



BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

AVALAHALLI, YELAHANKA, BANGALORE-560119

DEPARTMENT OF MATHEMATICS

List of Publications

Year: 2025

Sl. No.	Title of the publication	Authors of the publication	Journal name, volume, Issue, Page number, Year, ISSN, DOI	Indexing (Scopus/WoS/Q1-Q4)
1	Securing Sensitive Data: How Blockchain Transforms Privacy in Healthcare, Law, and Education PDF	Ajay Sudhir Bale, T S Arulananth, S Saranya, Tejashwini Gadag, J Sathiamoorthy, Sudhakiran Ponnuru	IEEE Xplore, pp. 1-7, 2025 ISBN: 978-80-8075-477-8 DOI: 10.1109/ICSES63760.2024.10910390	Scopus
2	Mechanical properties of stenosed coronary arterial walls with slip velocity	Shankar Narayan S, Aishwarya R, Nidhi S Vaishnaw, Chandankumar S	Physics of Fluids, 37(2), 021905, 2025 ISSN: 1089-7666 DOI: https://doi.org/10.1063/5.0251278	Scopus, Q1, SCIE
3	Blood Flow Across Cerebral Aneurysms with Magnetic Field Intervention	Shankar Narayan S, Rakshitha S, Aashna Singh	Physics of Fluids, 37(3), 031901, 2025 ISSN: 1089-7666 DOI: https://doi.org/10.1063/5.0252178	Scopus, Q1, SCIE
4	Ricci Semi-Symmetric Robertson–Walker Spacetime in $f(R)$ -Gravity	H. Aruna Kumara, Abdul Haseeb, V. Venkatesha and Mohd Bilal	Mathematics, 13(6), 2025 ISSN: 2227-7390, DOI: https://doi.org/10.3390/math13061012	Scopus, Q2, SCIE
5	Improving the 8T SRAM Cell Design for Fault Tolerance and Power Efficiency	Ajay Sudhir Bale, S. Saranya, Arulananth T S, Varun Yogi Shanthakumar, T Y Satheesha, Gururaj Murtugudde	IEEE Xplore, pp. 1-6, 2025 ISBN: 978-80-8075-477-8 DOI: https://doi.org/10.1109/ACIT62457.2024.10939847	Scopus
6	Optimizing Computation: A Biomimicry Design Spiral Approach to Algorithm Development	Vaishali B. Langote, Jnanaranjan Acharya, S Saranya, Mamta B Savadatti, T. Saravanan, P. Vidya, Ajay Sudhir Bale and Saurabh Mittal	Communications on Applied Nonlinear Analysis, 32(1), 2025 ISSN: 1074-133X DOI: https://doi.org/10.52783/cana.v32.2317	Scopus, Q4

7	The effects of a constant bias force on the dynamics of a periodically forced spherical particle in a Newtonian fluid in uniform undisturbed motion at low Reynolds numbers	K. Madhukar, Kallur V. Vijayakumar, Shrishail B. Sollapur, Rahul Singh, Chander Prakash,	Multiscale and Multidisciplinary Modeling, Experiments and Design, 8, 231, 2025 ISSN: 2520-8179 DOI: https://doi.org/10.1007/s41939-025-00813-3	Scopus, Q2, SCIE
8	Investigating Casimir Wormhole Solutions supported by Yukuwa Potentials in Modified Symmetric Teleparallel Gravity	Chaitra Chooda Chalavadi, V. Venkatesha, H. Aruna Kumara, S.V. Divya Rashmi	High Energy Density Physics, 57, 2025 ISSN: 1878-0563 DOI: https://doi.org/10.1016/j.hedp.2025.101222	Scopus, Q2, SCIE
9	Reconstruction Algorithms for Source Term Recovery from Dynamical Samples in Catalyst Models	Akram Aldroubi, Le Gong, Ilya Krishtal, Brendan Miller & Sumati Thareja	Journal of Fourier Analysis and Applications, 31, 2025 ISSN: 1531-5851 DOI: https://doi.org/10.1007/s00041-025-10184-5	Scopus, Q1, SCIE
10	OHAM-based investigation of flow dynamics in Maxwell hybrid nanofluid with copper and graphene nanoparticles	D.S. Neha, Dr Arnab Bhattacharya, Dr Sreelakshmi T K	Multiscale and Multidisciplinary Modeling, Experiments and Design, 8, 308, 2025 ISSN: 2520-8179 DOI: https://doi.org/10.1007/s41939-025-00893-1	Scopus, Q2
11	Previous concrete as a sustainable solution for groundwater recharge: a comprehensive review of material properties and fluid flow dynamics in Acta Scientia	Vinod B R, Sreelakshmi T K, Shobha R	Acta Scientiae	Scopus, Q2
12	Study of transmission pattern of COVID-19 among cardiac and noncardiac population using a nonlinear mathematical model	Gopishetty Shirisha, Saroj Vernekar	Computational and Mathematical Biophysics, 13(1), 2025 ISSN: 2544-7297 DOI: https://doi.org/10.1515/cmb-2025-0020	Scopus, Q3
13	Predictive dynamics of a two-way interactive Cooperative and Supportive Neural Network	G. Shirisha and Saroj Vernekar	Panamerican Mathematical Journal, 35(4), 2025 ISSN: 1064-9735 DOI: https://doi.org/10.52783/pmj.v35.i4s.5463	Scopus, Q4
14	Flow diverters as a technique to balance the flow in bifurcation branches in a stenosed coronary artery	Shankar Narayan S	Chinese Journal of Physics, 96, pp. 906-973, 2025 ISSN: 2309-9097 DOI: https://doi.org/10.1016/j.cjph.2025.06.017	Scopus, Q2
15	Revolutionizing Chip Design using Generative AI in Semiconductors: A Case Study Approach	Ajay Sudhir Bale, S Saranya, Santhrupth B C, Arulananth T S, T Y Satheesha, Sudhakiran Ponnuru	IEEE Xplore, pp. 1-6, 2025 ISBN: 978-80-8075-477-8 DOI: 10.1109/ICACCM61117.2024.11059162	Scopus

16	Probing the geometries of wormholes: A comparative study of $f(R,T)$ and $f(Q,T)$ theories in the presence of BEC matter	Chaitra Chooda Chalavadi, H. Aruna Kumara, V. Venkatesh	Nuclear Physics B, Volume 1018, 2025, 117013, ISSN 0550-3213 DOI: https://doi.org/10.1016/j.nuclphysb.2025.117013	Scopus, Q1
17	Modelling Disease Transmission via Fluid Dynamics	Saroj Revankar	-	Book chapter
18	Laminar single-phase modeling and numerical study of flow of aspirin in a coronary arterial bifurcation with slip boundary	Shankar Narayan S	ZAMM - Journal of Applied Mathematics and Mechanics, 105, 2025 ISSN: 1521-4001 DOI: https://doi.org/10.1002/zamm.70177	Scopus, Q2
19	Thermal and Fluid Flow Dynamics Over a Single-Walled Carbon Nanotubes in Converging and Diverging Channels Under Darcy-Forchheimer Flow Conditions: A Comprehensive Analysis	Jyothi Anigere Marikempaiah, Sreelakshmi Thalanki Kanthraj, Jagadeesha Seethappa, Ananda Kempaiah, Chandra Shekara Guruva Reddy, Kavita Permi	International Journal of Applied and Computational Mathematics, 11, 2025 ISSN: 2199-5796 DOI: https://doi.org/10.1007/s40819-025-01956-0	Scopus, Q3
20	AI-Powered Predictive Modeling of Heat Energy Consumption in Smart Buildings for Enhanced Efficiency	Kolandasamy Poongodi, Saurabh Gupta, Varun V L, G. Ashwin Prabhu, Joshuva Arockia Dhanraj, Mohit Tiwari	IEEE Xplore, pp. 483-487, 2025 ISBN: 979-8-3315-8673-7 DOI: 10.1109/MRIE66930.2025.11156680	Scopus
21	TOPSIS approach for MADM based on Quadripartitioned single valued neutrosophic refined Hamacher aggregation operations	Arokia Pratheesha S V, Radha R, Parul Arora, Ritika Wason, Divya Baliga B	Neutrosophic Sets and Systems, Vol. 80, 2025, pp. 163-177, DOI: https://doi.org/10.5281/zenodo.14707410	Scopus, Q3
22	Pentapartitioned Neutrosophic Pythagorean Connectedness	R. Radha, Annapoorna M S, S. Vasundhara, Parul Arora, Ankita Tiwari and R.Prema	Neutrosophic Sets and Systems, Vol. 83, 2025, pp. 927-934, DOI: 10.5281/zenodo.15229711	Scopus, Q3
23	Transforming Substation Automation through Deep Learning and Machine Learning	G. Ramkumar, Kallur V. Vijayakumar, S. Aravinth, Shaik Mastan Vali, Ankita Parida, P. Chandrasekar	IEEE Xplore, pp. 1-6, 2025 ISBN: 979-8-3503-7544-2 DOI: 10.1109/ICDSCNC62492.2024.10939226	Scopus
24	HealthLink: A Cutting-Edge System for Secure Healthcare Data with IoT, Blockchain, and IPFS	Kallur V Vijayakumar, Chethan A.S., Muneshwara M S, Swetha M S, Anand R, Shivakumara T	IEEE Xplore, pp. 1-7, 2025 ISBN: 979-8-3503-5434-8 DOI: 10.1109/ICBDS61829.2024.10837406	Scopus
25	Integrating Mathematical Models into the Design and Analysis of Soil Nailing for Effective Slope Stabilization	Vinod B R, Shobha R, Sreelakshmi T K	Vascular & Endovascular Review, Vol. 8 (12), 2025, pp. 176 – 182,	Scopus, Q3

			DOI: https://verjournal.com/index.php/ver/article/view/935	
26	Product Design Considerations for Fly Ash into Fly Ash Bricks and Economic and Environmental Benefits of Using Fly Ash Bricks	Vinod B R, Ashwini K R, Sreelakshmi T K	Apple Academic Press	Scopus



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1	Hydrodynamic Force Expression with Couple Stress Drag Over Sphere at Small Reynolds Numbers	K Madhukar, Kallur V Vijayakumar, Chethan A.S., Muneshwara M.S	Communications in Applied Nonlinear Analysis, 31(8s), 2024 ISSN: 1074-133X, https://doi.org/10.52783/cana.v31.1581	Scopus, Q4
2	Develop a Mathematical Model to Secure Anonymous Communication in Manet Through Cluster Framework	Swetha M S, Kallur V Vijayakumar, Muneshwara M S, Chethan A S, Anand R, Shivakumara T	Communications on Applied Nonlinear Analysis, 31(8S), pp. 505–513, 2024 ISSN: 1074-133X, https://doi.org/10.52783/cana.v31.1544	Scopus, Q4
3	A single server finite buffer Geom/G/1/K queue with L limited service and multiple vacation policy	Karabi Sikdar	International Journal of Mathematics in Operational Research, 2024, Vol. 27 (3), pg. no. 328 - 353, ISSN- 1757-5869 DOI: 10.1504/IJMOR.2024.138058	Scopus, Q3
4	Almost*-Ricci solitons on contact strongly pseudo-convex integrable CR-manifolds	H. Aruna Kumara, Karabi Sikdar and V Venkatesha	Filomat 2024 Volume 38, Issue 2, Pages: 543-551 ISSN: 2683-3867 https://doi.org/10.2298/FIL2402543A	Scopus, Q3, SCIE
5	Characterization of Bach and Cotton Tensors on a Class of Lorentzian Manifolds	Yanlin Li, M. S. Siddesha, H. Aruna Kumara and M. M. Praveena	Mathematics 2024, 12(19), 3130; ISSN: 2227-7390 https://doi.org/10.3390/math12193130	Scopus, Q2, SCIE

6	Static perfect fluid spacetime on Riemannian manifolds admitting concurrent-recurrent vector field with Bach tensor	M.M.Praveena, Aruna Kumara H., C.M. Arjun and M.S. Siddesha	J. Appl. Anal., 2024 ; ISSN: 1869-6082 https://doi.org/10.1515/jaa-2024-0018	Scopus, Q4
7	Anisotropic Spheres with Tolman–Kuchowicz Spacetime in the Context of $f(Q, T)$ Gravity	Chaitra Chooda Chalavadi, V. Venkatesha and H Aruna Kumara	Annalen der Physik, 2024; ISSN: 1521-3889 https://doi.org/10.1002/andp.202400233	Scopus, Q2, SCIE
8	5G Wireless Communication and Its Adverse Effects on the Human Body: Distinguishing Falsehoods from Reality	Ajay Sudhir Bale, Sabhyata Uppal Soni, Dheeraj Singh Rajput, Hamsalekha R., S. Saranya, Salna Joy, Baby Chithra R., Mamta B. Savadatti	International Journal of Intelligent Systems and Applications in Engineering, 12(5S), 101–112, 2024 ISSN: 2147-6799 https://ijisae.org/index.php/IJISAE/article/view/3870	Scopus, Q4



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1	Dynamics of Brownian motion and nonlinear mixed convective conditions on thermophoretic slip flow embedded with non-Fourier flux	T. K. Sreelakshmi, P. D. Selvi, K. Ramesh Babu, P. Durga Prasad, H. B. Santosh, Annamma Abraham, C. S. K. Raju, and M. Sreedhar Babu	International Journal of Modern Physics B, 38(10), 2450144, 2024 ISSN: 1793-6578 https://doi.org/10.1142/S0217979224501443	Scopus, Q3, SCIE
2	A Study on Heat and Flow of Viscoelastic Dielectric Liquid Over an Inclined Stretching Sheet	Veena, Annamma Abraham, Jojy Joseph Idicula, P. A. Dinesh	Journal of Mines, Metals and Fuels, 71(11): 2278-2288, 2023 ISSN : 0022-2755, 10.18311/jmmf/2023/36048	Scopus, Q4
3	Viscoelastic dielectric liquid flow over a horizontal stretching sheet	N. Veena, P. A. Dinesh, Annamma Abraham, Jojy Joseph Idicula	Journal of Thermal Analysis and Calorimetry, 148, 11893–11902, 2023 ISSN : 2278 – 8697, https://doi.org/10.1007/s10973-023-12480-y	Scopus, Q2, SCIE
4	Structural equation modelling of integrated healthcare delivery system KPIs on operational performance and physician outcomes,	Rema, V., Sikdar, K.	2nd International Conference on Computational Sciences-Modelling, Computing and Soft Computing (CSMCS 2022), AIP Proceedings, 2875(1), 2023 https://doi.org/10.1063/5.0153991	Scopus (Conference Proceedings)

5	Study on Patents in Genomics and Human Genetics	Sirisha.J, Annapoorna M S, Sowjanya Vuddanti, Sridevi Pothumarthi	African Journal of Biological Sciences, 5(3), 01-08, 2023 ISSN: https://doi.org/10.33472/AFJBS.5.3.2023.01-08	Scopus, Q4
6	Laceability in the Image Graph of Some Classes of Graphs	Annapoorna M S, R. Murali	Book chapter in Research Highlights in Mathematics and Computer Science, 6, 127-139, 2023 ISBN:978-81-19102-02-0 https://doi.org/10.9734/bpi/rhmcs/v6/5127E	
7	Preliminary Mathematical Study of Renderings of Mantrapushpam	Vijayakumar Kallur, V., Krishnamurthy, M., Arun Kumar, R.	AIP Conference Proceedings, 2649 (1), 030018, 2023 ISSN: 1551-7616 https://doi.org/10.1063/5.0114494	Scopus (Conference Proceedings)
8	Effect of Gravity Modulation on Benard-Marangoni Convection in Magnetic Nanofluids with Internal Heat Generation	Rudrappa, A., Kallur, V., Kavyashree	AIP Conference Proceedings, 2649 (1), 030050, 2023 ISSN: 1551-7616 https://doi.org/10.1063/5.0114218	Scopus (Conference Proceedings)
9	A comprehensive review of Ferromagnetic liquid dynamics and nonlinear thermal buoyancy effects	Sreelakshmi T. K.	Tuijin Jishu/ Journal of Propulsion Technology, 44 (4), 2023 ISSN : 1001-4055 https://doi.org/10.52783/tjpt.v44.i4.1960	Scopus, Q3
10	Enhanced heat and mass transfer characteristics of multiple slips on hydro-magnetic dissipative Casson fluid over a curved stretching surface	Duraihem, F.Z., Renuka Devi, R.L.V., Prakash, P., Sreelakshmi T. K., Raju, C.S.K., Suresh Kumar Raju, S.	International Journal of Modern Physics B, 37(23), 2350229, 2023 ISSN: 1793-6578 https://doi.org/10.1142/S0217979223502296	Scopus, Q3, SCIE
11	Characterization of Ricci Almost Soliton on Lorentzian Manifolds	Yanlin Li, H.A. Kumara, M.S. Siddesha and D. M.Naik	Symmetry 15(6), 1175, 2023 ISSN: 2073-8994 https://doi.org/10.3390/sym15061175	Scopus, Q2, SCIE
12	On Einstein-type almost Kenmotsu manifolds	Kumara, H.A., Praveena, M.M., Naik, D.M.	Analysis (Germany), 43(3), 141–147, 2023 ISSN: 2196-6753 https://doi.org/10.1515/anly-2022-1058	Scopus, Q3

13	Geometry of paracontact metric as an almost Yamabe solitons	H. Aruna Kumara, V. Venkatesha, Gh. Fasihi-Ramandi, and Devaraja Mallesha Naik	International Journal of Geometric Methods in Modern Physics, Vol. 20, No. 05, 2350090 (2023), ISSN: 1793-6977 https://doi.org/10.1142/S0219887823500901	Scopus, Q2, SCIE
14	Yamabe Solitons and τ -Quasi Yamabe Gradient Solitons on Riemannian Manifolds Admitting Concurrent-Recurrent Vector Fields	Devaraja Mallesha Naik, Gh. Fasihi-Ramandi, H. Aruna Kumara and V. Venkatesha	Mathematica Slovaca, vol. 73, no. 2, 2023, pp. 501-510, ISSN: 1337-2211 https://doi.org/10.1515/ms-2023-0037	Scopus, Q2, SCIE
15	Generalized V-Ric Vector Fields on Contact Pseudo-Riemannian Manifolds	V. Venkatesha, H. Aruna Kumara and Devaraja Mallesha Naik	MATEMATICKI VESNIK, 75, 3 (2023), 166–174, ISSN: 2406-0682 DOI: 10.57016/MV-mzwb3188	Scopus, Q3