

Faculty Academic Profile /Curriculum Vitae



Name: Krishnendu De

Contact Details: Department of Mathematics, Kabi Sukanta Mahavidyalaya, The University of Burdwan, Bhadreswar, P.O.-Angus, Hooghly, Pin-712221, West Bengal, India.

Email: krishnendu.de@outlook.in, krishnendu.de67@gmail.com, krishnendu_de@yahoo.com, krishnendu@ksmv.ac.in

Current Occupation: Working as an Assistant Professor in the Department of Mathematics, Kabi Sukanta Mahavidyalaya from 1st April, 2017.

Previous Occupation: Worked as an Assistant Teacher in Konnagar High School, Hooghly from 9th October 2007 to 31st March 2017.

Educational Qualification:

Ph.D:

Ph.D (Science) was done from the Department of Mathematics, Calcutta University in 2014.

Research field: Differential Geometry.

Thesis Title: [Certain contributions to differential geometry of contact manifolds with Riemannian and Lorentzian metric.](#)

M.Sc:

M.Sc was done from the Department of Pure Mathematics, Calcutta University in 2006.

Special Paper:i) Category theory, Universal algebra and lattice theory; ii) Global Differential Geometry.

B.Sc:

B.Sc was done from the Ramakrishna Mission Vidyamandira (Belur Math), Calcutta University in 2004.

NET:

Qualified Net (Joint CSIR-UGC Test for Junior Research Fellowship and Eligibility for Lectureship) held on December 2008.

List Of Published Articles

SCI/SCIE-indexed:

- (1) De, K, and De, U.C., *Pseudo generalized Ricci-recurrent spacetimes and modified gravity*, *Modern Physics Letters A* **39**:14 (2024) 2450062 (13 pages)
<https://doi.org/10.1142/S0217732324500627> [ISSN: 0217-7323; Impact Factor: 1.34].
- (2) De, K, Woo, C. and De, U.C., *Geometric and physical characterizations of a spacetime concerning a novel curvature tensor*, *Filomat* **38**:10 (2024), 3535–3546.
<https://doi.org/10.2298/FIL2410535D> [ISSN: 2406-0933; Impact Factor: .988 ; Q3].
- (3) De, U.C. and De, K. *Pseudo generalized Ricci-recurrent spacetimes with certain application to modified gravity*, *Chinese Journal of Physics* **90** (2024) 252–265.
<https://doi.org/10.1016/j.cjph.2024.05.025> [ISSN: 0577-9073; Impact Factor: 5; Q1].
- (4) De, U.C., De, K. and Güler, S., *Characterizations of a Lorentzian Manifold with a semi-symmetric metric connection*, *Publ. Math. Debrecen*, **104** 3-4 (2024), 329–341.
<https://doi.org/10.5486/PMD.2024.9647> [ISSN: 0033-3883; Impact Factor: .6; Q3].
- (5) De, K., Khan, M.N. and De, U.C., *Characterizations of GRW spacetimes concerning gradient solitons*, *Heliyon* **10** (2024) e25702.
<https://doi.org/10.1016/j.heliyon.2024.e25702> [ISSN: 2405-8440; Impact Factor: 4; Q2].
- (6) Suh, Y.J., De, K. and De, U.C., *Impact of projective curvature tensor in $f(R, G)$, $f(R, T)$ and $f(R, L_m)$ -gravity*, *International Journal of Geometric Methods in Modern Physics* Vol. 21, No. 03, 2450062 (2024).
<https://doi.org/10.1142/S0219887824500622> [ISSN: 0219-8878; IF: 2.1 ; Q3]
- (7) De, U.C., Sardar, A. and De, K., *Conformal vector fields on almost Kenmotsu manifolds*, *Afrika Matematika* (2023) 34:72.
<https://doi.org/10.1007/s13370-023-01118-9> [ISSN: 2190-7668; Impact Factor: 1.1]
- (8) De, K. U. C. De and velimirovic, J., *Some curvature properties of perfect fluid spacetimes*, *Quaestiones Mathematicae* 2024, 47(4): 751–764.
<https://doi.org/10.2989/16073606.2023.2255933> [ISSN: 1607-3606; IF: 1.3; Q2]
- (9) F. Mofarreh, De, K. and U. C. De *Characterizations of a spacetime admitting Ψ -conformal curvature tensor*, *Filomat* **37**:30 (2023), 10265–10274.
<https://doi.org/10.2298/FIL2330265M> [ISSN: 2406-0933; IF: .988 ; Q3]
- (10) De, K., Y.J. Suh and De, U.C., *Characterization of Perfect fluid spacetimes obeying $f(\mathcal{R})$ -gravity equipped with different gradient solitons*, *International Journal of Geometric Methods in Modern Physics* Vol. 20, No. 10 (2023) 2350174 (15 pages).
<https://doi.org/10.1142/S0219887823501748> [ISSN: 0219-8878; IF: 2.1 ; Q3]
- (11) De, K., De, U.C. and Gezer, A., *Perfect fluid spacetimes and k -almost yamabe solitons*, *Turk J Math* (2023) 47: 1236-1246.
<https://doi.org/10.55730/1300-0098.3423> [ISSN: 1300-0098; IF .658 ; Q2].

(12) De, K. and De, U.C., *Investigation on gradient solitons in perfect fluid spacetimes*, *Reports on Math. Phys.*, Vol. 91 (2023) 277-289.
[https://doi.org/10.1016/S0034-4877\(23\)00035-6](https://doi.org/10.1016/S0034-4877(23)00035-6) [ISSN: 0034-4877; IF: .808 ; Q3]

(13) De, U.C., De, K., Zengin, F.O. and Demirbag, S.A., *Characterizations of a spacetime of quasi-constant sectional curvature and $\mathcal{F}(\mathcal{R})$ -gravity*, *Fortschr. Phys.* 2023, 2200201.
<https://doi.org/10.1002/prop.202200201> [ISSN: 1521-3978; IF: 5.532 ; Q1]

(14) De, K., De, U. C., *Perfect fluid spacetimes obeying certain restrictions on the energy-momentum tensor*, *Filomat* 37:11 (2023), 3483-3492.
<https://doi.org/10.2298/FIL2311483D>. [ISSN: 2406-0933; IF: .988 ; Q3]

(15) De, K., Khan, M.N.* and De, U.C., *almost co-Kähler manifolds and (m, ρ) -quasi-Einstein solitons*, *Chaos, Solitons and Fractals* 167 (2023) 113050.
<https://doi.org/10.1016/j.chaos.2022.113050> [ISSN: 2590-0544; IF: 9.922 ; Q1]

(16) De, K. and De, U.C., *A note on gradient Solitons on two classes of almost Kenmotsu Manifolds*, *International Journal of Geometric Methods in Modern Physics* Vol. 19, No. 13 (2022) 2250213 (12 pages).
<https://doi.org/10.1142/S0219887822502139> [ISSN: 0219-8878; IF: 1.8 ; Q3]

(17) De, K. and De, U.C., *A note on Almost Riemann Soliton and gradient almost Riemann soliton*, *Afrika Matematika* (2022) 33:74
<https://doi.org/10.1007/s13370-022-01010-y> [ISSN: 2190-7668; IF: 1.1]

(18) De, K., U. C. De, A. A. Syied*, N. B. Turki and S. Alsaeed, *Perfect fluid spacetimes and gradient solitons*, *Journal of Nonlinear Mathematical Physics*, 29 (2022), 843-858.
<https://doi.org/10.1007/s44198-022-00066-5> [ISSN: 1776-0852; IF 1.053 ; Q3]

(19) De, K. and De, U.C., *Some geometric and physical properties of pseudo ψ -conharmonically symmetric manifolds*, *Quaestiones Mathematicae*, 46:5, 939-958.
<https://doi.org/10.2989/16073606.2022.2046197> [ISSN: 1607-3606; IF 1.3 ; Q2]

(20) De, U.C., Sardar, A. and De, K., *Ricci-Yamabe solitons and 3-dimensional Riemannian manifolds*, *Turk J Math* (2022) 46: 1078-1088.
<https://doi.org/10.3906/mat-2111-21> [ISSN: 1300-0098; IF: .658 ; Q2]

(21) De, K., De, U.C., *Investigations on solitons in $f(\mathcal{R})$ -gravity*, *Eur. Phys. J. Plus* (2022) 137:180.
<https://doi.org/10.1140/epjp/s13360-022-02399-y> [ISSN: 2190-5444; IF: 3.911; Q2].

(22) De, K., *Almost Riemann Soliton and gradient almost Riemann soliton on LP-Sasakian manifolds*, *Filomat* 35:11 (2021), 3759-3766.
<https://doi.org/10.2298/FIL2111759D> [ISSN: 2406-0933; IF: .988 ; Q3].

(23) P. Zhao *, U. C. De, B. Ünal and De, K., *Sufficient conditions for a pseudosymmetric spacetime to be a perfect fluid spacetime*, *Int. J. Geom. Methods Mod. Phys.* **18**, no. 13, (2021),2150217 (12 pages).

<https://doi.org/10.1142/S0219887821502170> [ISSN: 0219-8878; IF: 1.874 ; Q3].

(24) De, K. and De, U.C., *δ -almost Yamabe solitons in paracontact metric manifolds*, *Mediterr. J. Math.* **18**, 218 (2021).

<https://doi.org/10.1007/s00009-021-01856-9> [ISSN: 1660-5454; IF: 1.418 ; Q2]

(25) De, K. and De, U.C., *Investigation of generalized Z - recurrent spacetimes and $f(\mathcal{R}, T)$ -gravity*, *Adv. Appl. Clifford Algebras* **31**, 38 (2021).

<https://doi.org/10.1007/s00006-021-01145-4>. [ISSN: 1661-4909; IF: 1.066]

(26) De, K. and De, U.C., *A note on gradient Solitons on para-Kenmotsu manifolds*, *Int. J. Geom. Methods Mod. Phys.* **18**, no. 01, (2021),2150007 (11 pages).

<https://doi.org/10.1142/S0219887821500079> [ISSN: 0219-8878; IF: 1.874].

(27) De, K. and De, U.C., *Almost quasi-Yamabe solitons and gradient almost quasi-Yamabe solitons in paracontact geometry*, *Quaestiones Mathematicae*, **44** (11) (2021), 1429-1440.

<https://doi.org/10.2989/16073606.2020.1799882> [ISSN: 1607-3606; IF: 1.3]

SCOPUS-indexed:

(1) De, K., De, U.C. and A. Gezer, *Investigations on a Riemannian manifold with a semi-symmetric non-metric connection and gradient solitons*, *Kraguevac Journal of Mathematics* 49(3) (2025), 387-400.

<https://api.semanticscholar.org/CorpusID:267938171>[ISSN: 1450-9628]

(2) De, U.C. and De, K., *K -Ricci-Bourguignon almost solitons*, *International Electronic Journal of Geometry* 17(1) (2024), 63-71.

<https://doi.org/10.36890/IEJG.1434598> [ISSN: 1307-5624]

(3) De, U.C.*, Ghosh, G. and De, K., *A note on Bach flat paraSasakian manifolds*, *Commun.Fac.Sci. Univ. Ank.Series A1* **72** 3 (2023), 826-838.

<https://doi.org/10.31801/cfsuasmas.1172289> [ISSN: 1303-5991]

(4) De, K., De, U.C.*, *Ricci-Yamabe solitons in $f(R)$ -gravity*, *International Electronic Journal of Geometry* 16(1) (2023), 334-342.

<https://doi.org/10.36890/iejg.1234057> [ISSN:1307-5624]

(5) De, K. and De, U.C., *Riemann Solitons on para-Sasakian Geometry*, *Carpathian Math. Publ.* 2022, 14 (2), 395-405.

<https://doi.org/10.15330/cmp.14.2.395-405> [ISSN: 2075-9827]

(6) De, K., De, U.C.* and F. Mofarrhe *m -quasi Einstein metric and paracontact geometry*, *International Electronic Journal of Geometry* 15(2) (2022), 304-312.

<https://doi.org/10.36890/IEJG.1100147> [ISSN:1307-5624]

(7) De, K. and Ghosh, S., *A note on Yamabe Solitons and gradient yamabe solitons*, *Kyungpook Math. J.* **62** (2022), 179-191.

<https://doi.org/10.5666/KMJ.2022.62.1.179> [ISSN: 1225-6951; IF: .73]

(8) De, K. and De, U.C., *Almost quasi-Yamabe and gradient almost quasi-Yamabe solitons on quasi-Sasakian manifolds*, *Acta Math. Univ. Comenianae* **90** (2021), 333-340. [ISSN: 0862-9544; IF: 0.59]

(9) De, K., *α -almost Ricci solitons on Kenmotsu Manifolds*, *SUT J. Math.* **56** (2020), 159-169. [ISSN 0916-5746, IF: 0.56]

(10) De, K., *Some Relativistic Properties of Lorentzian para-Sasakian type spacetime*, *Kyungpook Math. J.* **60** (2020), 821-830.

<https://doi.org/10.5666/KMJ.2020.60.4.821> [ISSN 1225-6951; IF .73]

(11) De, K., *D-Homothetic deformation of LP-Sasakian manifolds*, *Novisad J.Math.* **45** (2015), 113-123.

<https://doi.org/10.30755/NSJOM.2014.033> [ISSN: 1450-5444]

(12) De, K. and De, U.C., *LP-Sasakian manifold with quasi-conformal curvature tensor*, *SUT J. Math.* **49** (2013), 33-46.

<https://doi.org/10.55937/sut/1379605047>[ISSN 0916-5746, IF: 0.26]

(13) De, K. and De, U.C., *On a class of pseudosymmetric LP-Sasakian manifolds*, *Afr. Math.* **26** (2013), 131-138.[ISSN 1012-9405]

(14) De, U.C. and De, K., *Lorentzian Trans-Sasakian manifolds*, *Commun.Fac.Sci. Univ. Ank.Series A1* **62** (2013), 37-51. [ISSN 1303-5991]

(15) De, K. and De, U.C., *On LP-Sasakian manifolds with a coefficient α satisfying certain curvature conditions*, *Tamsui Oxford Journal of Information and Mathematical Sciences* **29**(4) (2013) 435-456. [ISSN 2222-4424]

(16) De, K. and De, U.C., *Some results on LP-Sasakian manifolds with a coefficient α* , *Yokohama Math. J.* **58** (2012), 79-94. [ISSN 1476-4687]

(17) De, U.C. and De, K., *On a class of three- dimensional Trans-Sasakian manifolds*, *Commun. Korean math. Soc.* **27** (2012), 795-808. [ISSN 1225-1763]

(18) De, K. and De, U.C., *(m, ρ) -quasi Einstein solitons on paracontact geometry*, *Novi Sad J. Math.* <https://doi.org/10.30755/NSJOM.13225>

Web of Science/ESCI-indexed:

(1) De, U.C. and De, K., *Solitons in $f(\mathcal{R}, T)$ -gravity*, *Geometry of Submanifolds and Applications*, Springer Nature Singapore, Singapore, (2024), 63–77.

- (2) De, K., *A note on gradient Solitons on para-Sasakian manifolds*, *BSG Proceedings*, **28** (2021), 20-29. [ISSN 1843-2654]
- (3) De, K. and De, U.C., *k-Almost Yamabe Solitons On Kenmotsu Manifolds*, *Honam Math. J.* **43** (2021), 115-122. [ISSN 2288-6176]
- (4) De, K. and De, U.C., *A note on Almost Ricci Soliton and gradient almost Ricci soliton on para-Sasakian manifolds*, *Korean J. Math.* **28** (2020), 739-751. [ISSN 1976-8605]
- (5) De, K., *W₂-curvature tensor on K-contact manifolds*, *Facta Universitatis (NIS) Ser. Math. Inform.* Vol. 35, No 4 (2020), 995-1001. [ISSN 0352-9665]
- (6) De, K., Blaga, A. M.* and De, U.C., **-Ricci Solitons on (ε)-Kenmotsu manifolds*, *PJM* **9** (2)(2020), 984-990. [ISSN 2219-5688]
- (7) De, K. and Dey, C., **-Ricci Solitons on (ε)-para sasakian 3-manifolds*, *Bulletin of the Transilvania University of Braşov* • Vol 12(61), No. 2 - 2019, 265-274. [ISSN 2065-2151]
- (8) De, K. and De, U.C., *η-Ricci Solitons on Kenmotsu 3-Manifolds*, *Analele Universitatii de Vest, Timisoara, LVI* (2018), 51-63. [ISSN 1841-3307]
- (9) De, K., *On a type of Trans-Sasakian manifolds*, *Acta Mathematica Academiae Paedagogicae Nyiregyhaziensis*, **33** (2017), 91-101. [ISSN 0866-0182]
- (10) De, K. and De, U.C., *Projective Curvature tensor in 3-dimensional connected Trans-Sasakian manifolds*, *Acta Univ.Palacki.Olomuc.,Fac.rer.nat., Mathematica* **55** 2 (2016), 29-40. [ISSN 0231-9721]
- (11) De, K. and Samui, S., *On a class of LP-Sasakian manifold*, *Bull. Transilvania Univ. of Brasov, Series III: Mathematics, Informatics, Physics*, **7** (2014), 45-58. [ISSN 2065-2151]
- (12) De, K., *On φ- quasi conformally symmetric β-Kenmotsu manifolds*, *Facta Universitatis (NIS) Ser. Math. Inform.* **29** (2014), 173-188. [ISSN 0352-9665]
- (13) De, K., *On a type of semi-symmetric metric connection in an LP-Sasakian manifold with a coefficient α*, *Anal. Univ. Oradea Fasc. Math., Tom XXI* (2014), 41-50. [ISSN 1221-1265].
- (14) De, U.C. and De, K., *On η-Einstein LP-Sasakian manifolds*, *acta univ. apulensis*, **38** (2014), 143-151. [ISSN 1582-5329]
- (15) De, K. and De, U.C., *Conharmonic curvature tensor on Kenmotsu manifolds*, *Bulletin of the Transilvania University of Brasov, Series III: Mathematics, Informatics, Physics*, **6** (2013), 9-22. [ISSN 2065-2151]

(16) De, U.C. and De, K., *On ϕ -Concircularly symmetric Kenmotsu Manifolds*, *Thai J. Math.*, **10** (2012), 1-11. [ISSN 1686-0209]

(17) De, U.C.* and De, K., *On three dimensional Kenmotsu manifolds admitting a quater- symmetric metric connection*, *Azerbaijan J. Math.*, **1** (2011), 132-142. [ISSN 2218-6816]

Other referred journal:

(1) De, K., *Quater-symmetric metric connection in a 3-dimensional Trans-Sasakian manifold*, *Aligarh Bull. Maths.* **29** (2010), 63-70. [ISSN 0304-9787]

(2) De, K., *On Trans-Sasakian manifolds admitting a semi-symmetric metric connection*, *Bull. pure Appl. Math.*, **5** (2011), 360-366. [ISSN 0973-5933]

(3) De, K., *A note on gradient *-Ricci Solitons*, *Math. Sci. Appl. E-Notes* 8(2)(2020), 79-85. [ISSN 2147-6268]

(4) De, U.C.* and De, K., *Pseudo projective symmetric manifolds and Gray's decomposition*, *Journal of The Tensor Society (J.T.S.)* 15 (2021), page 53 - 61. [ISSN: 0974-5424]

List Of Invited Papers in Conference

- De, K., *Generalized Robertson-Walker spacetimes concerning gradient Ricci solitons*, 24th International Differential Geometry Workshop on Submanifolds in Homogenous Spaces satisfying Geometric Properties and the 21th RIRC-OCAMI Joint Differential Geometry Workshop at Pukyong National University, Busan, Republic of Korea during August 27-29, 2023. presented on 28/09/2023.
- Y. J. Suh and K. De, *Effect of projective curvature tensor in $f(R, G)$ -gravity*, 24th International Differential Geometry Workshop on Submanifolds in Homogenous Spaces satisfying Geometric Properties and the 21th RIRC-OCAMI Joint Differential Geometry Workshop at Pukyong National University, Busan, Republic of Korea during August 27-29, 2023. presented on 29/09/2023.

List Of Presented Papers in Conference

- De, K., *Impact of gradient ρ -Einstein solitons in perfect fluid spacetimes.*, Riemannian Geometry and Applications – RIGA 2023 (September 22-24, 2023). organized online by the Faculty of Railways, Roads and Bridges, Technical University of Civil Engineering Bucharest, Romania and the Faculty of Mathematics and Computer Science, University of Bucharest.
- De, K., *A note on α -almost Ricci Soliton.*, Recent Advances in Mathematics and its Applications (RAMA-2020), Department of Pure Mathematics, University of Calcutta.
- De, K., *A note on almost Riemann Soliton*, Recent Advances in Pure and Applied Mathematics (RAPAM-2020), Kurseong College.

- De, K, *Projective Curvature Tensor on LP-Sasakian Manifolds*, 22 International Conference of International Academy of Physical Sciences (CONIAPS XXII), Faculty of Sciences, Dr. Ram Monohar Lohia Avadh University, Faizabad, U.P.

Membership of Learned Societies:

- Calcutta Mathematical Society (Life Member)

Other activities:

- Reviewer of Mathematical Review (American Mathematical Society)
- Have been acting as a reviewer of some reputed National and International Journals.
- Acted as paper setter, moderator and examiner in various examinations of different Universities.

My profile can be found in the subsequent cites:

- Krishnendu De-Research Gate
- Krishnendu De-Google Scholar
- MR: De, Krishnendu-923294(ams.org)
- Krishnendu De (0000 – 0001 – 6520 – 4520) (orcid.org)

Krishnendu De

July 7, 2024