavpur University.
- (33) Resource Person for the workshop on curriculum in Mathematics under Teacher Exchange Programme of CPE, sponsored by UGC in the Department of Mathematics Midnapore College, Midnapore, West Bengal 721 101 on 18th January 2011.
- (34) Resource Person for the DST-INSPIRE Internship Science Camp 2010 entitled "Spectrum of Science" during April 26-30, 2010 held at JB-Centre of Excellence for Student-Scientists, 1300 Rajdanga Main Road, Kolkata 700107.
- (35) Resource Person for the DST-INSPIRE Internship Science Camp 2010 entitled "Science Beyond School" during March 20-24, 2010 held at JB-Centre of Excellence for Student-Scientists, 1300 Rajdanga Main Road, Kolkata 700107.
- (36) Resource Person for the "Refresher Course on Mathematical Analysis and its applications" at the Department of Mathematics, Jadavpur University, Kolkata 700032, India held during the period Feb.16 - March 07, 2009.

Plenary Talk/ Invited talk/ Keynote lecture delivered at National level :

- (1) Lecture titled "Ramanujan and his infinite series $1 + 2 + 3 + \ldots = -\frac{1}{12}$ " delivered as keynote speaker on celebration of National Mathematics Day at Sadhu Ramchand Murmu University of Jhargram on December 23, 2024.
- (2) Series of lectures delivered at the workshop "Advanced Functional Analysis and its Applications 2024" sponsored by Anusandhan National Research Foundation (ANRF) and National Board for Higher Mathematics (NBHM) held at IIT Hyderabad during 09.12.2025-13.12.2025.
- (3) Invited talk delivered at the National Conference on Operator Theory and Function Spaces organized by Department of Mathematics, Shiv Nadar Institution of Eminence (Delhi NCR) during March 27-29, 2024.
- (4) Delivered an invited talk titled "Operator orthogonality in the space of linear operators on Banach space" at 33rd Annual Conference of the Ramanujan Mathematical Society (ACRMS - 2018) held at Delhi University during June 1- June 3, 2018.
- (5) Invited talk delivered on "Role of Birkhoff-James orthogonality in Banach space geometry" at the Department of Mathematics, Delhi University on 08.03.2018.
- (6) Invited talk delivered in UGC sponsored National seminar on "Advances and applications of contemporary mathematics" held on 18.02.2017 organized by K K Das College, Kolkata.
- (7) Invited talk delivered in UGC sponsored National seminar on "Advanced level of Mathematical Science" held during 09-10 February, 2017 organized by Raja N. L. Khan Women's College, Midnapur, West Bengal.
- (8) Invited talk delivered in the National Conference on "Advances in Mathematical Sciences" during 22-23 December, 2016 held at Gauhati University.
- (9) Invited Lecture delivered in the West Bengal state council of science and technology sponsored "National Seminar on Mathematics and its Applications" held at the Department of Mathematics, Lady Brabourne College, Kolkata, India on 22.11.2013.

- (10) Invited lecture delivered in the "National Seminar on Advances in Mathematics & Applications" organised by Department of Mathematics, University of Burdwan, WB, India during March 6 - 7, 2013.
- (11) Invited lecture delivered in the UGC sponsored "National Seminar on Advances in Research in Physical Sciences" organised by Cachar College, Silchar, Assam during March 25 - 26, 2013.
- (12) Invited lecture delivered in the National Conference entitled "Recent Trends in Mathematical and Computational Sciences" held at Institute of Advanced Study in Science and Technology (IASST) Guwahati during November 28 - 30, 2012.
- (13) Lecture delivered in the UGC sponsored state level seminar on "Contemporary Mathematical Analysis : Certain ramifications and applications" held at Charuchandra College, Kolkata on February 9, 2012.
- (14) Delivered a talk titled " On different aspects of antieigenvalues of a bounded linear operator" in the International Conference on recent development in mathematical sciences and their applications (ICRDMSA - 2010) organized by Calcutta Mathematical Society from 09-11 December 2010.
- (15) Plenary lecture delivered in the National Conference on "Recent advances in Mathematical Sciences and their Applications (RAMSA-10)" held from November 25-27, 2010 at Assam University, Silchar.
- (16) Delivered Keynote Lecture in the UGC sponsored National Seminar on "Mathematics in Daily Life" organized by the Department of Mathematics, New Alipore College (affiliated to Calcutta University), Kolkata 700053 held during 29-30 August 2008.
- (17) Delivered a talk in the UGC sponsored "National Seminar on Mathematics and its Applications" at the Department of Mathematics, B.E. College (Deemed University) on 27 March 2004.
- (18) Delivered a talk in the "Regional Seminar on Functional Analysis and Geometry and Applications" organized by the DSA Programme, Department of Mathematics, Jadavpur University on 24 March 1999.

Participation in workshop / summer school / winter school, Refresher Courses / Orientation Courses :

- (1) Participated in the UGC sponsored "Refresher Course in Mathematics " conducted by Department of Pure Mathematics, Calcutta University during the period August 02, 2005 - August 23, 2005.
- (2) Participated in the UGC sponsored "Refresher Course in Mathematics" conducted by Department of Pure Mathematics, Calcutta University during the period Dec.10,2003 - Dec.31,2003.
- (3) Participated in the UGC sponsored "Orientation Programme" conducted by Academic Staff College, Calcutta University during the period Dec.14,2001 -Jan.12,2001.
- (4) Participated in the "Regional Training Course on Computer Applications in Mathematics Teaching" for College/University teachers in India and South Central Asian Countries" held at the I.I.T. Kharagpur during the period Jan.4 -Jan.18, 2000 sponsored by the UNESCO.
- (5) Participated in the "UNESCO-IMSc Regional Training Programme in Mathematics for College/University teachers in India and South Central Asian Countries "held at The Institute of Mathematical Sciences, Chennai during the period Nov.9 Nov.21, 1998 sponsored by UNESCO and The Institute of Mathematical Sciences, Chennai.