



Sudarsan Padhy, Ph.D.

Designation : Professor

Department : Department of Computer Science and Engineering
(JOINED THE INSTITUTE IN 2015)

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RESEARCH INTERESTS

- ✓ Machine Learning
- ✓ Optimization Methods
- ✓ Computational Finance
- ✓ Parallel Algorithms
- ✓ Computational Biology
- ✓ Numerical Solution of Differential Equations(Finite difference and finite element methods-theory and computation)
- ✓ Computational Fluid Dynamics

Academic Qualifications

Post- Doc, University of Freiburg, Germany

Ph. D. (Mathematics), Utkal University, India

M. Sc. (Mathematics) Utkal University, India (Gold)

Teaching and Research Experience (46 years)

1. As lecturer, reader, and professor at Post Graduate Department of Mathematics, Utkal University from October, 1974 to July, 2010 and as post-doctoral fellow at University of Freiburg, Germany. (Oct.1980- Sept.1981)
2. As emeritus professor at Department of Computer Science and Engineering, IIIT, Bhubaneswar, from Sept. 2010 to June 2012.
3. As Director, Institute of Mathematics and Applications, Bhubaneswar, from July, 2012- July, 2015.
4. As senior professor from Sept. 2015 to present time

A. SELECTED JOURNAL PUBLICATIONS (2016 ONWARDS)

- [1]. Shom Prasad Das, and Sudarsan Padhy, A new hybrid parametric and machine learning model with homogeneity hint for European-style index option pricing, *Neural Computing and Applications*, Springer, pp. 1-17, April, 2016
- [2]. Shom Prasad Das, and Sudarsan Padhy, Unsupervised extreme learning machine and support vector regression hybrid model for predicting energy commodity futures index, *Memetic Computing*, Springer, pp. 1-1, May, 2016
- [3]. Shom Prasad Das, N S Achary, and Sudarsan Padhy, Novel hybrid SVM-TLBO forecasting model incorporating dimensionality reduction techniques, *Applied Intelligence* 45 (4), 1148-1165, 2016
- [4]. A Mahapatra, PK Sa, B Majhi, S Padhy, MVS: A multi-view video synopsis framework, *Signal Processing: Image Communication* 42, 31-44, 2016
- [5]. Itishree Nayak, Ajit Kumar Nayak, and Sudarsan Padhy, Implicit finite difference solution for the magneto-hydro-dynamic unsteady free convective flow and heat transfer of a third-grade fluid past a porous vertical plate, *International Journal of Mathematical Modelling and Numerical Optimisation* 7 (1), 4-19, 2016
- [6]. Debasmita Pradhan, Sudarsan Padhy, and Biswajeet sahuo, Enzyme classification using multiclass support vector machine and feature subset selection, *Computational biology and chemistry* 70, 211-219, 2017
- [7]. Ambit K. Pany, Susanta K. Paikray, Sudarshan Padhy, and Amiya K. Pani, Backward Euler Schemes for the Kelvin-Voigt Viscoelastic Fluid Flow Model, *International Journal of Numerical Analysis and Modeling*, ISCI, Vol. 14, No. 1, pp. 126-151, Jan, 2017
- [8]. Sabyasachi Mohanty, Sudarsan Padhy, A novel OFS-TLBO-SVR hybrid model for optimal budget allocation of government schemes to maximize GVA at factor cost, *Journal of Management Analytics*, Taylor and Francis, Vol. 5, No.1, pp. 32-53, Sept, 2017
- [9]. Mamata Parida, Sudarsan Padhy, Numerical Investigation of Unsteady Pulsatile Transport of a Magnetohydrodynamic Fluid in an Inclined Porous Tube under the Influence of Periodic Body Acceleration, *American Journal of Fluid Dynamics*, SAP, Vol. 7, No. 2, pp. 56-62, Oct, 2017
- [10]. Shom Prasad Das, and Sudarsan Padhy, A novel hybrid model using teaching, learning-based optimization and a support vector machine for commodity futures, index forecasting, *International Journal of Machine Learning and Cybernetics* 9 (1), 97-111, 2018
- [11]. Mamata Parida, Sudarsan Padhy, Electro-osmotic flow of a third-grade fluid past a channel having stretching walls, *Nonlinear Engineering*, Vol. 8, No. 1, pp. 56-64, 2019
- [12]. Sasmita Mishra, Sudarsan Padhy, An efficient portfolio construction model using stock price predicted by support vector regression, *The North American Journal of Economics and Finance*, Elsevier, Vol. 50, Article 101027, 2019.

- [13]. Debasmitta Pradhan, Biswajit Sahoo, Bijan Bihari Misra, Sudarsan Padhy, A multiclass SVM classifier with teaching learning based feature subset selection for enzyme subclass classification, Applied Soft Computing, Elsevier, Vol. 96, 2020 (DOI: 10.1016/j.asoc.2020.106664)
- [14]. Sabyasachi Mohanty, Sudarsan Padhy, M. Vamsi Krishna, A novel EN-TLBO-SVR model for analysing achievements of government schemes, Electronic Government, Vol. 16, No. 3, pp. 281-303, 2020
- [15]. Sasmita Mishra, Sudarsan Padhy, Satya Narayan Mishra, Satya Narayan Misra, A novel LASSO-TLBO-SVR hybrid model for an efficient portfolio construction, The North American Journal of Economics and Finance, Elsevier, Vol. 55, Article No. 101350, 2021

B. JOURNAL PUBLICATIONS PRIOR TO 2016

– No. of reseach papers published :

International Journals : 32, National Journals : 10

C. PAPERS PUBLISHED IN CONFERENCE PROCEEDINGS

– International : 12 , National : 8

D. BOOKS:

Coauthor of Books : 5

ANY OTHER

Thesis Supervision :

Ph. D. Theses Supervised:

Awarded: 15 (10 in Mathematics, 5 in Computer Science)

Submitted: 1

Currently Supervising: 8

No. of M. Phil (Mathematics)/ M.Tech.(Computer Science)Dissertations Supervised : 40

Positions in Learned Society

1. President of Orissa Mathematical Society
2. Former President of Orissa Information Technology Society
3. Former Regional co-ordinator INMO

Academic Participation Overseas

1. Germany during June, 1980 – Sept. 1981 for Post Doctoral Research at University of Freiburg by availing DAAD fellowship.
2. Italy during 18-26, June 1981 for participating in International Symposium on Free Boundary Problems.

3. Italy during 9-27 September, 1996 for participating at the School of Numerical Simulation of Partial Differential Equations & for presenting a paper at the International Conference on Recent Advances in Numerical Methods for partial Differential Equations held at International Center for Theoretical Physics, Trieste.