



## Prof. Sudarsan Padhy

**Name** : Sudarsan Padhy

**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 sahoo, 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 Magneto-hydrodynamic 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.