

Curriculum-Vitae

DR. KISHOR D. KUCCHE Professor, Department of Mathematics, Shivaji University, Kolhapur- 416004, Maharashtra, India.	Email: kdkucche@gmail.com, kdk_maths@unishivaji.ac.in Phone: (Office) 0231-2609218, Mob: +91 9890129305	
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Educational Qualifications: M.Sc., B.Ed., SET, Ph. D.

Teaching Experience: 22 Years

Teaching Experience	University/Institute	Designation	From	To
Post Graduate	Shivaji University, Kolhapur	Professor	22/08/2025	Till Today
		Associate Professor	12/08/2022	21/08/2025
		Assistant Professor	23/05/2008	11/08/2022
Under Graduate	M. I. T. Engineering College, Aurangabad	Lecturer	16/12/2003	22/05/2008

Research Profile

- Google Scholar profile:
<https://scholar.google.co.in/citations?user=0ieK5xUAAAAJ&hl=en&oi=ao>
- Research Gate profile:
<https://www.researchgate.net/profile/Kishor-Kucche>
- Scopus profile:
<https://www.scopus.com/authid/detail.uri?authorId=37002751600>

Research Projects

Sr. No.	Title	Funding Agency	Funds in Rupees	Status / Period	PI / Co-PI
1	Nonlinear Differential Equations with Generalized Hilfer Fractional Derivatives	Anusandhan National Research Foundation	Rs. 20,18,764/-	Ongoing 26/02/2024 to 25/02/2027	Principal Investigator
2	An Eight Institution Partnership for Advancing Materials Research and Development: From Fundamental Design to Emerging Applications in Structural, Functional and Biomaterials Spaces	Anusandhan National Research Foundation (ANRF-PAIR)	Rs. 5,90,90,000/-	Ongoing 16/10/2025 to 15/10/2030	Co-Principal Investigator
3	Analysis of ψ -Hilfer fractional differential equations	Science and Engineering Research Board	Rs. 17,58,000/-	Completed 22/02/2019 to 21/02/2022	Principal Investigator
4	On nonlinear mixed functional integrodifferential equations in Banach spaces	University Grants Commission	Rs. 1,97,000/-	Completed 01/04/ 2013 to 31/03/ 2015	Principal Investigator

Research Work Guidance

1. Ph.D. Students (Awarded) : 04
2. Ph.D. Students (Working) : 04

Ph.D. Supervision – Awarded Candidates

Sr. No.	Research Scholar	Title of Thesis	Date of Award
1	Smt. Kharde Jyoti Pramod	Analysis of Fractional Differential Equations Involving Generalized Hilfer Fractional Derivative	31/07/2023
2	Smt. Mali Ashwini Dhondiram	A Study of Nonlinear Generalized Hilfer Fractional Differential Equations	06/01/2022
3	Mr. Sutar Sagar Tanaji	Studies on Nonlinear Differential Equations of Fractional Order	01/04/2021
4	Smt. Shikhare Pallavi Uttam	A Study of Nonlinear Integrodifferential Equations in Banach Spaces	24/02/2020

International Research Collaborations (Outside India)

- José Vanterler da C. Sousa, University of Campinas Campinas, São Paulo, Brazil.
- Edmundo Capelas de Oliveira, University of Campinas Campinas, São Paulo, Brazil.
- Juan J. Trujillo, University of La Laguna, La Laguna, Tenerife, Spain.
- Juan J. Nieto, University of Santiago de Compostela, Santiago de Compostela, Spain.
- Hari M. Srivastava, University of Victoria, Victoria, British Columbi, Canada.
- Yong-Kui Chang, Xidian University, Xi'an, Shaanxi, China.
- Arran Fernandez, Eastern Mediterranean University, Famagusta, Northern Cyprus.
- Kottakkaran Sooppy Nisar, Prince Sattam bin Abdulaziz University, Saudi Arabia.
- Thabet Abdeljawad, Prince Sultan University, Riyadh, Saudi Arabia.

Roles in Statutory Authorities

- Chairperson, Board of Studies in Mathematics, Shivaji University, Kolhapur (From 06 March 2023 to 31 August 2027)
- Ex-officio Member, Academic Council, Shivaji University, Kolhapur (From 06 March 2023 to 31 August 2027)
- Member, Faculty of Science and Technology, Shivaji University, Kolhapur (Academic Year: 2018-19 to 2021-22)
- Member, Faculty of Science and Technology, Solapur University, Solapur (Academic Year: 2018-19 to 2019-20)
- Member, Board of Studies in Mathematics, Shivaji University, Kolhapur (Academic Year: 2018-19 to 2021-22,)
- Member, Board of Studies in Mathematics, Solapur University, Solapur (Academic Year: 2018-19 to 2019-20, 2022-23 to 2026-27)
- Member, Board of Studies in Mathematics, Vivekanand College, Kolhapur (Academic Year: 2017-18 to 2019-20)
- Member, Board of Studies in Mathematics, Tuljaram Chaturchand College, Baramati (Academic Year: 2022-23 to 2024-25)
- Member, Board of Studies in Mathematics, Government College of Engineering, Karad.

Administrative Roles at the University Level

- Coordinator, SWAYAM (31 March 2018 to 18 September 2025)
- Coordinator, UGC Schemes of Remedial Coaching
- Coordinator, Plagiarism Check, Computational Sciences
- Member, Lapses Committee (21 August 2018 to 15 September 2023)
- Member, Plagiarism Committee
- Member, Standing Committee (Special Cell, University Administration and Postgraduate Departments)
- Member, Caste-Based Discrimination Prevention Committee
- Member, IQAC – Criteria-wise Committee for NAAC and AQAR

Administrative Roles at the Department Level

- Coordinator, NAAC
- Training and Placement Officer
- Chairman, Ph.D. Entrance and Theory Examinations
- Coordinator, Examinations, M.Sc. Mathematics and M.Sc. Tech. Mathematics
- Member, Research Advisory Committee
- Member, Departmental Research Committee
- Member, Departmental Academic Integrity Panel

Memberships in Research Committees

- Member, Research Advisory Committee Shivaji University, Kolhapur
- Member, Research Advisory Committee, Punyashlok Ahilyadevi Holkar Solapur University, Solapur.
- Member, Departmental Research Committee, Shivaji University, Kolhapur
- Member, Departmental Research Advisory Committee, YCIS, Satara

Memberships in Professional Bodies

- Life member, Indian Mathematical Society
- Life member, The Indian Society for Technical Education
- Life member, Shivaji University Mathematical Society
- Life member, Marathwada Mathematical Society
- Secretary, Shivaji University Mathematical Society

Research Publications

56. S.A. Kalloli , J. V. C. Sousa, **K. D. Kucche**, On the Φ -Hilfer iterative fractional differential equations, *CUBO, A Mathematical Journal*, 27 (1) (2025), 93-117.

<https://doi.org/10.56754/0719-0646.2701.093>

(Impact Factor: 0.5)

55. J. V. C. Sousa, **K. D. Kucche**, A. R. G. Plata, Regularity of weak solutions to generalized quasilinear elliptic obstacle problems, *Journal of Differential Equations*, 434 (2025), Article 113317, 1-28.

<https://doi.org/10.1016/j.jde.2025.113317>

(Impact Factor: 2.4)

54. J. V. C. Sousa, **K. D. Kucche**, V. Govindaraj, L. S. Tavares, Fractional Kirchhoff type equations involving Neumann conditions, *Discrete and Continuous Dynamical Systems - Series S*, 18(8) (2025), 2319-2338.
doi:10.3934/dcdss.2025047.

(Impact Factor: 1.3)

53. A. D. Mali, **K. D. Kucche**, J. V. C. Sousa, Calculus of k-fractional derivative with respect to monotonic functions, *Journal of Pseudo-Differential Operators and Applications*, 16 (2025), Article 19, 1-35.

<https://doi.org/10.1007/s11868-025-00678-7>

(Impact Factor: 0.9)

52. A. D. Mali, **K. D. Kucche**, On the boundary value problems of Ψ -Hilfer fractional differential equations, *Kyungpook Mathematical Journal*, 64(4) (2024) , 669-702.

<https://doi.org/10.5666/KMJ.2024.64.4.669>

(Impact Factor: 0.6)

51. **K. D. Kucche**, S. T. Sutar, K.S. Nisar, Analysis of nonlinear implicit fractional differential equations with the Atangana-Baleanu derivative via measure of non-compactness, *AIMS Mathematics*, 9 (10) (2024), 27058–27079.

DOI: 10.3934/math.20241316

(Impact Factor: 1.8)

50. J. V. C. Sousa, **K. D. Kucche**, Juan J. Nieto, Existence and multiplicity of solutions for fractional $K(\xi)$ -Kirchhoff-type equation, *Qualitative Theory of Dynamical Systems*, 23(1) (2024), 1-21.

<https://doi.org/10.1007/s12346-023-00877-x>

(Impact Factor: 1.9)

49. V. Vijayakumar, C. Ravichandran, K. S. Nisar, **K. D. Kucche**, New discussion on approximate controllability results for fractional Sobolev type Volterra-Fredholm integro-differential systems of order $1 < r < 2$, *Numerical Methods for Partial Differential Equations* , 40 (2) 2024, 1-19 .

<https://doi.org/10.1002/num.22772>

(Impact Factor: 2.1)

48. J. P. Kharade, **K. D. Kucche**, On the (k, Ψ) -Hilfer nonlinear impulsive fractional differential equations, *Mathematical Methods in the Applied Sciences* , 46(15)(2023), 16282-16304.

DOI 10.1002/mma.9450.

(Impact Factor: 3.007)

47. **K. D. Kucche**, A. D. Mali, A. Fernandez, H. M. Fahad, On tempered Hilfer fractional derivatives with respect to functions and the associated fractional differential equations, *Chaos, Solitons and Fractals*, 163 (2022), Article number 112547, 1-9.

<https://doi.org/10.1016/j.chaos.2022.112547>

(Impact Factor: 9.922)

46. A. D. Mali, **K. D. Kucche**, A. Fernandez, H. M. Fahad, On tempered fractional calculus with respect to functions and the associated fractional differential equations, *Mathematical Methods in the Applied Sciences* , 45(17) (2022) , 11134-11157.
<https://doi.org/10.1002/mma.8441>
(Impact Factor: 3.007)

45. **K. D. Kucche**, A. D. Mali, On the nonlinear Ψ -Hilfer hybrid fractional differential equations, *Computational and Applied Mathematics*, 41, (2022), Article 86, 1-23.
<https://doi.org/10.1007/s40314-022-01800-x>
(Impact Factor: 2.998)

44. P. U. Shikhare , **K. D. Kucche**, J. V. C. Sousa, On the nonlinear impulsive Volterra-Fredholm integrodifferential equations, *International Journal of Nonlinear Analysis and Applications*, 13 (1) (2022), 523-537.
https://ijnaa.semnan.ac.ir/article_5527.html

43. J. V. C. Sousa, **K. D. Kucche**, E. C. de Oliveira, Stability of mild solutions of the fractional nonlinear abstract Cauchy problem, *Electronic Research Archiv*, 30(1) (2021), 272-288.
<https://www.aimspress.com/article/doi/10.3934/era.2022015>
(Impact Factor: 1.604)

42. **K. D. Kucche**, A. D. Mali, On the nonlinear (k, Ψ) -Hilfer fractional differential equations, *Chaos, Solitons and Fractals*, 152 (2021): Article number 111335, 1-14.
<https://doi.org/10.1016/j.chaos.2021.111335>
(Impact Factor: 9.922)

41. M. S. Abdo, T. Abdeljawad, **K. D. Kucche**, K. D. Alqudah, S. M. Ali, M. B. Jeelani, On nonlinear pantograph fractional differential equations with Atangana-Baleanu-Caputo derivative, *Advances in Difference Equations*, 2021 (2021): 65.
<https://doi.org/10.1186/s13662-021-03229-8>
(Impact Factor: 3.1)

40. J. V. C. Sousa, **K. D. Kucche**, Existence, uniqueness and stability of fractional impulsive functional differential inclusions, *São Paulo Journal of Mathematical Sciences*, 15 (2021), 839-857.
<https://doi.org/10.1007/s40863-021-00259-8>
(Impact Factor: 0.6)

39. S. T. Sutar, **K. D. Kucche**, Existence and data dependence results for fractional differential equations involving Atangana-Baleanu derivative, *Rendiconti del Circolo Matematico di Palermo Series 2*, 71 (2022). 647-663.
<https://doi.org/10.1007/s12215-021-00622-w>
(Impact Factor: 0.9)

38. A. D. Mali, **K. D. Kucche**, J. V. C. Sousa, On coupled system of nonlinear Ψ -Hilfer hybrid fractional differential equations, *International Journal of Nonlinear Sciences and Numerical Simulation*, (2021), Article number: 000010151520210012, 1-21
<https://doi.org/10.1515/ijnsns-2021-0012>
(Impact Factor: 2.156)

37. **K. D. Kucche**, S. T. Sutar, Analysis of nonlinear fractional differential equations involving Atangana-Baleanu-Caputo derivative, *Chaos, Solitons and Fractals*, 143 (2021): Article number 110556, 1-9.
<https://doi.org/10.1016/j.chaos.2020.110556>
(Impact Factor: 5.944)

36. S. T. Sutar, **K. D. Kucche**, On nonlinear hybrid fractional differential equations with Atangana-Baleanu-Caputo derivative, *Chaos, Solitons and Fractals*, 143 (2021), Article number 110557, 1-11.
<https://doi.org/10.1016/j.chaos.2020.110557>
(Impact Factor: 5.944)

35. **K. D. Kucche**, J. P. Kharade, Analysis of impulsive ϕ -Hilfer fractional differential equations, *Mediterranean Journal of Mathematics*, 17 (5) (2020), Article number 163, 1-23.
<https://doi.org/10.1007/s00009-020-01575-7>
(Impact Factor: 1.4)

34. A. D. Mali, **K. D. Kucche**, Nonlocal boundary value problem for generalized Hilfer implicit fractional differential equations, *Mathematical Methods in the Applied Sciences*, 43 (15) (2020), 8608-8631.
<https://doi.org/10.1002/mma.6521>
(Impact Factor: 3.007)

33. **K. D. Kucche**, J. P. Kharade, Global existence and Ulam-Hyers stability of Ψ -Hilfer fractional differential equations, *Kyungpook Mathematical Journal*, 60 (3) (2020), 647-671.
<https://doi.org/10.5666/KMJ.2020.60.3.647>
(Impact Factor: 0.6)

32. P. U. Shikhare, **K. D. Kucche**, J. V. C. Sousa, Analysis of Volterra integrodifferential equations with nonlocal and boundary conditions via Picard operator, *Computational and Applied Mathematics*, 39 (3) (2020), Article number 208, 1-18.
<https://doi.org/10.1007/s40314-020-01234-3>
(Impact Factor: 2.39)

31. **K. D. Kucche**, J. P. Kharade, J. V. C. Sousa, On the nonlinear impulsive Ψ -Hilfer fractional differential equations, *Mathematical Modelling and Analysis*, 25 (4) (2020), 642-660.
<https://doi.org/10.3846/mma.2020.11445>
(Impact Factor: 1.474)

30. K. D. Kucche, P. U. Shikhare, On impulsive delay integrodifferential equations with integral impulses, *Mediterranean Journal of Mathematics*, 17 (4) (2020), Article number 103, 1-22.

<https://doi.org/10.1007/s00009-020-01541-3>

(Impact Factor: 1.4)

29. K. D. Kucche, A. D. Mali, Initial time difference quasilinearization method for fractional differential equations involving generalized Hilfer fractional derivative, *Computational and Applied Mathematics*, 39 (1) (2020), Article number 31, 1-33.

<https://doi.org/10.1007/s40314-019-1004-4>

(Impact Factor: 2.3)

28. J. P. Kharade, K. D. Kucche, On the impulsive implicit Ψ -Hilfer fractional differential equations with delay, *Mathematical Methods in the Applied Sciences*, 43 (4) (2020), 1938-1952. <https://doi.org/10.1002/mma.6017>

(Impact Factor: 3.007)

27. K. D. Kucche, J. J. Nieto, V. Venktesh, Theory of nonlinear implicit fractional differential equations, *Differential Equations and Dynamical Systems*, 28 (1) (2020), 1-17. <https://doi.org/10.1007/s12591-016-0297-7> (Published online: 27 May 2016)

(Impact Factor: 1.2)

26. P. U. Shikhare, K. D. Kucche, Existence, Uniqueness and Ulam stabilities for nonlinear hyperbolic partial integrodifferential equations, *International Journal of Applied and Computational Mathematics*, 5 (6) (2019), Article number 156, 1-21

<https://doi.org/10.1007/s40819-019-0742-8>

25. S. T. Sutar, K. D. Kucche, On fractional Volterra integrodifferential equations with fractional integrable impulses, *Mathematical Modelling and Analysis*, 24 (3) (2019), 457-477. <https://doi.org/10.3846/mma.2019.028>

(Impact Factor: 1.6)

24. K. D. Kucche, A. D. Mali, J. V. C. Sousa, On the nonlinear Ψ -Hilfer fractional differential equations, *Computational and Applied Mathematics*, 38 (2) (2019), Article number 73, 1-25. <https://doi.org/10.1007/s40314-019-0833-5>

(Impact Factor: 2.3)

23. J. V. C. Sousa, K. D. Kucche, E. C. de Oliveira, On the Ulam-Hyers stabilities of the solutions of Ψ -Hilfer fractional differential equation with abstract Volterra operator, *Mathematical Methods in the Applied Sciences*, 42 (9) (2019), 3021-3032. <https://doi.org/10.1002/mma.5562>

(Impact Factor: 2.0)

22. J. V. C. Sousa, K. D. Kucche, E. C. de Oliveira, Stability of ψ -Hilfer impulsive fractional differential equations, *Applied Mathematics Letters*, 88 (2019), 73-80. <https://doi.org/10.1016/j.aml.2018.08.013>

(Impact Factor: 2.7)

21. J. V. C. Sousa, E. C. de Oliveira, **K. D. Kucche**, On the fractional functional differential equation with abstract Volterra operator, *Bulletin of the Brazilian Mathematical Society, New Series*, 50 (4) (2019), 803-822.
<https://doi.org/10.1007/s00574-019-00139-y>
(Impact Factor: 1.9)
20. **K. D. Kucche**, P. U. Shikhare, Ulam stabilities for nonlinear Volterra delay integro-differential equations, *Journal of Contemporary Mathematical Analysis*, 54 (5) (2019), 276-287.
<https://doi.org/10.3103/S1068362319050042>
(Impact Factor: 0.3)
19. **K. D. Kucche**, P. U. Shikhare, Ulam stabilities for nonlinear Volterra-Fredholm delay integrodifferential equations, *International Journal of Nonlinear Analysis and Applications*, 9 (2) (2018), 145-159.
<https://doi.org/10.22075/IJNAA.2018.12688.1647>
18. **K. D. Kucche**, P. U. Shikhare, Ulam-Hyers stability of integrodifferential equations in Banach spaces via Pachpatte's inequality, *Asian-European Journal of Mathematics*, 11 (2) (2018), Article number 1850062, 1-19.
<https://doi.org/10.1142/S1793557118500626>
(Impact Factor: 0.5)
17. **K. D. Kucche**, P. U. Shikhare, Ulam stabilities via Pachpatte's inequality for Volterra-Fredholm delay integrodifferential equations in Banach spaces, *Note di Matematica*, 38 (1) (2018), 67-82.
<https://doi.org/10.1285/i15900932v38n1p67>
(Impact Factor: 0.2)
16. **K. D. Kucche**, S. T. Sutar, On existence and stability results for nonlinear fractional delay differential equations, *Boletim da Sociedade Paranaense de Matemática*, 36 (4) (2018), 55-77.
<https://doi.org/10.5269/bspm.v36i4.33603>
(Impact Factor: 0.54)
15. **K. D. Kucche**, J. J. Trujillo, Theory of system of nonlinear fractional differential equations, *Progress in Fractional Differentiation and Applications*, 3 (1) (2017), 7-18.
<http://dx.doi.org/10.18576/pfda/030102>
14. **K. D. Kucche**, Y.-K. Chang, C. Ravichandran, Results on non-densely defined impulsive Volterra functional integrodifferential equations with infinite delay, *Nonlinear Studies*, 23 (4) (2016), 651-664.
<http://nonlinearstudies.com/index.php/nonlinear/article/view/1415>

13. S. T. Sutar, **K. D. Kucche**, Global existence and uniqueness for implicit differential equation of arbitrary order, *Fractional Differential Calculus*, 5 (2) (2015), 199-208. <http://dx.doi.org/10.7153/fdc-05-17>

12. **K. D. Kucche**, M. B. Dhakne, On second order mixed functional integrodifferential equations, *Azerbaijan Journal of Mathematics*, 5 (1) (2015), 29-43. <https://azjm.org/volumes/0501/0501-3.pdf>
(Impact Factor: 0.6)

11. **K. D. Kucche**, Existence and controllability results for mixed functional integrodifferential equations with infinite delay, *Demonstratio Mathematica*, 47 (4) (2014), 893-909. <https://doi.org/10.2478/dema-2014-0072>
(Impact Factor: 1.6)

10. C. Ravichandran, N. Valliammal, **K. D. Kucche**, Controllability of neutral functional integrodifferential equations via resolvent operators in Banach spaces, *International Journal of Applied Engineering Research*, 9 (23) (2014), 19751-19766. <https://www.ripublication.com/Volume/ijaerv9n23.htm>

9. **K. D. Kucche**, M. B. Dhakne, Existence of solution via integral inequality of Volterra-Fredholm neutral functional integrodifferential equations with infinite delay, *International Journal of Differential Equations*, 2014 (2014), Article number 784956, 1-13 . <https://doi.org/10.1155/2014/784956>
(Impact Factor: 1.7)

8. **K. D. Kucche**, M. B. Dhakne, Sobolev-type Volterra-Fredholm functional integrodifferential equations in Banach spaces, *Boletim Sociedade Paranaense de Matematica*, 32 (1) (2014), 239-255. <https://doi.org/10.5269/bspm.v32i1.19901>
(Impact Factor: 0.54)

7. **K. D. Kucche**, M. B. Dhakne, Controllability of Non-densely Defined Functional Mixed Integrodifferential Equations in Banach Spaces, *Communications on Applied Nonlinear Analysis*, 20 (4) (2013), 17-32.

6. **K. D. Kucche**, M. B. Dhakne, On existence results and qualitative properties of mild solution of semilinear mixed Volterra-Fredholm functional integrodifferential equations in Banach spaces, *Applied Mathematics and Computation*, 219 (22) (2013), 10806-10816. <https://doi.org/10.1016/j.amc.2013.05.005>
(Impact Factor: 3.2)

5. **K. D. Kucche**, M. B. Dhakne, Controllability of non-densely defined abstract mixed Volterra-Fredholm neutral functional integrodifferential equations, *Asian-European Journal of Mathematic*, 6 (2) (2013), 1350025, 1-7. <https://doi.org/10.1142/S1793557113500253>
(Impact Factor: 0.5)

4. **K. D. Kucche**, M. B. Dhakne, Controllability results for second order abstract mixed Volterra-Fredholm functional integrodifferential equations, *Pan American Mathematical Journal*, 22 (4) (2012), 109-121.

3. M. B. Dhakne and **K. D. Kucche**, Global existence for abstract nonlinear Volterra-Fredholm functional integrodifferential equation, *Demonstratio Mathematica*, 45 (1) (2012), 117-127.

<https://doi.org/10.1515/dema-2013-0349>

(Impact Factor: 2.093)

2. M. B. Dhakne, **K. D. Kucche**, On mild solution of second order functional integrodifferential equation with nonlocal condition, *Communications on Applied Nonlinear Analysis*, 18 (3) (2011), 79-88.

1. M. B. Dhakne, **K. D. Kucche**, Existence of mild solution of mixed Volterra-Fredholm functional integrodifferential equation with nonlocal condition, *Applied Mathematical Sciences*, 5 (8) (2011), 359-366.

<http://www.m-hikari.com/ams/ams-2011/ams-5-8-2011/kuccheAMS5-8-2011.pdf>

Chapters Contributed to Edited Books

1. Monotone Iteration Principle in the Theory of Hadamard Fractional Delay Differential Equations, Chapter 5, In: *Frontiers in Fractional Calculus*, Editors: Sachin Bhalekar, Bentham Science Publishers, ISBN (Online): 978-1-68108-599-9, ISBN(Print): 978-1-68108-600-2, (2018).

Books Co-Authored

8. M. T. Gophane, **K. D. Kucche**, G. D. Shelke, J. P. Kharade, *Research Methodology*, Shivaji University Press, 2025, (ISBN: 978-93-49570-90-0).

7. C. T. Aage, **K. D. Kucche**, *Complex Analysis*, Yashwantrao Chavan Maharashtra Open University, 2022, (ISBN: 978-93-95855-32-7).

6. S. H. Thakar, **K. D. Kucche**, *Functional Analysis*, Shivaji University Press, 2015, (ISBN: 978-81-8486-667-4).

5. S. R. Chaudhari, U. H. Naik, **K. D. Kucche**, *Complex Analysis*, Shivaji University Press, 2014, (ISBN: 978-81-8486-136-5).

4. S. H. Thakar, **K. D. Kucche**, *Differential Equations*, Shivaji University Press, 2013, (ISBN: 978-81-8486-261-2).

3. M. S. Chaudhary, **K. D. Kucche**, *Integral Equations*, Shivaji University Press, 2009, (ISBN: 978-81-8486-261-4).

2. S. R. Khillare, **K. D. Kucche**, *Engineering Mathematics-III*, Vidyarthi Prakashan, Aurangabad, 2013. (ISBN: 978-81-930896-5-1).

1. S. R. Khillare, **K. D. Kucche**, A. C. Dabhole, G. C. Lomte, *Engineering Mathematics-I*, Vidyarthi Prakashan, Aurangabad, 2011. (ISBN: 978-81-930896-3-7).

Invited Talks at Conferences, Seminars, and Workshops

❖ Invited Talks (International)

10. The 8th International Conference on Frontiers in Industrial and Applied Mathematics (FIAM-2025), December 21–22, 2025, Nirma University, Ahmedabad, Gujarat, India: *Ψ -Tempered Fractional Derivatives: Properties and Nonlinear Differential Equations*
9. International Conference on Mathematical Analysis and Its Applications – Hybrid Mode (ICMAA-HM-2025), June 28–30, 2025, Department of Mathematics, Karnataka University, Dharwad, Karnataka, India: *The Calculus of Tempered Fractional Derivatives with Respect to Monotonic Functions.*
8. International Conference on Advancement and Emerging Trends in Sciences (ICAETS-2025), January 08-10, 2025, Rayat Shikshan Sanstha's Dahiwadi College Dahiwadi, Maharashtra, India: *Time Scale Calculus*
7. International Conference on Mathematics and Its Applications in Science and Technology (ICMAST-2024), August 30-31, 2024, Shri Ram Murti Smarak College of Engineering and Technology, Bareilly, Uttar Pradesh, India: *Ψ -Tempered Hilfer Fractional Derivative and Associated Differential Equations*
6. International Conference on Mathematical Analysis and Its Applications (ICMAA-2024), August 02-04, 2024, Department of Mathematics, Karnatak University, Dharwad, India: *The Calculus of Tempered Fractional Derivatives with respect to Monotonic Functions*
5. International Conference on Emerging Trends in Computational mathematics and data science (ICETCMDs-24), 10-11 January, 2024, Sri Krishna Arts and Science College, Kuniamuthur, Coimbatore, Tamilnadu: *Analysis of tempered Hilfer differential equations.*
4. International Conference on Mathematical Modelling, Analysis and Computing (IC-MMAC 2023), 21-22 October, 2023, Holy Cross college, Tirupattur, Tamilnadu: *Analysis of (k, ψ) Hilfer Fractional Differential Equations.*
3. International Conference on Multidisciplinary Research-2022, 22-24 November 2022, Sharnabasva University, Kalburgi, Karnataka: *Ulam Stabilities of Integrodifferential Equations.*
2. International Conference on Fractional Calculus - 2022, 18-19 January 2022, School of Mathematics and Statistics, University of Hyderabad: *Calculus of Generalized Hilfer Fractional Derivatives*
1. Seventh International Conference on Dynamical Systems and Applications & Fifth International Conference on Neural, Parallel and Scientific Computation, May 27-30, 2015, Morehouse College, Atlanta, Georgia, USA: *Non Densely Defined Impulsive Functional Differential Equations with Infinite Delay.*

❖ Invited Talks (National)

22. National Conference on Impact of Artificial Intelligence on Research in Physical & Mathematical Sciences-2026 (IAIRPMS-2026), February 25–26, 2026, Balwant College, Vita, Maharashtra, India: *Plagiarism and Artificial Intelligence: Regulations and Responsibilities*

21. National Conference on Mathematical and Statistical Computing (NCMSC-26), February 9–10, 2026, School of Computational Sciences, Punyashlok Ahilyadevi Holkar Solapur University, Solapur, Maharashtra, India: *On the Tempered Generalized Fractional Derivatives*

20. National Seminar on Fractional Calculus and Dynamical Systems, February 13-15, 2025, Department of Mathematics, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, Maharashtra, India, : *Fractional Derivatives with respect to Monotonic Function: Tempered Approach*

19. National Workshop on Differential Equations Dynamical Systems, February 13-15, 2025, School of Mathematical Sciences, Swami Ramanand Teerth Marathwada University, Nanded , Maharashtra, India, : *Advances in Fractional Calculus*

18. National Conference on Nonlinear Analysis and Applications (NCNAA-25), January 30-31, 2025, Department of Mathematics, Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhaji Nagar, Maharashtra, India, : *Investigation of Differential Equations Involving (k, Ψ) -Hilfer Fractional Derivative*

17. National Conference on Recent Trends in Mathematical Sciences(NCRTMS-2024), 18-19 March 2024, Department of Mathematics, Yashavantrao Chavan Institute of Science, Satara (Autonomous), India: *Tempered Hilfer fractional derivative and associated differential equations.*

16. National Conference on Recent Developments in Fractional Calculus and its Applications, 18-19 November 2022, SASTRA Deemed to be University, Thanjavur, Tamil Nadu: *Calculus of (k, ψ) -Hilfer Fractional Derivative.*

15. Online One Day National Conference on Recent Advances in Mathematics -2022 (NCRAM-2022) - 27th May 2022, Dattajirao Kadam Arts, Science and Commerce College, Ichalkaranji: *Riemann Liouville and Caputo Fractional Derivatives: A Review.*

14. One day online National Conference on Recent Trends In Mathematics, 27 August 2021, IQAC and Department of Mathematics, Shri Pancham Khemraj Mahavidyalaya Sawantwadi: *Differential Equations Involving Generalized Fractional Derivative*

13. National Conference on Recent Frontiers in Fractional Calculus Theory and its Applications (NCFCTA 2021), March 7-8, 2021, Vel Tech High Tech Dr. Rangarajan Dr. Sakunthala Engineering College, Chennai, Tamilnadu, India: *Nonlinear Fractional Dynamical Systems: Recent Developments, Challenges and Applications.*

12. National Conference on Recent Developments in Pure and Applied Mathematics (NCRDPAM-2019), February 26-27, 2019, Yashwantrao Chavan Institute of Science, Satara, Maharashtra, India (Autonomous): *Analysis of Cauchy Problem Involving Generalized Fractional Derivative*.
11. Two days state level seminar on Emerging Trends in IT, January 18-19, 2019, Arts , Commerce and Science College, Landewadi, Bhosari, Pune, Maharashtra, India: *Introduction to Latex*.
10. National Conference on Algebra, Analysis and Number Theory, January 13-14, 2018, School of Mathematical Sciences, North Maharashtra University, Jalgaon, Maharashtra, India: *Ulam Stabilities for Volterra Delay Integrodifferential Equations*.
9. National Workshop on Fractional Calculus and its Applications, March 23-25, 2017, School of Mathematical Sciences Swami Ramanand Teerth Marathwada University, Nanded, Maharashtra, India: *Theory of Nonlinear Fractional Differential Equations*.
8. 24th Annual Conference of SUMS on Recent Trends in Mathematics and Student's Carnival; March 18, 2017 Raje Ramrao, Mahavidyalaya, Jath-Sangli, Maharashtra, India: *Fractional Derivatives: Riemann-Liouville versus Caputo Derivatives*.
7. Symposium on "Integral Inequalities and Applications" of 82nd Annual Conference of the Indian Mathematical Society, December 27-30, 2016, Kalyani University, Kalyani, West Bengal, India: *Role of Integral Inequalities in the Study of Differential and Integro-differential Equations*.
6. National Conference on Numerical Methods and its Applications in Science and Engineering, April 2-3, 2016, Karnataka Arts, Science and Commerce, College, Bidar, Karnataka, India: *Existence and Qualitative Properties of Implicit Fractional Differential Equations*.
5. National Seminar on Recent Trends in Differential Equations and its Applications, January 30-31, 2016, Changu Kana Thakur, Arts Commerce and Science College, New Panvel, Maharashtra, India: *Implicit Differential Equations Involving Caputo Fractional Derivative*.
4. National Conference on Recent Advances in Mathematics, January 21-23, 2016, Mrs. KSK Alias Kaku Arts, Science and Commerce College, Beed, Maharashtra, India: *Basic Theory of Nonlinear Fractional Differential Equations*.
3. National Conference on Recent Trends in Mathematics, December 18-19, 2015, Deshbhakta Anandrao Balawantrao Naik Arts and Science College, Chikhali, Sangli, Maharashtra, India: *On a Class of Nonlinear Fractional Differential Equations with Caputo Derivative*.
2. National Conference on Recent Analysis and Applications in Discrete Mathematics, February 13-14, 2015, Raja Lakhamgauda Science Institute, Belgavi, Karnataka, India: *Semigroup Theory and Abstract Cauchy Problem*.

1. National Conference on Algebra, Analysis and Fuzzy Mathematics, January 20-23, 2014, Department of Mathematics, North Maharashtra University, Jalgaon, Maharashtra, India: *Existence and Controllability Results for Mixed Functional Integrodifferential Equations with Infinite Delay.*

❖ **Invited Talk (State)**

2. Two Days Regional Conference on Advances in Mathematics along with Student Carnival, February 01-02, 2019, Padmabhushan Dr. Vasantraodada Patil Mahavidyalaya, Tasgaon, Maharashtra, India: *Ulam type Stabilities for Differential and Integrodifferential Equations.*

1. State level Seminar on Applications of Advanced Mathematics and Research Methodologies in Mathematical Sciences, October 16-17, 2014, Shri Vijay Sinha Yadav Arts and Science College, Pet Vadgaon, Dist. Kolhapur, Maharashtra, India: *Functional Integrodifferential Equations with Finite Delay.*

Invited Talks in Refresher Courses, FDPs, and Orientation Programs

3. Refresher Course in Mathematics and Computational Sciences, February 15-28, 2025, Savitribai Phule Pune University UGC-Malaviya Mission Teacher Training Centre, Pune, Maharashtra, India: *Calculus on the Time Scale*

2. Refresher Course – MOOCs, E-Content Development and Open Educational Resources, May 06-18, 2024 organised by UGC – Malaviya Mission Teacher Training Centre, Sant Gadge Baba Amravati University, Amravati, Maharashtra, India: *Online Learning through SWAYAM*

1. Two Weeks Faculty Development Programme on Advances in Applied Mathematics, December 11-22, 2017, Government College of Engineering, Karad, Maharashtra, India: *Basics of Fractional Calculus.*

Research Paper Presented at Conferences

❖ **Research Papers Presented at International Conferences**

16. Analytical and Numerical Methods in Differential Equations (Yanenko 105), March 23–27, 2026, Suranaree University of Technology, Nakhon Ratchasima, Thailand: *Tempered- ψ -Hilfer Fractional Derivative and Fractional Differential Equations Involving It*

15. International Symposium on Mathematical Analysis of Fractals and Dynamical Systems – 2023 (ISMAFDS-2023), 24-25 August 2023, Vellore Institute of Technology Vellore, Tamil Nadu: *Ψ -Hilfer Fractional Differential Equations with Boundary Conditions.*

14. International Conference on PDE & Applications, Modeling and Simulation (ICPAMS' 21), June 2- 3, 2021, Beni Mellal, Morocc: *ψ -Hilfer Hybrid Fractional Differential Equations.*

13. International conference Methods of Nonlinear Analysis in Differential and Integral Equations which held in May 15-16 and May 22-23, 2021, Rzeszów University of Technology, Poland: *Impulsive Ψ -Hilfer Fractional Differential Equations*.
12. International e-Conference on Pure And Applied Mathematical Sciences (ICPAMS-2021), 7-10 June 2021, Tunisia - Saudi Arabia: *($k; \Psi$) -Hilfer Fractional Derivative*.
11. International Conference on Special Functions and Applications (ICSFA-2020), December 22-23, 2020, Babu Banarasi Das University, Lucknow, Uttar Pradesh, India: *On the Atangana-Baleanu Nonlinear Fractional Differential Equations*.
10. 3rd International Conference on Mathematical Modelling, Applied Analysis and Computation-2020, August 7-9, 2020, JECRC University Jaipur, Rajasthan, India: *On the ABC-Nonlinear Fractional Differential Equations*.
9. 2nd International Conference on Mathematical Modelling, Applied Analysis and Computation-2019, August 8-10 2019, JECRC University Jaipur, Rajasthan, India: *Analysis of Nonlinear Ψ -Hilfer Fractional Differential Equations*.
8. International Conference on Mathematical Sciences-2015, Sadguru Gadge Maharaj College, Karad, September 15-16, 2015: *Non Densely Defined Impulsive Volterra Functional Integrodifferential Equations*.
7. International Conference on Emerging Trends in Mathematical Sciences (ICETMS-2014), Department of studies in Mathematics, Vijayanagara Sri Krishnadevaraya University, Bellary, Karnataka, July 25-26, 2014: *Existence Results via Resolvent Operators for Mixed Functional Integrodifferential Equations with Infinite Delay in Abstract Spaces*.
6. International Conference on Recent Advances in Mathematics (ICRAM 2014), Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, January 20-23, 2014: *Controllability of Non-densely Defined Abstract Mixed Volterra-Fredholm Neutral Functional Integrodifferential Equations*.
5. 18th annual cum 3rd International Conference of Gwalior Academy of Mathematical Sciences (GAMS), Maulana Azad National Institute of Technology, (MA NIT) Bhopal, M. P. India, September 22-26, 2013: *Existence Results and Qualitative Properties of Mild Solution of Semilinear Mixed Volterra-Fredholm Functional Integrodifferential Equations in Banach Spaces*.
4. International Conference on Mathematical Sciences, Science College, Congress Nagar, Nagpur, India, December 28-31, 2012: *Volterra-Fredholm Functional Integrodifferential Equations with Infinite Delay in Abstract Spaces*.
3. International conference on mathematical sciences in honor of Professor A. M. Mathai, St. Thomas College, Pala, Kottayam, Kerla, January 3-5, 2011: *On Mild Solution of Mixed Volterra-Fredholm Functional Integrodifferential Equation*.

2. International Conference on Advances in Modeling, Optimization and Computing (AMOC - 2011), IIT Roorkee, India, December 5-7, 2011: *Existence Results for Semilinear Volterra-Fredholm Functional Integrodifferential Equations*.

1. International congress of Mathematicians, Department of Mathematics and Statistics, University of Hyderabad, Hyderabad, August 19-27, 2010: *Global Existence for Volterra-Fredholm Functional Integrodifferential Equations*.

❖ Research Papers Presented at National Conferences

7. 78th Annual Conference of Indian Mathematical Society, Banaras Hindu University (BHU), Varanasi-221 005 (UP), January 22-25, 2013: *Controllability Results for Second Order Nonlinear Mixed Neutral Functional Integrodifferential Equations in Abstract spaces*.

6. National Conference on Current Practices in Mathematics, Statistics and Actuarial Science, School of Mathematical Sciences, North Maharashtra University, Jalgaon, March 7-8, 2013: *Sobolev-type Volterra-Fredholm Functional Integrodifferential Equations in Banach Spaces*.

5. National Conference on Mathematical Sciences (NCMS-2012), School of Mathematical Sciences, North Maharashtra University, Jalgaon, March 5, 2012: *Controllability of non-densely defined abstract mixed Volterra-Fredholm Functional Integrodifferential Equations*.

4. National Conference on Evolution Equations: Theory Methods and Applications (NCEETMA-2012), IIT Kanpur, Uttar Pradesh, December 07-08, 2012: *On Second Order Mixed Functional Integrodifferential Equations*.

3. National conference on Recent Frontiers in Applied Dynamical Systems, Department of Mathematics, Karunya University, Coimbatore, Tamilnadu, January 21-22, 2011: *Global Existence for Second Order Mixed Volterra-Fredholm Functional Integrodifferential Equation*.

2. 77th Annual Conference of Indian Mathematical Society, S. R. T. M. University, Nanded, December 27-30, 2011: *Controllability of Second Order Abstract Mixed Volterra-Fredholm Functional Integrodifferential Equation*.

1. National Conference in Mathematics (NCM-2005), Yashwantrao Chavan Institute of Science, Satara, December 22 - 24, 2005: *Circle as a Vector*.

Organization of Conferences, Seminars, and Workshops

14. Convener, *One-Day Workshop on Differential Equations: Analytical and Numerical Approaches*, January 15, 2025, Department of Mathematics, Shivaji University, Kolhapur.

13. Organizing Secretary, *National Conference on Applicable Mathematics-2025*, March 03-04, 2025, Department of Mathematics, Shivaji University, Kolhapur.

12. Convener, *National Conference on Mathematical Analysis and Applications-2022 (NCMAA-2022)*, March 21-22, 2022, Department of Mathematics, Shivaji University, Kolhapur.
11. Co-Convener, *Mini-Symposium on Fractional Calculus Applications in Science & Engineering*, December 21-22, 2021, Department of Mathematics, Sant Longowal Institute of Engineering & Technology, Longowal, Punjab.
10. Organizer, *One Day Workshop on Fractional Differential Equations: Analysis and Applications*, March 09, 2020, Department of Mathematics, Shivaji University, Kolhapur.
9. Organizing Secretary, *National Seminar on Algebra-2020*, February 14-15, 2020, Department of Mathematics, Shivaji University, Kolhapur.
8. Organizing Secretary, *CSIR sponsored National Workshop on Linear Algebra and its Applications -2018*, February 28 -March 05, 2018, Department of Mathematics, Shivaji University, Kolhapur.
7. Convener, *UGC-SERB-CSIR sponsored National Seminar on Differential Equations and Dynamical Sytemes-2017*, February 27-28, 2017, Department of Mathematics, Shivaji University, Kolhapur.
6. Convener, *UGC-SERB sponsored National Conference on Differential Equations-2015*, January 29-30, 2015, Department of Mathematics, Shivaji University, Kolhapur.
5. Organizing Secretary, *UGC-NBHM sponsored National Workshop on Algebra-2015*, Department of Mathematics, Shivaji University, Kolhapur, December 21-26, 2015.
4. Organizing Secretary, *National Mathematics Day, Sponsored by NCSTC, DST- Govt. of India and Rajiv Gandhi Science and Technology Commission*, Department of Mathematics, Shivaji University, Kolhapur, December 22, 2014 to March 05, 2015.
3. Organizing Secretary, *UGC-DST sponsored National Conference on Dynamical Systems-2013*, December 23-24, 2014, Department of Mathematics, Shivaji University, Kolhapur.
2. Coordinator, *UGC Sponsored NET/SET workshop for the student of M. Sc. (Mathematics)*, February 11-16, 2013, Department of Mathematics, Shivaji University, Kolhapur.
1. Coordinator, *UGC Sponsored NET/SET workshop for the student of M. Sc. (Mathematics)*, August 12-20, 2012, Department of Mathematics, Shivaji University, Kolhapur.

Academic Development Programs Attended

10. *50 years of Functional Differential Equations at ICMC*, 02-06 August, 2021, Institute of Mathematics and Computer Sciences, University of São Paulo, São Carlos, Brazil.
9. *Online Two - Week Refresher Course in Mathematical Sciences*, 14-28 June, 2021, Teaching Learning Centre, Ramanujan College, University of Delhi, Under the aegis of Ministry Of Education Pandit Madan Mohan Malaviya National Mission On Teachers And Teaching.
8. *Faculty Development Programme on Educational Video Creation (E-content Development)*, 05-10 June 2020 , Bharati Vidhapeeth's College of Engineering, Kolhapur.
7. *Two Weeks Faculty Development Programme on MANAGING ONLINE CLASSES and CO-CREATING MOOCS: 2.0*, 18 May – 03 June, 2020, Teaching Learning Centre, Ramanujan College, University of Delhi, Sponsored by Ministry Of Education Pandit Madan Mohan Malaviya National Mission On Teachers And Teaching.
6. *One Week National Online Faculty Development Program, ICT tools for Effective Teaching Learning*, 27 April 2020 to 02 May 2020, Swami Ramanand Teerth Marathwada University, Nanded.
5. *Faculty Development Program on Cyber Security*, 01-17 July 2019, Vivekananda College Kolhapur, conducted by FDC PMMMNMTT.
4. *Special Winter School in Computational Mathematics*, 06-26 November 2017, UGC-HRDC, Savitribai Phule Pune University, Pune.
3. *National Workshop on Evolution Equations: Theory Methods and Applications (NCEETMA-2012)*, December 02-06, 2012, IIT Kanpur, Uttar Pradesh.
2. *UGC Sponsored Refresher course in the subject Research Methodology*, 09-29 November 2010, UGC-Academic Staff College., Dr. Babasaheb Ambedkar Marathwada University .
1. *“UGC Sponsored Orientation Course”* 22 June - 18 July 2009, UGC-Academic Staff College, Osmania University, Hyderabad.