

Faculty Profile



Faculty Image:

Faculty Role :

Name : Dr. Yogita M. Mahatekar (Y. V. Sukale)
Department: Mathematics, School of Computational
Sciences, COEP Technological University
Designation: Assistant Professor

Faculty Email: yvs.maths@coeptech.ac.in

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Personal profile:

1. Qualification : Doctor of Philosophy (Ph.D.)

Specialization : Analysis of fractional differential equations
Institute : Savitribai Phule Pune university
Awarded date : 7.7.17

- Master of Science (M. Sc.) Mathematics

Major : Pure Mathematics
Institute : Department of Mathematics, SPPU, Pune
Year Completed : June 2008

2. Experience: Teaching:

- i. S.P.College, Pune -30 : Taught Linear Algebra at M.Sc. level, Dynamics, Calculus.(31/05/2008 – 18/09/2008)
- ii. Marathwada Mitra Mandal College of Engineering : Engineering Mathematics (19/09/2008 – 31/03/2010)
- iii. COEP Technological University: 6/4/2010 till date

3. Research Interest/Area: Fractional Calculus, Analysis, Differential Equations, Computational Mathematics, Numerical Methods

4. Publication :

INTERNATIONAL PUBLICATIONS

Total Google scholar citations till date : 359

1. V. Daftardar-Gejji, Y. Sukale, S. Bhalekar , A new predictor-corrector method for fractional differential equations, Appl. Math. Comput. 244 (2014), 158-182. Final version published online: 22-JUL-2014, DOI information: 0.1016/j.amc.2014.06.097. Citations: 126
2. V. Daftardar-Gejji, Y. Sukale, S. Bhalekar , Solving fractional delay differential

equations : a new approach, *Frac. cal. appl. anal.*,18 2 (2015), 400–418 , DOI: 10.1515/fca-2015-0026. Citations: 119

3. Y. Sukale, V. Dftardar-Gejji , Numerical methods for differential equations, *Int. J. Appl. Comp. Math.*,(2016), 1-22 . Citations: 11
4. Amey S. Deshpande, Varsha Daftardar-Gejji, Yogita V. Sukale, On Hopf bifurcation in fractional dynamical systems, *Chaos, Solitons and Fractals* (98), (2017), 189-198. Citations: 84
5. Yogita Mahatekar, Pallavi Scindia, A new family of methods for solving delay differential equations, *Journal of Houzhong university of science and technology*, (2021). Citations: 1
6. Mahatekar, Y., Deshpande, A.S. A Generalized NPCM for Solving Multi-Term Fractional Differential Equations. *Int. J. Appl. Comput. Math* **8**, 115 (2022). <https://doi.org/10.1007/s40819-022-01305-5> Citations: 1
7. Mahatekar, Yogita, Pallavi S. Scindia, and Pushpendra Kumar. "A new numerical method to solve fractional differential equations in terms of Caputo-Fabrizio derivatives." *Physica Scripta* 98.2 (2023): 024001. Citations: 17
8. Yogita Mahatekar, New techniques to solve fractional partial differential equations, *International Journal of all research education and scientific methods, IJARESM publisher*,12(2024), 749-753.

9. Yogita Mahatekar, Amey Deshpande, Analysis of natural Daftardar- Jafari method for fractional delay differential equations, volume-10, article number 117,(2024); DOI: <https://doi.org/10.1007/s40819-024-01753-1>

- International Conference attended at Japan, Tokyo

- i. [Attended an international conference at Waseda University, Tokyo, Japan during August 20th to 25th, 2023. Some salient features of the conference were as under: Dr . Yogita Mahesh Mahatekar presented a contributed talk onsite physically at Waseda University entitled “Solving fractional Hantavirus Model: a new approach” which was accepted after peer review in ICIAM-2023.](#)
- ii. [Presented a poster onsite at Waseda University entitled “Solving fractional disease Model using new iterative method” which was accepted in ICIAM-2023. This poster presentation was recorded and **later delivered by Robot** and were run throughout the day by Robot. This was really a great learning experience of technology and knowledge spread was huge and easy because of these perfectly organized technologies at Waseda University. Recording was sent to me by email.](#)
- iii. [Dr. Yogita Mahesh Mahatekar was assigned to the role of chairperson of the academic session no CT017 whose details can be found using following link: \[https://iciam2023.org/registered_data?id=CT017\]\(https://iciam2023.org/registered_data?id=CT017\)](#)

α . Paper presented in the national conference :

I have presented a research paper entitled ‘A review of numerical methods to solve fractional differential equations’ at the ‘National conference on Modeling, Optimization and Control’ (NCMOC-2015), during March 4-6, 2015.

β . Speciality of the publication 1.

Our article (1st publication above) was on the 7th place in top 25 articles of the journal Applied Mathematics and Computation (AMC) (period: 22/7/2014 to 22/10/2014). AMC provides the international level rank of the article published quarterly i.e. four times in a year.

5. Recent courses Taught: (last three years teaching specified):

A.Y. 2021-22 Semester I: Probability and Statistics for Engineers for Electrical branches
Semester II: Probability and Statistics for Engineers for Non-Electrical branches

A.Y. 2022-23 Semester I: Probability and Statistics for Engineers for Electrical branches
Semester II: Probability and Statistics for Engineers for Non-Electrical branches

A.Y. 2023-24 Semester I: Probability and Statistics for Engineers for Electrical branches
Semester II: Probability and Statistics for Engineers for Non-Electrical branches

6. Awards & Recognition:

1. Won consolidated prize in CHEMIAD exam
2. Got selected in Mathematics Training and Talent Search (MTTS) Program funded by National Board of Higher Mathematics (NBHM)
3. Won R.B.Kench prize
4. Got ‘Leading Women’ award from MM Polytechnic college in October 2023.
5. Completed a mooc course on ‘Essentials of data science with R software- Part 1’ (83%) and got Silver band