

Curriculum Vitae

Full Name	Dr. Kailash Chandra Petwal			
Designation	Professor			
Department	Mathematics (School of Sciences)			
Campus	SRT Campus Badshahithaul, TG			
Mobile	+919411521475; 9627108167			
Email	kcpetwal@gmail.com			
Education Qualification	B.Sc. (1988) with PCM, HNB Garhwal University			
	M.Sc. (1990), Mathematics, HNB Garhwal University			
	D. Phil. (1993), HNB Garhwal University			
Teaching Experience	UG - 30 Yrs PG - 30 Yrs	Research Experience	30 Years	
Areas of Interest/ Specialization Pure and Applied Differential Geometry				
Honours & Awards Successfully completed a tenure " Board of Governor " (EC member), Patanjali University, Haridwar, Uttarakhand from December 2020 to December 2023.				
Member of Academic Institutions 1. Member of Academic Council, HNBGU (2026) 2. Member of BOS, HNBGU (2018; 2023) 2. Member of board of Governor , Patanjali University, Haridwar				
Membership of Scientific Organization Life Member of 1. Tensor Society of India 2. International Academy of Physical Science (IAPS)				
Research Projects Completed one research project entitled "The study of submanifolds in conformal & Pseudo Conformal spaces". Agency: Uttarakhand State Council for Science & Technology (U-COST), Dept. of Science & Technology, Govt. of Uttarakhand, Total Cost: Rs. 3,25,000 Duration: 2008-2010				
Curriculum development 1. Certificate course of CCNA Exploration: 'Routing protocols and concepts' at college of technology, G.B. Pant University of Agriculture & Technology on June 02, 2008 to June 09, 2008. 2. Certificate course of CCNA Exploration: 'Network fundamental' at college of technology, G.B. Pant University of Agriculture & Technology on June 10, 2008 to June 14, 2008.				

Orientation/Refresher Courses

1. Participate the **4-week orientation programme** from UGC Academic Staff College, Jamia Millia Islamia, New Delhi **w.e.f 19/02/2009 to 21/03/2009**.
2. Participate the **3-week refresher course** in *Mathematics & Statistics (RC-238)* from UGC Academic Staff College, H. P. University Shimla, Himanchal Pradesh **w.e.f. 18/07/2011 to 06/08/2011**.
3. Participate the **3-week refresher course** in '*Environment and Sustainable Development*' from UGC-HRDC (Special Summer School) Kumaun University Nanital, **w.e.f. 11/07/2016 to 30/01/2016**.

Administrative Experience

1. Proctor (3 years) 2008-2011, SRT Campus Tehri
2. Programme officer NSS (2011-2013 and 2017-19), SRT Campus Tehri
3. Expert in UKPSC, Haridwar, Uttarakhand, India from 2015 to till date
4. Hostel Warden (3 years) 2014-2017, SRT Campus Tehri
5. Member of different administrative committee and other committees such as: exam, admission (CUET, UET), Campus NAAC; Library, antiragging, chief election officer etc.
6. In charge **Head Dept. Sports, HNBGU, SRT Campus Tehri**, from 2022 to till date.
7. Assist. DDSW (July, 2022 to July 2025), SRT Campus Tehri.

Research Supervision

Awarded - 07; Working – 01

S. No	Name	Awarded	Year
1.	Dr Vineeta Negi	Awarded	June, 2011
2.	Dr. Shikha Uniyal	Awarded	March, 2013
3.	Dr. Jagdish Rawat	Awarded	August, 2013
4.	Dr. Vineet Bhatt	Awarded	December, 2014
5.	Dr. Sandeepa Bhandari	Awarded	October, 2015
6.	Dr. Kulveer Rana	Awarded	November, 2019
7.	Dr. Monika Sati	Awarded	November, 2021
8.	Ms. Meena	Working	From January, 2025

Book(s) authored /edited

1. Edit Book entitled “Promoting the Advancement of Applied Sciences” Edited by **Dr. U.S. Negi and Dr. K.C. Petwal** (ISBN 978-93-87229-44-0) **Edition-2020**
2. **Chapter** in the Book Promoting the Advancement of Applied Sciences entitled “Geometric Operations for Transformations Image Wraps to DTMRI” **Edition-2020**
3. “A Text Book of Vector Calculus” **Author: Dr. U.S. Negi and Dr. K.C. Petwal** Published by ABS Books, New Delhi (ISBN 978-93-91002-22-0) **Edition-2021**

Participation

1. One-week programme, Academic leadership (Aug.26-Sep.1, 2019)
2. National seminar-Hindi terminology (By MHRD)30-31 May 2019
3. One day training programme SRTC Law Dept.- Feb 18, 2020
4. Online faculty development programme-MHRD April29-May 01 2020
5. International Webinar on Impact of COVID-19 on Research and Academic Activities, June 19-20, 2020. Organized by Department of Physics, SRT Campus.
6. International conference (online) on “Emerging Trends in the Vedic Mathematics & Application in Science, Technology and social sciences Research” August 16-17, 2020. Organized by JNU, New Delhi.
7. National Webinar on “Use of Technology”, August 10, 2021. Organized by CCS Univ. Meerut (U.P.)

Conference/Symposium/Workshop Organized

1. **Organized national symposium** entitled “**A National Symposium on Mind, Matter and Mathematics: A Dialogue**” as a Convener, at HNB Garhwal University Campus Badshahithaul, Tehri (UK) from March 12-14, 2014.
2. **Organized a national conference** entitled “**Promoting the Advancement of Applied Sciences**” as an **Organizing Secretary** during October 22-23, 2019 at HNBGU, SRT Campus Badshahithaul.
3. **Organized a seminar** on “Development of Scientific Temper among Students” on the occasion of national science day-2020 **as an Organizing Secretary** during February 27-28, 2020 at HNBGU, SRT Campus Badshahithaul.
4. **Organized a seminar** on the occasion of national science day-2024 **as a Convener** during February 27-28, 2024 at HNBGU, SRT Campus Badshahithaul.

List of conference/seminar Attended

1. Presented a paper entitled “*Mathematical Modelling on Probabilistic Environmental Risk Assessment*” in the **international conference** on “Climate change and Disaster Risk Reduction” during October 26-28, 2018 at HNBGU, SRT Campus Badshahithaul, (TG).
2. Presented a paper entitled “*Impacting Digital technologies on Mathematics Education*” in the **National Seminar** on “Digitalization in India: The way to Knowledge Economy” during December 21-22, 2018 at Sahu Jain (PG) College, Najibabad (UP).
3. Presented a paper entitled “*Trends of computing the geometric structures in Mathematical Science*” in the **National Seminar** on “Emerging Trends and Future Challenges in Science” during February 27-28, 2019 at Dept. of Chemistry S.G.R.R. (PG) College, Dehradun (Uttarakhand).
4. Presented a paper entitled “*Survey of image compression and face recognition*” in the **National conference** on “Promoting the Advancement of Applied Sciences” during October 22-23, 2019 at HNBGU, SRT Campus Badshahithaul, (TG).
5. Presented a paper entitled “*Evolution of Weylian structure Under Ricci flow*” in the **24th International conference** of international academy of physical sciences on “Innovations in Physical Sciences” during August 09-11, 2019 at CCS University, Meerut (UP).
6. Presented a paper entitled “*Geometric operations on Diffusion tensor magnetic resonance imaging*” in the **international conference** on Material Science and Applications, during November 25-27, 2019 at HNBGU Srinagar (Garhwal).

7. Presented a paper entitled “*Newtonian limit for the curvature of space time*” in the **25th International conference** on Physical and biological sciences at Cross-roads: Interdisciplinary Explorations and Exciting Challenges, during **December 29-31, 2019** at Guru Jambheshwar University of Science & Technology, Hisar (Haryana).
8. Presented a paper entitled “*Vedic Mathematics: Concept & Calculations*” in the **National Science Day seminar** on “Development of Scientific Temper among Students” during **February 27-28, 2020** at HNBGU, SRT Campus Badshahithaul.
9. Presented a paper entitled “*Analysis of Ricci flow through various Weylian configurations*” in the ‘**International conference** on Recent Advancements in Mathematics (ICRAM-2021)’ during **April 09-10, 2021** at PG and Research Department of Mathematics, Sacred Heart College, Tirupattur, Tamil Nadu.
10. Presented a paper entitled “*A Remark on Almost Complex Manifold with Linear Connections*” in the “**International conference** on Advancements in Engineering and Sciences” during **July 01-02, 2021** at Dept. of Mathematics, Graphic Era Hill & Deemed to be University, Dehradun (Uttarakhand).
11. Presented a paper entitled “*A Remark on Almost Complex Manifold with Linear Connections*” in the ‘**International conference** on Mathematical, Physical and Computational Sciences (ICMPCS-2021)’ during **August 27-28, 2021** at Aurora’s Degree & PG College in collaboration with Andhra Pradesh and Telangana Mathematical Society (APTSMS).
12. Presented a paper entitled “*Dense oriented totally real submanifolds of Kaehlerian Manifold*” in the ‘**International conference** on Computational and Mathematical methods in Applied Sciences (CCMAS-2023)’ during **March 30-31, 2023** at School of Applied and Life Science, Uttaranchal University, Dehradun.
13. Presented a talk entitled “*Geometrization of Heat flow on Volumetrically Isothermal Manifolds via Ricci Flow*” in the ‘**XXIX International conference of IAPS (CONIAPS XXIX)**’ during **July 21-23, 2023** at Shivalik College of Engineering, Dehradun.
14. Session Chair Person of ‘**XXIX International conference of IAPS (CONIAPS XXIX)**’ during **July 21-23, 2023** at Shivalik College of Engineering, Dehradun.

Publications

1. K. C. Petwal & Vineeta Negi: Projective and Conformal transformation on almost Hermitian and Einstein spaces, *Society for the Progress of Science, ACI*, Vol. XXXIV M, No. 3, pp 1099-1104 (2008).
2. S. Kumar & K. C. Petwal: A note on Neo-curvature tensor field in recurrent Finsler manifolds, *Journal of Ultra Scientists of Physical Sciences*-Vol. 21, No. 2, pp 495-502 (2009).
3. K. C. Petwal, Kumar, S. & Negi, V.: A note on some types of affine motions in recurrent Kaehlerian manifolds of second order, *Pure & Appl. Mathematika Sciences*-Vol. LXX, No. 1-2, pp 67-78 (2009).
4. K. C. Petwal & Vineeta Negi: A remark of submanifolds in conformal and pseudoconformal spaces. *Journal of Ultra Scientist of Physical Sciences* Vol.21 (3) M, pp 691-696 (2009).
5. K. C. Petwal & Shikha Uniyal: Complete Hermitian submanifolds in Riemannian manifold, *Aligarh Bull. Of Math.*, Vol. 28 Nos. 1-2, 35-42 (2009).
6. K. C. Petwal and J.S. Rawat: Totally real submanifolds of Sasakian manifold with vanishing contact Bochner curvature tensor, *J. Mountain Res.*, Vol-4 pp 17-27 (2009)
7. K. C. Petwal, S. Kumar & Vineeta Negi: The study of pseudo-analytic vectors on pseudo-Hermitian hypersurfaces, *Bulletin of Calcutta Math. Society*, Vol. 102 (3) pp 281-288 (2010).

8. K. C. Petwal, Kumar, S. & Shikha Uniyal: A note on the applications of tensors in Physics, Mathematics and Medical Science, *Journal of Ultra Scientists of Physical Science*-Vol. 22(1) M, pp 163-178 (2010).
9. K. C. Petwal, Jagdish Rawat & Shikha Uniyal: Conformally flat totally real submanifold of a Kaehlerian manifold, *J. of Ultra Scientists of Phy. Science*-Vol. 22(2) M, pp 473-480 (2010).
10. K. C. Petwal, Shikha Uniyal & Jagdish Rawat: Complete Kaehlerian manifolds with totally real bisectional curvature tensor, *J. of Calcutta Math. Society, Vol. 6, No. 1, pp 1-8* (2010).
11. K. C. Petwal & S. Kumar: The study of pseudo-analytic vectors on pseudo-Hermitian hypersurfaces, *Bull. Cal. Math. Soc.*-Vol. 102 (3) pp 281-288 (2010).
12. S. Kumar & K. C. Petwal: Analysis on recurrence properties of Weyl's curvature tensor and its Newtonian limit, *Differential Geometry-Dynamical System, Romania, Vol. 12, pp 109-117* (2010).
13. K.C. Petwal, Kumar, S. & Shikha Uniyal: A note on the applications of tensors in Physics, Mathematics and Medical Science, *Journal of Ultra Scientists of Physical Science*-Vol. 22(1) M, pp 163-178 (2010).
14. K. C. Petwal, Jagdish Rawat & Shikha Uniyal: Conformally flat totally real submanifold of a Kaehlerian manifold, *Journal of Ultra Scientists of Physical Science*-Vol. 22(2) M, pp 473-480 (2010).
15. K.C. Petwal, Shikha Uniyal & Jagdish Rawat: Complete Kaehler manifolds with totally real bisectional curvature tensor, *J. Cal. Math. Soc., Vol. 6, No. 1, pp 1-8*(2010).
16. K. C. Petwal & S. K. Bahuguna: Spatial transformations of diffusion tensor magnetic resonance imaging using certain geometric operations, *Int. J. of Phy. Sci., Vol. 5(7), pp 940-954, July 2010*.
17. K. C. Petwal & S. Kumar: Functioning of Devine Ratio on Conformal Einstein Spaces, *British Journal of Mathematics & Computer Science*, 1 (2): 87-100 (2011).
18. S. Kumar & K. C. Petwal: Evolution of Lovelock tensor as a generalized Einstein tensor and lovelock gravity under Ricci flow, *Physical Review & Res. Int., 1(1): 1-15* (2011).
19. S. Kumar & K. C. Petwal: Spectral Decomposition of 4th –order Covariance Douglas tensor in *P-Finsler Manifolds, *Albanian Journal of Mathematics*, Vol. 5, No. 1, pp 53-65 (2011).
20. K. C. Petwal & Jagdish Rawat: Compact Oriented Anti-invariant submanifolds of Kaehlerian manifold, *International Journal of current Research*, Vol. 3 (4), pp 263-266 (2011).
21. K. C. Petwal & S. Kumar: Techniques for the decomposition of Cartan's curvature tensor in complex Finsler manifolds, *Albanian Journal of Mathematics*, Vol.5, No.1, pp 67-86 (2011).
22. K. C. Petwal & Shikha Uniyal: Affine Transformations and Isometries in a Complete Riemannian Manifold, *Int. J. of Mathematical Archive, Vol. 2, No. 9, pp 1508-1511* (2011).
23. S. Kumar and K. C. Petwal: Evolution of Weyl's Gauge invariant geometry under Ricci flow, *Proyecciones Journal of Mathematics, Vol. 30, No 3, pp. 329-350*, (2011) Universidad Cat'olica del Norte Antofagasta – Chile (China).
24. A. A. Bourai and K. C. Petwal: Application of tensor in various scientific and mathematical fields, *International Journal of current research, vol. 3, Issu 11, pp 151-155* (2011).
25. S. Kumar & K. C. Petwal: Evolution of Weyl's Gauge invariant geos scientific and Mathematical fields, *Int. Journal of current Research*, Vol. 3, Issue, 11, pp 151-155 (2011).
26. S. Kumar & K. C. Petwal (2012): Evolution of Einstein conformal geometry under Ricci flow techniques, *Inventi Impact: Computational Mathematics*, Vol. (2), pp79-87.

27. Vineet Bhatt, S. Kumar & K. C. Petwal (2012): CAS Aided Factorization Techniques for Elasticity Tensor of Olivine (Fo90Fa10), *Inventi Rapid: Computational Mathematics*, Vol. 2012(4): pp1-24.
28. K. C. Petwal & Sandeepa Bhandari (2012): On Conformal Complex Space Form, *International Journal of current Research*, Vol. 4, Issue, 12, pp. 150-153.
29. K. C. Petwal & Sandeepa Bhandari (2013): Characterization of Hypersurface in Conformal Manifolds, *Int. J. of Physical, Chemical & Mathematical Sc.*, Vol. 2, No. 1; pp. 65-70.
30. Vineet Bhatt & K. C. Petwal (2013): Survey of Image Compression and Face Recognition, *Inventi Rapid: Image & Video Processing*, Vol. 2013, Issue 2, pp 1-8.
31. Sandeepa Bhandari & K. C. Petwal (2013): Some properties of submanifolds in conformal Manifold, *Int. J. of Mathematical Archive*, Vol. 4, Issue 3, pp 92-100.
32. Petwal, K. C. and Bhatt, Vineet (2014): CAS Study of Tucker Decomposition, *International Journal of Physics and Mathematical Sciences 2014 Vol. 4 (2) pp. 29-38*.
33. K. C. Petwal, Kumar, S. and Negi, V. (2015): Theory of minimal submanifolds in Tachibana manifolds, *The Mathematics Education*, Vol. XLVI, No. 2.
34. Kulveer Singh Rana and K. C. Petwal (2016): Review of complex conformal structures on 1-dimensional Riemannian Manifold, *International Journal of current Research*, Vol. 8, Issue, 08, pp. 37048-37059.
35. K. C. Petwal and Kulveer Singh Rana (2016): A remark on the topology of product submanifolds of Hermitian manifolds, *International Journal of Physical, Chemical and Mathematical Sciences*, vol.5, No. 2, pp.16-21
36. Kulveer Singh Rana and K. C. Petwal: Conformal Geometry of arc length Functional on space Curves and Space time, *Int. J. of Math. Trends and Technology*, vol 47, No. 5, pp. 338-344 (2017).
37. K. C. Petwal and Kulveer Singh Rana: Remark on Isotropic four-dimensional conformal structures, *Aryabhatta J. of Mathematics & Informatics*, Vol. 9, No. 2, pp. 307-314 (2017).
38. K. C. Petwal and Kulveer Singh Rana: Characteristics of Riemannian manifolds and Pseudo-Riemannian Metric, *Aryabhatta J. of Mathematics & Informatics*, Vol.10(1), pp.179-190 (2018).
39. Isotropic tensor Decomposition of Cartan's Curvature tensor in Complex Finsler Manifolds, **K.C. Petwal & Monika Sati**, *International journal of Research in Advent Technology*, Vol.7, No.4, pp 595-599 (2019) [UGC Journal Listed]
40. Newtonian Limit for the Curvature of Space Time, **K. C. Petwal**, *Journal of International Academy of Physical Sciences*, pp. 337- 347, Vol. 23 No. 4 (2019); ISSN 0974 – 9373 [Peer Reviewed Journal]
41. A Note on Factorization for Centro-symmetric Real matrices that preserves Centro-symmetry, **Vineet Bhatt, K. C. Petwal and S. Kumar**, *Electronic Journal of Mathematical Analysis and Applications*, Vol. 8(2), pp. 272-290 (2020) [SCOPUS Journal]
42. A Comprehensive Note on Techniques Used for Face Detection and Application, Vineet Bhatt, **Kailash Chandra Petwal** at al., *Applied Mathematics E-Notes*, 21(2021), 478-494 c. [SCOPUS Journal]
43. Some Properties on Divine Kaehlerian Manifold, **Kailash Chandra Petwal**, *Journal of Mountain Research*, Vol. 16(1), (2021), 251-258. [WOS Journal]
44. A Review on Black hole solutions in General Relativity, **Monika Sati and K. C. Petwal**, *Journal of Mountain Research*, Vol. 16(3), pp 99-110 (2021). [WOS Journal]

45. Evolution of Purely Electric and Magnetic Parts of Weyl's Tensor in a space time, **Monika Sati and K. C. Petwal**, Bulletin of Calcutta Mathematical Society, Vol. 114(1) pp. 75-84 (Feb. 2022) [UGC Listed Journal]
46. Evolution of Electric and Magnetic parts of Weyl Tensor in a Space-time, Monika Sati and **Kailash Petwal**; *Journal of Applied & Computational Mathematics*, Vol. 11:06, (2022) 478, Mini Review, Open Access.
47. A Remark on Almost Complex Manifold with Linear Connections, **Kailash Chandra Petwal at. al.**, AIP Publishing; **2481**, 020035 (2022).
48. A Remark on Non-negative Matrix Factorization; **Vineet Bhatt, Kailash Chandra Petwal at. al.**, AIP Publishing; 2481, 020010 (2022).
49. Emerging Electric or Magnetic parts of well tensor on PNDP Manifold, **Monika Sati, K.C. Petwal, Alexander Pigazzini, Cenap Ozel at al.**, *Int. J. of Geometric Methods in Modern Physics*; World Scientific, pp 2450022-1 to 2450022-12 (2024)
50. Affine Motions in Recurrent Kaehlerian Manifolds, **Meena and K. C. Petwal** (Submitted for publication). **August, 2025**