Dr. Babita Majhi

Asst. Professor
Dept. of Computer Science and Information Technology
G. G. Vishwavidyalaya (A Central University), Bilaspur-495009(CG),India
Email:babita.majhi@gmail.com, Mobile :9098715203

Academic Appointments:

13/01/2012 –Till date: Asst. Professor, Dept. of CSIT, Guru Ghasidas Vishwavidyalaya (Central University), Bilaspur, India

(Dec. 2011-Dec. 2012) Boyscast Fellow(DST, GOI) at University of Sheffield, United Kingdom.

2009-2011 : Asst. Professor, Dept. of CSIT, Institute of Technical Education and Research, Siksha "O" Anusandhan (Deemed to be) University, Bhubaneswar, India.**(NIRF Ranking 2019 : 24)**

Education :

Post Doc.(Boyscast Fellow, DST, GOI) Dec.2011-Dec.2012, University of Sheffield, United Kingdom (UK). **(QS Global World ranking 2019 : 78)**

Ph.D., 2009, National Institute of Technology Rourkela, Odisha, India**. (NIRF Ranking 2019: 16).**

Master of Computer Application(MCA),Sambalpur University/Biju Patnaik University of Technology, Odisha, India.

Research Experience :

Ph. D. Thesis : On Applications of Soft and Evolutionary Computing Techniques to Direct and Inverse modeling Problems

Supervisor : Prof. G. Panda,FNAE, FNASc., Indian Institute of Technology, Bhubaneswar

Post Doctoral work for one year under BOYSCAST Fellowship of DST, Govt. of India, 2011-12 at University of Sheffield, UK.
Mentor : Prof. Peter J. Fleming, Dept. of Automatic Control and System Engg., University of Sheffield, UK.

Research Interests : Soft Computing, Evolutionary Computing, Data Mining, Data Analytics, Adaptive Signal Processing and Computational Finance.

Total Research Publications : 128

International Journals : 38(Published), 02(Under Review)

Contributed Book Chapters : 06

Book   : 02

Edited conference proceeding (ebook) -01

International Conferences : 66

National Conferences : 15

Citations :

Scopus : 870, h-index :15

Google scholar : 1439, h-index : 18, i10index : 35

Research Guidance :

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Name of the student	Broad area/Title of the thesis	Name of supervisor	Name of Co-Supervisor	Remark
Ph. D. Theses				
H Pal Thethi	Application of Bio-Inspired techniques for direct and inverse modeling	Babita Majhi	G. Panda	Awarded in 2011(KIITS Univ., BBSR)
Minakhi Rout	Development of Novel Intelligent Methods for Prediction of Financial Data	Babita Majhi	NIL	Awarded in 2015(SOA Univ., BBSR)
C. M. Anish	Development of novel methods for prediction of financial time series	Babita Majhi	NIL	Awarded in Oct. 2018(GGV)
Pushpalata Pujari	Development of novel methods for Odia language processing	Babita Majhi	NIL	Awarded in Dec. 2019 (GGV)
Diwakar Naidu	On applications of machine learning techniques for analysis of agrometerological data	Babita Majhi	NIL	Continuing(GGV)
Aarti Kashyap	Data analytics in health care	Babita Majhi	NIL	Continuing (GGV)
M. Tech. Theses				
Bijayalaxmi Panda	Classification of consumer behavior using soft and evolutionary computing techniques	Babita Majhi	NIL	Awarded in 2010
Debashree Mishra	Stock market prediction using Artificial neural network	-do-	Nil	Awarded in 2011
Madhusmita Nayak	Clustering and classification of microarray data using soft computing techniques	-do-	NIL	Awarded in 2011
Chinmayee Bihari	Handwritten odia character recognition using ANN	-do-	NIL	Awarded in 2011
Jyoti Mohanty	Development of mismatch filters for radar pulse compression	-do-	NIL	Awarded in 2011
Usha Manashi Mahapatra	Development and performance evaluation of exchange rate forecasting	-do-	NIL	Awarded in 2012

| Rojalin Mahapatra | Performance evaluation of feature reduction techniques for microarray data | -do- | NIL | Awarded in 2012 |
| Bishnupriya Panda | Protein structural classification using soft computing techniques | -do- | NIL | Awarded in 2013 |

MCA and M. Sc. Projects : 60 nos.
B. Tech. /B.Sc. Projects : 30 nos.

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Details of Publications :
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International Journals

Submitted

1. Babita Majhi and Diwakar Naidu, Pan evaporation modeling in different agro-climatic zones using Functional link artificial neural network, Information Processing in Agriculture, Elsevier, June 2019.

2. Babita Majhi and Diwakar Naidu, Differential Evolution based RBF Neural Network model for Reference Evapotranspiration Estimation, Soft Computing, Springer, Aug. 2019.

Published

1. D. Naidu and Babita Majhi, Reference evapotranspiration modeling using radial basis function neural network in different agro-climatic zones of Chhattisgarh, **Journal of Agrometeorology**, vol. 21, issue 3, pp. 316-326, Sept. 2019. **(impact factor 0.563)** (WoS, Scopus & ICI) (UGC-26374)

2. Babita Majhi, D. Naidu, A. P Mishra and S.C. Satapathy, Improved prediction of daily pan evaporation using Deep LSTM network, **Neural Computing and applications, Springer, Feb. 2019**. **(Impact Factor : 4.664**) (Citations : 03) (In Press)

3. U. M. Mahapatra, Babita Majhi and Alok Jagdev, On the development of Cat Swarm metahuristic using distributed learning strategies and the applications, **International journal of intelligent computing and cybernetics,** vol. 12, issue 2, pp. 224-244, May 2019. **(Scopus Indexed) (Citation : 01)** (UGC : 22981) https://doi.org/10.1108/IJICC-10-2018-0146

4. B. Panda and Babita Majhi, A novel improved prediction of protein structural class using Deep recurrent neural network, **Evolutionary Intelligence, Springer, September 2018. (Scopus Indexed)**.**(Citations : 03)** (UGC : 29041). (In Press) https://doi.org/10.1007/s12065-018-0171-3

5. P. Pujari and Babita Majhi, Recognition of Odia Handwritten Digits using Gradient based Feature Extraction Method and Clonal Selection Algorithm, **International Journal of Rough Sets and Data Analysis, IGI Global,** vol. 6, issue 2, pp. 19-33, April-June 2019**.**.(UGC : 48803)

6. Bishnupriya Panda, Babita Majhi and Abhimanyu Thakur, An integrated-OFFT model for the prediction of protein secondary structure, **Current Computer aided drug design, Bentham Science, vol. 15, issue 1, pp. 45-54, 2019. (Impact Factor : 0.77)** (UGC : 14194) Doi: 10.2174/1573409914666180828105228 (Citation: 01)

7. Babita Majhi, U. M. Mahapatra and S. C. Satapathy, Distributed Machine Learning Strategies for Efficient Development of Direct and Inverse Nonlinear and IIR Models, **Journal of Ambient Intelligence and Humanized Computing, Springer**, May 2018.(In Press) **(Impact Factor : 1.598)** DOI : 10.1007/s12652-018-0839-7 (UGC Jr. No. : 26400)

8. Babita Majhi, C.M. Anish and Ritanjali Majhi, On Development of Novel Hybrid and Robust Adaptive models for Net asset value prediction, Journal of King Saud Univ.-Computer and Information Science, Elsevier, April 2018. DOI: 10.1016/j.jksuci.2018.04.011 (In Press). **(Scopus indexed)** (Citations : 03) (UGC Jr. No.: 30389)

9. U. M Mahapatra, Babita Majhi and S. C. Satapathy, Financial time series prediction using Distributed Machine learning techniques, **Neural Computing and its applications, Springer**, 31(8), pp. 3369-3384, Oct. 2019. **(Impact Factor :4.664).** https://doi.org/10.1007/s00521-017-3283-2. (UGC Jr. No.: 37535)

10. B. Panda and Babita Majhi, ADAMMLP: An Adaptive Moment Based Hybrid Multi-Layer Perceptron for Protein Secondary Structure Prediction, **Journal of Pharmaceutical Science and Research**, Pharmainfo Publication, 9(11), pp. 2023-2028, 2017. ISSN 0975-1459**(Scopus Indexed)** (UGC Jr. No.: 19145)

11. VSS Sameer Chakravarthy Vedula, Chowdary Satish Rama Paladuga, Ganapati Panda, Jaume Anguera, Aurora Andújar and Babita Majhi, On the linear antenna array synthesis techniques for sum and difference patterns using flower pollination algorithm", **Arabian Journal of Science and Engineering, Springer**, vol. 43, issue 8, pp. 3965–3977, August 2018. DOI 10.1007/s13369-017-2750-5 **(Impact factor : 1.518) (Citations -16)** (UGC Jr. No.: 8147)

12. Soumya Ranjan Tripathy, G. Panda and Babita Majhi, A constrained LMMSE based object specific reconstruction in compressive sensing**, IET Signal Processing**, 11(9), pp. 1122-1127, 2017. **(Impact Factor : 1.754).**(UGC Jr. No.: 30103)

13. Babita Majhi and P. Pujari, On Development and Performance Evaluation of Novel Odia Handwritten Digit Recognition Methods, **Arabian Journal for Science and Engineering, Springer**,_vol. 43, Issue 8, pp 3887–3901, Aug. 2018. DOI 10.1007/s13369-017-2652-6 **(Impact factor : 1.518) (Citation -03)** (UGC Jr. No.: 8147)

14. C. M. Anish, Babita Majhi and R. Majhi, Development and evaluation of novel forecasting adaptive ensemble model, **The Journal of Finance and Data Science, Elsevier**, vol. 2, issue 3, pp. 188-201, Sept 2016. (Citations : 03)

15. S. K. Mishra, G. Panda and Babita Majhi, Prediction based mean-variance Model for Constrained Portfolio Optimization using Multiobjective Particle Swarm Optimization, **Swarm and Evolutionary Computation, Elsevier**, vol.28, pp. 117-130, June 2016. **(Impact factor : 6.330)** (UGC Jr. No.: 22324) **(Citation:15)**

16. C. M. Anish and Babita Majhi, Hybrid Nonlinear Adaptive Scheme for Stock Market Prediction using Feedback FLANN and Factor Analysis", **Journal of the Korean Statistical Society**, **Elsevier**, vol. 45, issue 1, pp.64-76, March 2016. **(Impact factor : 0.569)** (UGC Jr. No.:11175) **(Citations :31)**

17. Babita Majh and C. M. Anish, "Multiobjective optimization based adaptive model with fuzzy decision making for stock market forecasting", **Neurocomputing**, **Elsevier**, vol. 167, issue 1, pp. 502-511, November 2015. **(Impact factor : 4.072)** (UGC Jr. No.: 37560) **(Citations :28)**

18. P. R. Jena, R. Majhi and Babita Majhi, "Development and Performance Evaluation of a Novel Knowledge Guided Artificial Neural Network (KGANN) Model for Exchange Rate Prediction", Journal of King Saud University **– Computer and Information Sciences, Elsevier**, vol.27, no. 4, pp. 450-457, Oct. 2015. **(Scopus Indexed)** (UGC Jr. No.: 30389) **(Citations :16)**

19. Minakhi Rout and Babita Majhi, "Long range prediction of retails sales volume using Recurrent Radial basis function neural network", **International Journal of Foresight and Innovation Policy, Inderscience Publication**, vol. 10, no. 1, pp.29-47, 2015. **(Scopus Indexed) (Citation:01)** (UGC Jr. No.: 3045)

20. Babita Majhi, Minakhi Rout and Vikas Bhagel, "On the Development of Multiobjective based RBF Prediction model for Efficient Forecasting of Stock Indices", Journal of King Saud university- **Computer and Information Sciences**, **Elsevier**, Vol. 26, issue 3, pp. 319-331,Nov. 2014. **(Citation-21) (Scopus Indexed)** (UGC Jr. No.: 30389)

21. U. K. Sahoo, G. Panda, B. Mulgrew and Babita Majhi, "Development of robust distributed learning strategies for wireless sensor networks using rank based norms", **Signal Processing**, **Elsevier**, vol. 101, pp. 218-228, Aug. 2014 (**Impact factor :4.086**) **(Citation-08)** (UGC Jr. No.: 36023)

22. U. K. Sahoo, G. Panda, B. Mulgrew and Babita Majhi, "Robust Incremental Adaptive Strategies for Distributed Networks to Handle Outliers in both Input and Desired Data", **Signal Processing**, **Elsevier**, vol. 96, part B, pp. 300-309, March 2014.(**impact factor :4.086**) **(Citation-06)** (UGC Jr. No.:36023) **(citation-2)**

23. Minakhi Rout, Babita Majhi, R. Majhi, G. Panda, "Forecasting of currency exchange rates using an adaptive ARMA model with differential evolution based training", Journal of King Saud university- **Computer and Information Sciences**, **Elsevier**, vol. 26, Issue 1, pp. 7-18, January 2014, ISSN : 1319-1578.**(Citations-71) (Scopus Indexed)** (UGC Jr. No.:30389)

24. Babita Majhi and Ganapati Panda, "Distributed and Robust Parameter Estimation of IIR Systems using Incremental Particle Swarm Optimization", **Digital Signal Processing : A Review Journal, Elsevier, vol**. 23, issue 4, pp.1303-1313, July 2013. **(Impact factor :2.792). (Citation-15)** (UGC Jr. No.:13201)

25. T. Panigrahi, G. Panda, B. Mulgrew and Babita Majhi, "Distributed DOA estimation using clustering of sensor nodes and diffusion PSO algorithm", **Swarm and Evolutionary Computation**, **Elsevier**, vol.9, pp.47-57, April 2013, ISSN : 2210-6502 **(Impact factor : 6.330) (Citation-27).** (UGC Jr. No.:22324)

26. T. Panigrahi, G. Panda and Babita Majhi, "Maximum Likelihood Source Localization in Wireless Sensor Network Using Particle Swarm Optimization", **International Journal of Signal and Imaging Systems Engineering**, Inderscience Publication, vol. 6, issue 2, pp.83-90, 2013.**(Citations-09) (Scopus Indexed)** (UGC Jr. No.:23509)

27. Babita Majhi, Minakhi Rout, R. Majhi, G. Panda and P. J. Fleming, "New robust forecasting models for exchange rates prediction", **Expert systems with applications**, Elsevier, vol. 39, issue 16, pp. 12658-12670, Nov. 2012. (**Impact factor:4.292**). **(Citations-48).** (UGC Jr. No.:29150)

28. U. K. Sahoo, G. Panda, B. Mulgrew and Babita Majhi, "QR-based incremental minimum-Wilcoxon-norm strategies for distributed wireless sensor networks", **Signal Processing**, **Elsevier**, vol. 92, issue 11, pp.2657-2667, Nov. 2012. (**Impact factor :4.086**). **(Citation-06)** (UGC Jr. No.:36023)

29. R. Majhi, Babita Majhi and G. Panda, "Development and performance evaluation of Neural network classifiers for Indian internet shoppers", **Expert Systems with Applications**, **Elsevier**, vol. 39, issue 2, pp.2112-2118, February 2012.**(Impact factor: 4.292**). **(Citation-09)** (UGC Jr. No.:29150)

30. G. Panda, P. M. Pradhan and Babita Majhi, "IIR System Identification using Cat Swarm Optimization", **Expert Systems with Applications**, vol. 38, issue 10, pp. 12671-12683, September 2011. (**Impact factor: 4.292**) **(Citations – 188)** (UGC Jr. No.:29150)

31. Babita Majhi and G. Panda, "Robust Identification of Nonlinear Complex Systems using Low Complexity ANN and Particle Swarm Optimization Technique", **Expert Systems with**

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Applications, Elsevier, vol. 38, issue 1, pp.321-333, January 2011. **(Impact factor: 4.292)** **(Citations:43)** (UGC Jr. No.:29150)

32. S. J. Nanda, G. Panda and Babita Majhi, "Improved Identification of Hammerstein Plants using new CPSO and IPSO algorithms", **Expert Systems with Applications**, Elsevier, vol. 37, issue 10, Pages 6818-6831, October 2010. (**Impact factor: 4.292). (Citations -42)** (UGC Jr. No.:29150)

33. Babita Majhi and G. Panda, "Development of Efficient identification Scheme for Nonlinear Dynamic Systems using Swarm Intelligence techniques", **Expert Systems with Applications**, Elsevier, vol. 37, issue 1, pp. 556-566, January 2010. (**Impact factor: 4.292)** (**Citations –46)** (UGC Jr. No.:29150)

34. R. Majhi, G. Panda, Babita Majhi and G. Sahoo, "Efficient prediction of stock market indices using adaptive bacterial foraging optimization (ABFO) and BFO based techniques", **Expert Systems with Applications**, Elsevier, vol. 36, issue 6, pp. 10097-10104, August 2009. (**Impact factor: 4.292**) **(Citations-149)** (UGC Jr. No.: 29150)

35. Babita Majhi, G. Panda and B. Mulgrew, "Robust identification using New Wilcoxon Least Mean Square (WLMS) Algorithm", **Electronics Letters**, vol. 45, issue 6, pp. 334-335, 12th March 2009.(**Impact factor:1.343**). **(Citations-29)** (UGC Jr. No.: 13577)

36. Babita Majhi and G. Panda, "Cascaded Functional Link Artificial Neural Network Model for Nonlinear Dynamic System Identification", **International Journal of Artificial Intelligence and Soft Computing**, Inderscience Publication, vol. 1, Nos. 2/3/4, pp. 223 – 237, 2009.**ISSN online:** 1755-4969 **ISSN print:** 1755-4950. **(Indexed in ACM Digital library) (Citation-02) (UGC Jr. No.:: 49129)**

37. Babita Majhi, G. Panda, "Identification of IIR Systems using Comprehensive Learning Particle Swarm Optimization", **International Journal of Power and Energy Conversion,** Inderscience Publication, vol. 1, no. 1, pp.105-124, 2009, **ISSN online:** 1757-1162 **ISSN print:** 1757-1154**. (Scopus Indexed) (Citations-08)** (UGC Jr. No.:23374)

38. Babita Majhi and G. Panda, "A Hybrid Functional Link Neural Network and Bacterial Foraging Approach for Efficient Identification of Dynamic Systems", **International Journal of Applied Artificial Intelligence in Engineering Systems**, Serial Publication, vol. 1, no. 1, pp. 91-104, January-June 2009, **ISSN :** 0975-3176.

Book and Book Chapters

- C. M. Anish, Babita Majhi and R. Majhi, A novel hybrid model using RBF and PSO for net asset value prediction, Modeling, Analysis, and Application of Nature-Inspired Metaheuristic Algorithms, IGI, Publication, pp.54-72, 2017. (ISBN : 9781522528579) (Scopus Indexed)

- P. Pujari and Babita Majhi, Application of Natured Inspired Technique to Odia Handwritten Numeral Recognition, Modeling, Analysis, and Application of Nature-Inspired Metaheuristic Algorithms, IGI, Publication, pp. 377-399, 2017.(ISBN : 9781522528586)

- U. M. Mahapatra and Babita Majhi, "Distributed parameter estimation using Incremental and Diffusion Differential Evolution", **Handbook of Research on Wireless Sensor Network Trends, Technologies, and Applications, IGI Publication, pp. 58-79.** (ISSN: 2327-3305; eISSN: 2327-3313), DOI: 10.4018/978-1-5225-0501-3.ch003

- B. Panda, Babita Majhi, "Development of Novel Multi-Objective based Model for Protein Structural Class Prediction," **Handbook of Research on Computational Intelligence Applications in Bioinformatics, IGI Publication, Section-2, Chapter-5, June 2016,** ISBN13: 9781522504276, DOI: 10.4018/978-1-5225-0427-6. (Scopus Indexed)
.

- R. Majhi, Babita Majhi and G. Panda, "Efficient prediction of retail sales using differential evolution based adaptive model", **Integration of Swarm Intelligence and Artificial Neural Networks**, pp. 213-238, **World Scientific Press,** 2011, ISBN : 9789814280143.

- G. Panda, P. M. Pradhan and Babita Majhi "Direct and Inverse modeling of plants using Cat Swarm Optimization", **Hand Book on Swarm Intelligence**, **Adaptation, Learning and Optimization, Springer series,** vol. 8, Part 4, pp. 469-485, 2011. DOI: 10.1007/978-3-642-17390-5_20, ISBN: 9783642173899. **(Citation : 10)**

- Harpal Thethi and Babita Majhi, Application of Bio-inspired techniques to telecommunication problems, **LAMBERT Academic Publication, Germany**, 2012.(Available at www.amazon.com) ISBN : 9783659223235.

- Babita Majhi, Computational Intelligence techniques to direct and inverse modeling, **LAMBERT Academic Publication, Germany**, 2016, ISBN : 978-3-659-90736-4 .

- Edited the Conference Proceeding (ebook) of National Conference on Data Analytics, Machine learning and Security, ISBN : 978-93-5291-457-9.

International Conferences

Published/Presented

1. Babita Majhi and Aarti Kashyap, Feature reduction and classification techniques for healthcare data, International Conference on recent trends in mathematical, physical & computational Sciences, Sagar Univ., MP, 12-14 December, 2019. (Presented)

2. Diwakar Naidu and Babita Majhi, Application of machine learning techniques for reference evapo-transpiration modeling, International Symposium on advances in agrometeorology for managing climatic risks of farmers" (INAGMET-2019) 11-13 February 2019, JNU, New Delhi.(Presented)

3. Sidharth Behera, Ayush Pradhan and Babita Majhi, A Novel Clustering Based Fuzzy Approach for Character Segmentation in Handwritten Odia Scripts, 4th IEEE International Conference on Image Information Processing, 21-23, Dec. 2017, Shimla. **DOI:** 10.1109/ICIIP.2017.8313728

4. Venkata Sasank Pagolu, Kamal Nayan Reddy Challa, Ganapati Panda and Babita Majhi, Sentiment Analysis of Twitter Data for Predicting Stock Market Movements, SCOPES 2016, Paralakhemundi, 3-5 Oct 2016, pp1345-1350. **DOI:** 10.1109/SCOPES.2016.7955659 (Citations : 103)

5. Kamal Nayan Reddy Challa, Venkata Sasank Pagolu, Ganapati Panda and Babita Majhi, An Improved Approach for Prediction of Parkinson's Disease using Machine Learning Techniques, IEEE Scopes 2016, Paralakhemundi 3-5 Oct. 2016, pp.1446 - 1451, DOI: 10.1109/SCOPES.2016.7955679 (**Received Best Paper Award)**

6. Ayush Pradhan, Sidharth Behera, Ganapati Panda and Babita Majhi Comparative Performance Study of Word Segmentation Techniques for Handwritten Odia Documents, IEEE Scopes 2016, Paralakhemundi 3-5 Oct. 2016., pp.1592 - 1597, DOI: 10.1109/SCOPES.2016.7955708

7. C. M. Anish and Babita Majhi, Prediction of Mutual Fund Net Asset Value using low complexity Feedback Neural Network, **IEEE International conference on Current Trends in advanced Computing (ICCTC 2016), Bangalore**, pp. 1-5, 10-11, March 2016. **DOI:** 10.1109/ICCTAC.2016.7567345

8. P. Pujari and Babita Majhi, Genetic Algorithm based hybrid model for recognition of Odia vowels using FLANN and Wavelet transform, IEEE conference on Electrical. Electronics and Optimization Techniques, Chennai, 3-5 March 2016.(presented)

9. P. Pujari and Babita Majhi, "Performance Comparison of Ensemble Models for Recognition of Offline Handwritten Odia Numerals", **IEEE International conference on Power, Communication and Information Technology, Bhubaneswar,**15-17 Oct. 2015,pp.29-35. Doi: 10.1109/PCITC.2015.7438187

10. C. M. Anish and Babita Majhi, " An ensemble based model for Net asset value prediction**", IEEE International conference on Power, Communication and Information Technology, Bhubaneswar,**15-17 Oct. 2015, pp.392-396. Doi: 10.1109/PCITC.2015.7438197

11. C. M. Anish and Babita Majhi, A PSO based RBF model for net asset value prediction, **International Conference on advanced research applications in engineering and technology (Shaastrarth 2015), Bhilai**, 29-30 June 2015.(Presented)

12. P. Pujari and Babita Majhi, An efficient technique for recognition of Odia numerals using particle swarm optimized based FLANN model with gradient feature, **International Conference on advanced research applications in engineering and technology (Shaastrarth 2015), Bhilai,** 29-30 June 2015.(Presented)

13. P. Pujari and Babita Majhi, "Ensemble of Weak Learners on Recognition of Odia Numeric Digits", **International Seminar on Non-Conventional Energy Sources for Sustainable Development of Rural Areas, 21-22, March 2015, Bhillai**. **(Received best paper award)**

14. P. Pujari and Babita Majhi, "A comparative study of classifiers on recognition of offline handwritten Odia numerals", **IEEE International Conference on Electrical, electronics, signals, communication and optimization (EESCO), Vishakhapatnam**, pp. 1-5, 24-25,Jan 2015.

15. Aninditta Dutta, M. Rout and Babita Majhi, "TLBO Based Hybrid Forecasting Model for Prediction of Exchange Rates" **SEMCCO and FANCCO 2014, Bhubaneswar, LNCS 8947, Springer, pp. 1-11,** 18-20 Dec. 2014. Doi:10.1007/978-3-319-20294-54

16. C. M. Anish, Babita Majhi and H. S. Tonde, "A Novel Hybrid Nonlinear Adaptive Model For Prediction of Stock Indices", **International Conference on Communication and Computing (ICC-2014), Bangalore**, pp.18-25,12-14 June 2014.
http://www.elsvierst.com/conference_book_download_chapter.php?cbid=86#chapter3

17. B. Panda, A. P. Mishra, Babita Majhi and M. Rout, "Performance evaluation of Protein structural class prediction using Artificial Neural networks", **IEEE International Conference on human computer interactions (ichci'13), Chennai, Tamilnadu, pp.1-5,** 23-24 August 2013. DOI: 10.1109/ICHCI-IEEE.2013.6887792

18. B. Panda, A. P. Mishra, Babita Majhi and M. Rout, "Protein Structural Class Prediction Using Hybrid Feature Extraction Method and Low Complexity Neural Network", **SEMCCO and FANCCO 2013, SRM University, Chennai, Part II, LNCS 8298, pp. 298–307, 2013,**19-21 December 2013. DOI: 10.1007/978-3-319-03756-1

19. B.Panda, A. P. Mishra, Babita Majhi and M. Rout, "Development and performance evaluation of FLANN based model for protein structural class prediction", **Second International Conference on Advances in Electronics Electrical and Computer Engineering – EEC 2013,** pp. 230-234**, Dehradun,** 22-23 June 2013. **DOI:** 10.3850/ 978-981-07-6935-2_46

20. M. Rout, Babita Majhi, U. M. Mahapatra and R. Mahapatra, "Stock index prediction using radial basis function neural network", **SEMCCO and FANCCO 2012, Bhubaneswar,**

Springer LNCS 7677, pp. 285–293, 20-22 Dec., 2012. DOI: 10.1007/978-3-642-35380-2_34.**(Citation : 2)**

21. M. Rout, Babita Majhi and Rosalin Mahapatra," An Artificial Bee Colony algorithm based Efficient Prediction Model for Stock Market Indices", **IEEE 2nd World Congress on Information and Communication Technologies(WICT 2012), IIITM, Trivandrum,** pp. 750-754, 30th Oct. – 2nd Nov. 2012. DOI: 10.1109/WICT.2012.6409174 **(Citation:1)**

22. R. Mahapatra, Babita Majhi and Minakhi Rout, "Reduced feature based efficient cancer classification using single layer neural network", **2nd International Conf. on Communication, Computing & Security, NIT Rourkela,** Procedia Technology, Elsevier, vol. 6, pp.180-187, 6-8 October 2012. DOI : 10.1016/j.protcy.2012.10.022 **(Citation:5)**

23. P. M. Pradhan, G. Panda and Babita Majhi, "Multi-objective Cooperative Spectrum Sensing in Cognitive Radio using Cat Swarm Optimization", **IEEE 2012 Wireless Advanced, King's College, London,** pp. 44-48, 25-27,June 2012. DOI : 10.1109/WiAd.2012.6296565 (Citation-01)

24. S. Mishra, G. Panda, Babita Majhi and R. Majhi, "Improved portfolio optimization combining multi-objective evolutionary computing algorithms prediction strategy", **World Congress on Engineering(WCE 2012), International Conference of Financial Engineering, London, UK,** pp. 470-474, 4-6 July 2012. DOI: www.iaeng.org/publication/WCE2012/WCE2012_pp470-474.pdf **(Citation:5)**

25. A. K. Sahoo, G. Panda and Babita Majhi, "A technique for pulse radar detection using RRBF neural network", **World Congress on Engineering(WCE 2012), International Conference of Computational Intelligence and Intelligent Systems, London, UK,** pp. 684-689, 4-6 July 2012. DOI: www.iaeng.org/publication/WCE2012/WCE2012_pp684-689.pdf **(Citation:3)**

26. U.M. Mohapatra, Babita Majhi and M. Rout, "A Robust Technique for Exchange Rate Prediction using Wilcoxon Norm", **IEEE International Conference on Advances in Engineering, Science and Management (IEEE-ICAESM 2012), Nagapattinam,** pp. 536-541, 30-31 March 2012. DOI: *ieeexplore.ieee.org/iel5/6204370/6215562/06215902.pdf* **(Citation:1)**

27. R. Mahapatra, Babita Majhi and M. Rout, "Development and Performance Evaluation of Improved Classifiers of Microarray Data", **IEEE International Conference on Advances in Engineering, Science and Management (IEEE-ICAESM 2012), Nagapattinam,** pp.519-523, 30-31 March 2012. DOI: *ieeexplore.ieee.org/iel5/6204370/6215562/06215899.pdf* **(Citation :1)**

28. M. Rout, Babita Majhi and U. M Mahapatra, "Efficient Long Range Prediction of Exchange Rates using Radial Basis Function Neural Network Models", **IEEE International Conference on Advances in Engineering, Science and Management (IEEE-ICAESM 2012), Nagapattinam,** pp.530-535, 30-31 March 2012. DOI: ieeexplore.ieee.org/iel5/6204370/6215562/06215901.pdf **(Citation :1)**

29. T. Panigrahi, B. Mulgrew and Babita Majhi, "Robust Distributed Linear Parameter Estimation in Wireless Sensor Network", **IEEE International Conference on Energy, Automation and Signal(ICEAS 2011), Bhubaneswar,** pp.1-5, , 28-30 Dec. 2011.DOI:10.1109/ICEAS.2011.6147136 (Citation-1)

30. Babita Majhi, J. Satpathy and M. Rout, "Efficient recognition of Odia numerals using low complexity neural classifier", **IEEE International Conference on Energy, Automation and Signal(ICEAS 2011), Bhubaneswar,**pp.1-4, 28-30 Dec. 2011. DOI:10.1109/ICEAS.2011.6147094.**(Citation:3)**

31. M. Rout, Babita Majhi and U. M. Mahapatra, "Development and performance evaluation of DE based time series prediction model", **IEEE International Conference on Energy, Automation and Signal(ICEAS 2011), Bhubaneswar,** pp.1-5, 28-30 Dec. 2011. DOI:10.1109/ICEAS.2011.6147091 (Citation-1)

32. H Pal Thethi, S. Mondal, S. S. Roy, Babita Majhi and G. Panda, "Improved Identification Model for Nonlinear Dynamic Systems Using FLANN and Various Types of DE", **International Symposium on Devices, MEMS, Intelligent Systems and Communication, Sikkim**, pp.368-371,12-14 April 2011.

33. H Pal Thethi, S. Mondal, S. S. Roy, Babita Majhi and G. Panda, "Identification of Complex nonlinear dynamic systems using FLANN and differential evolution", **International Conference on Machine Intelligence Application to Power, Signal Processing, Communication and Control, Rajam**, pp.127-133, 7-9 April 2011.

34. T. Panigrahi, G. Panda, B. Mulgrew and B. Majhi, "Robust diffusion LMS over wireless sensor network in impulsive noise", **International Conference on Emerging Technologies (ICET 2011), NIT Durgapur**, pp. 17-21, 28-31 March 2011.

35. S. Mishra, M. Nayak, K. Shaw, Babita Majhi and G. Panda, "Classification of microarray gene expression data using single layer single neuron neural network", **International Conference on Emerging trends in soft computing and ICT, GG Central University, Bilaspur,** pp. 98-101, 16-17 March 2011.

36. C. Bihari, Babita Majhi and G. Panda, "A critical review on offline handwritten odia character recognition techniques", **International Conference on Emerging trends in soft computing and ICT, GG Central University, Bilaspur,** pp. 89-92, 16-17 March 2011.

37. M. Rout, Babita Majhi, R. Majhi and G. Panda, "Novel Stock Market Prediction using a Hybrid Model of Adaptive Linear Combiner and Differential Evolution", 2nd **International Conference on Recent Trends in Information, Telecommunication and Computing (ITC 2011), Bangalore,** pp. 187-191, 10-11 March 2011. DOI: 10.1007/978-3-642-19542-6_30 (Citation:3)

38. T. Panigrahi, AD. Hanumant Rao, G. Panda and Babita Majhi, "Maximum likelihood DOA estimation using adaptive particle swarm optimization", **ACM International Conference on Communication, Computing and Security, NIT Rourkela**, pp.134-137, 12-14 Feb. 2011. Doi:10.1145/1947940.1947969 **(Citation:6)**

39. T. Panigrahi, G. Panda, B. Mulgrew and Babita Majhi, "Maximum likelihood source localization in wireless sensor network using particle swarm optimization", **International conference on electronics systems, NIT Rourkela,** pp111-115, 7-9 January 2011.

40. T. Panigrahi, G. Panda, B. Mulgrew and Babita Majhi, "Robust Incremental LMS over Wireless Sensor Network in Impulsive Noise", **IEEE International Conference on Computational Intelligence Communication Networks (CICN200), Bhopal,** pp.205-209,26-28 Nov. 2010.DOI:10.1109/CICN.2010.50. (Citation-02)

41. R. Majhi, B. Panda, Babita Majhi and G. Panda, "Development and performance evaluation of PSO based single layer nonlinear ANN classifiers of Indian online shoppers", **4th International conference on Advanced Engineering Computing and Applications in Sciences, Florence, Italy,** pp.118-123, 25-30 October 2010. DOI:advcomp_2010_6_30_20049

42. H Pal Thethi, Babita Majhi and G. Panda, "Development of efficient robust inverse models using Bacterial foraging optimization", ACEEE **International Conference on Control, Communication and Power Engineering(CCPE 2010), Chennai,** pp. 24-29**,** 28-29 July 2010. DOI: 01.IJCSI.02.02.44

43. R. Majhi, S. Pandu, B. Panda, Babita Majhi and G. Panda, "Classification of consumer behavior using Functional Link Artificial Neural Network", **IEEE International Conference on Advances in Computer Engineering(ACE 2010), Bangalore,** pp. 323-325, 20-21 June 2010.DOI:10.1109/ACE.2010.68 **(Citation:12)**

44. R. Majhi, Babita Majhi, M. K. Mishra and G. Panda, "Retail Sales forecasting using differential evolution", **IEEE International Conference on Nature and Biologically Inspired Computing (NaBIC 09), Coimbatore,** pp. 1343-1348,9-11 December 2009. DOI:10.1109/NABIC.2009.5393740

45. R. Majhi, Babita Majhi, M. Rout, S. Mishra and G. Panda, "Efficient sales forecasting using – PSO based adaptive ARMA model", **IEEE International Conference on Nature and Biologically Inspired Computing (NaBIC 09), Coimbatore,** pp. 1333-1337, 9-11 December 2009. DOI:10.1109/NABIC.2009.5393738 **(Citation : 2)**

46. V. Bhagel, P. P. Srihari, K. RajaRajeswari, G. Panda and Babita Majhi, "An efficient multi-objective pulse radar compression technique using RBF and NSGA-II", **IEEE International Conference on Nature and Biologically Inspired Computing (NaBIC 09), Coimbatore,** pp. 1291-1296,9-11 December 2009.DOI:10.1109/NABIC.2009.5393761 **(Citation :10)**

47. R. Majhi, G. Panda and **Babita Majhi**, "Robust prediction of stock indices using PSO based adaptive linear combiner", **IEEE International Conference on Nature and Biologically Inspired Computing (NaBIC 09), Coimbatore,** pp. 312-317**,** 9-11 December 2009. DOI:10.1109/NABIC.2009.5393728

48. T. Panigrahi, P. M. Pradhan, G. Panda, Babita Majhi and B. Mulgrew, "Robust distributed optimization in wireless sensor network", **IEEE International Conference on Advances in Recent Technologies in Communication and Computing (ARTCom 2009), Kottyam, Kerela**, pp. 249-253, 27-28 Oct 2009.DOI:10.1109/ARTCom.2009.40 **(Citation :1)**

49. **Babita Majhi**, G. Panda and B. Mulgrew, "Robust prediction and identification using Wilcoxon norm and Particle swarm optimization", **17th European Signal Processing Conference (EUSIPCO 2009), Glasgow, UK,** 24-28 August, 2009. http://www.eurasip.org/Proceedings/Eusipco/Eusipco2009/contents/papers/1569186026.pdf **(Citation:5)**

50. **Babita Majhi**, G. Panda and B. Mulgrew, "Distributed identification of nonlinear processes using incremental and diffusion type PSO algorithms", **IEEE Congress on Evolutionary Computation (CEC 2009), Norway,** pp.2076-2082, May 18-21, 2009.DOI:10.1109/CEC.2009.4983197 **(Citation:5)**

51. S. J. Nanda, G. Panda and **Babita Majhi**, "Development of Immunized PSO Algorithm and Its Application to Hammerstein Model Identification", **IEEE Congress on Evolutionary Computation (CEC 2009),Norway,** pp.3080-3086, May 18-21, 2009. DOI:10.1109/CEC.2009.4983333 **(Citation:6)**

52. S. J. Nanda, G. Panda and **Babita Majhi**, "Improved Identification of Nonlinear MIMO Plants using New hybrid FLANN-AIS Model", **IEEE International Advance Computing Conference (IACC-09), Patiala,** pp. 141-146**,** 6-7, March 2009. DOI:10.1109/IADCC.2009.4808996 **(Citation : 14)**

53. S. J. Nanda, G. Panda and **Babita Majhi**, "Improved identification of Hammerstein Model based on Artificial Immune System", IEEE **International Conference on Emerging Trends in Computing (ICETiC-09), Tamilnadu,** pp. 193-198, 8-10, January 2009.

54. S. J. Nanda, G. Panda, **Babita Majhi** and Prakash Tah, "Development of a new optimization algorithm based on Artificial Immune System and its application", **IEEE ICIT 2008, Bhubaneswar,** pp. 45-48**,** 17-20, December 2008.DOI:10.1109/ICIT.2008.20 **(Citation :2)**

55. S. J. Nanda, G. Panda and **Babita Majhi, "**Development of Novel Digital Equalizers for noisy nonlinear channel using artificial Immune System", Proc. of **IEEE Region 10 Colloquium and 3rd International Conference on Industrial and Information Systems, IIT Kharagpur,** pp. 1-6, 8-10, December, 2008.DOI:10.1109/ICIINFS.2008.4798337 **(Citation:3)**

56. S. J. Nanda, G. Panda and **Babita Majhi**, "Improved identification of nonlinear dynamic systems using Artificial Immune System", Proc. of **IEEE INDICON**, **IIT, Kanpur,** pp. 268-273, 11-13 December, 2008.DOI:10.1109/INDCON.2008.4768838 **(Citation:3)**

57. **Babita Majhi,** G. Panda and A. Choubey, "Efficient scheme of identification of Pole-Zero Systems using Particle Swarm Optimization Technique", Proc. of **IEEE Congress on Evolutionary Computation (CEC 2008), Hong Kong,** June 1-6, 2008, pp. 446-451.DOI: 10.1109/CEC.2008.4630836 **(Citation:22)**

58. **Babita Majhi**, G. Panda and Harpal Thethi, "Development of Efficient Adaptive Nonlinear Channel Equalizers using Fuzzy-Bacterial Foraging Optimization Technique", Proc. of **International Conference on AI Tools in Engineering (ICAITE - 2008), Pune,** 6-8 March, 2008.

59. G. Panda, **Babita Majhi**, D. Mohanty and A. Sahoo, "A GA-based Pruning Strategy and Weight Update Algorithm for Efficient Nonlinear System Identification", Proc. of **International Conference on Pattern Recognition and Machine Intelligence (PReMI' 07), ISI, Kolkata**, 18-22, December 2007, pp. 244-251(Springer-Verlag Berlin Heidelberg 2007). DOI: 10.1007/978-3-540-77046-6_30 **(Citation :6)**

60. **Babita Majhi** and G. Panda, "Particle Swarm Optimization based Efficient Adaptive Channel Equalizer for Digital Communication*"*, Proc. of **International Conference on Trends in Intelligent Electronics Systems (ties2007), Chennai,** 12-14, November, 2007, pp.303-308. **(Citation:5)**

61. **Babita Majhi** and G. Panda, "Bacterial Foraging based Identification of Nonlinear Dynamics System", Proc. of **IEEE Congress on Evolutionary Computation(CEC-2007), Singapore**, 25-28, September, 2007, pp.1636-1641.DOI:10.1109/CEC.2007.4424669 **(Citation : 37)**

62. G. Panda, D. Mohanty, **Babita Majhi** and G. Sahoo, "Identification of Nonlinear Systems using Particle Swarm Optimization Technique", Proc. of **IEEE Congress on Evolutionary Computation(CEC-2007), Singapore,** 25-28, September, 2007, pp.3253-3257. DOI: 10.1109/CEC.2007.4424889 **(Citation : 44)**

63. **Babita Majhi** and G. Panda, *"*Recovery of Digital Information using Bacterial Foraging Optimization based Nonlinear Channel Equalizers*"*, Proc. of **IEEE 1st International Conference on Digital Information Management (ICDIM-2006),Bangalore,** India, 6-8th December, 2006, pp. 367-372. DOI : 10.1109/ICDIM.2007.369224 **(Citation : 12)**

64. G. Panda, **Babita Majhi** and S. Mishra, *"*Nonlinear System Identification using Bacterial Foraging based Learning", Proc. of **IET 3rd International Conference on Artificial Intelligence in Engineering Technology (ICAIET-2006), Malaysia,** 22-24, November, 2006, pp. 120-125. **(Citation:5)**

65. **Babita Majhi**, G. Panda and A. Choubey, "On The Development of a new Adaptive Channel Equalizer using Bacterial Foraging Optimization Technique*"*, Proc. of **IEEE Annual India Conference (INDICON-2006), New Delhi**, India, 15th-17th September, 2006, pp. 1-6.DOI: 10.1109/INDCON.2006.302761 **(Citation : 27)**

66. G. Panda, **Babita Majhi**, D. Mohanty and A. Choubey, "Development of GA Based Adaptive Techniques for Nonlinear System Identification", Proc. of **International Conference on Information Technology (ICIT-2005), Bhubaneswar, I**ndia, 20-23, December, 2005, pp. 198-204.

National Conferences

Published

1. Diwakar Naidu, Babita Majhi and S.K. Chandniha, Development of radial basis function neural network model for monthly rainfall prediction for Chhattisgarh state in east central India, National Seminar on "Agrometeorological Interventions for Enhancing Farmers Income (AGMET-2020)", College of Horticulture, Kerala Agricultural University, Vellanikkara, Thrissur, 20-22 Jan. 2020.(To be presented)

2. C. M. Anish, Babita Majhi and Harendra Bikrol, An adaptive RFLANN model with PSO basd training for Forex prediction, National conference on Data analytics, machine learning and security (NCDAMLS 2018), 14-15 Feb., 2018, GGV Bilaspur. ISBN : 978-93-5291-457-9.

3. Diwakar Naidu and Babita Majhi, Evaporation estimation using recurrent artificial neural network – A case study for Chhattisgarh plains region of east central India, National conference on Data analytics, machine learning and security (NCDAMLS 2018), 14-15 Feb., 2018, GGV Bilaspur. ISBN : 978-93-5291-457-9.

4. P. Pujari and Babita Majhi, Recognition of Odia vowels using clonal selection algorithm based FLANN model, National conference on Data analytics, machine learning and security (NCDAMLS 2018), 14-15 Feb., 2018, GGV Bilaspur. ISBN : 978-93-5291-457-9.

5. Babita Majhi and Usha manasi Mahapatra, Distributed inverse modeling using Incremental and diffusion LMS, National conference on Data analytics, machine learning and security (NCDAMLS 2018), 14-15 Feb., 2018, GGV Bilaspur. ISBN : 978-93-5291-457-9.

6. P. Pujari and Babita Majhi, Recognition of Vowels using Curvature Features and Genetic algorithm based FLANN model, AICON 2017, Durg, April 2017.

7. P. Pujari and Babita Majhi, Odia Handwritten Vowel Recognition System by using Discrete Cosine Transform and C5.0 Decision Tree Classifier" , All India National Conference AICON'16., Durg, 22-23, pp.1-6, April, 2016. ISBN: 978-81-923288-4-3.

8. P. Pujari and Babita Majhi, "Recognition of Handwritten Odia Numerals by using Prune Neural Network Model", All Indian Conference on sustainable product development (AICON 2015), Durg, 24-25 April, 2015.

9. C. M. Anish and Babita Majhi, "Net Asset Value Prediction using RBF Model**",** All Indian Conference on sustainable product development (AICON 2015), Durg, 24-25 April, 2015.

10. C. M. Anish and Babita Majhi, "Predicting Net asset value of Mutual fund using RFLANN model", National seminar on Innovation and research in science, management and technology(IRSMT -2015), Bilaspur University, Bilaspur, 29-30 March, 2015. **(Received best paper award)**

11. P. Pujari and Babita Majhi, "Read coded genetic algorithm based neural network model for Odia numerals recognition", National seminar on Innovation and research in science, management and technology(IRSMT -2015), Bilaspur University, Bilaspur, 29-30 March, 2015.

12. R. Mahapatra, Babita Majhi and M. Rout, "Efficient classification of cancer patient using artificial neural network", 35th National Systems Conference, IIT Bhubaneswar, Dec. 9-11, 2011, pp.138-143.

13. R. Majhi, G. Panda and Babita Majhi, "Robust forecasting of foreign exchange rates using low complexity Wilcoxon norm based artificial neural network model", Proc. of National conference on Forecasting Financial Markets in India (FFMI 2008), IIT Kharagpur, 29-31 December, 2008.

14. G. Panda, D. Mohanty and Babita Majhi, "An Adaptive Genetic Algorithm for System Identification : a faster approach", Proc. of National Conference on Soft Computing Techniques for Engineering Applications (SCT-2006), NIT Rourkela, India, 24-26, March, 2006, pp. 329-336.

15. G. Panda, Babita Majhi, D. Mohanty, A. Choubey and S. Mishra, "Development of Novel Digital Channel Equalisers using Genetic Algorithms", Proc. of National Conference on Communication (NCC-2006), IIT Delhi, India, 27-29,January, 2006, pp.117-121.

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Awards and Recognition :
_____

- Recognized as Outstanding Reviewer by journal of Data and Knowledge Engineering, Elsevier in August 2018.

- Elected as Senior Member IEEE, USA in 2016.

- Received Best Research paper awards in 2015 and 2016.

- Editorial Board Member of Turkish Journal of Forecasting, Turkey.

- Received the BOYSCAST Fellowship of DST, GOI for postdoctoral work at University of Sheffield, UK during 2010-11.

- Received the Indian National Academy of Engineering Fellowship for doing research work for two months under the faculty mentoring scheme by INAE Fellows in 2010.

- Awarded the best Ph. D. thesis award by the IEEE International Conference on Nature and Biologically Inspired Computing (NaBIC 2009), Coimbatore held during 9-11 Dec. 2009.

- Worked as a Team member in the UK-India Education & Research Initiative (UKIERI) project "A biologically inspired approach to distribute sensor signal processing" sponsored by British Council, UK for a duration of three years (1st Jan., 2008-30th September, 2011)

- Reviewer of IEEE Transaction on Evolutionary Computation, IEEE Signal Processing Letter, IEEE Transaction on Neural networks, IEEE Transaction on Parallel and Distributed systems

- Reviewer of Journal of Memetic computing, Springer, International journal of Machine Learning and Cybernetics, Financial Innovation, Wireless network, Springer.

- Reviewer of Neurocomputing, Elsevier, Signal Processing, Elsevier, of Information Sciences, Data and Knowledge Engg. Elsevier.

- Reviewer of IET System biology, Electronics Letters

- Reviewer of IEEE International Conference on Biologically Inspired Computing and Applications (BICA 09), Bhubaneswar, 21-22 December 2009.

- Reviewer of International Conference on Emerging Trends in Soft Computing and ICT (SCICT 2011), Guru Ghasidas Vishwavidyalaya, Bilaspur, 16-17 March 2011.

- Reviewer of Swarm, Evolutionary and Memetic Computing Conference (SEMCCO 2012) and Fuzzy and Neural Computing Conference (FANCCO 2012), Bhubaneswar, December 20th to 22nd , 2012.

- Reviewer of Swarm, Evolutionary and Memetic Computing Conference (SEMCCO 2014) and Fuzzy and Neural Computing Conference (FANCCO 2014), Bhubaneswar, December 18th-20th, 2014.

- Reviewer of International Conference on Power System(ICPS 2016), 4-6 March 2016, IIT Delhi.

- Reviewer of International Conference on International Conf. on Signal processing and machine intelligence, 22-24, Dec. 2017, IIT Indore.

- Reviewer of International conference on emerging technologies in data mining and information security (IEMIS 2018), University of Engg. and Management, Kolkata, 23-25 Feb. 2018.

- Reviewer of 8th International Conference on Frontiers of Intelligent Computing: Theory and Applications (FICTA), NIT Surathkal, Karnataka, 4-5 Jan. 2020.

Technical Session Chaired

Chaired a technical session at National Conference on Advance Signal Processing, Andhra University, Visakhapatnam, 20-21 November 2009.

Chaired a technical session at International Conference on Advanced research applications in engineering and technology (Shaastrarth 2015), Bhilai, 29-30 June 2015.

Chaired technical session at IEEE conference on Electrical. Electronics and Optimization Techniques, Chennai, 3-5 March., 2016.

- Chaired technical session at IEEE International Conference on Signal processing, communication, power and embedded system (SCOPES), Centurion University, Paralakhemundi, 3-5 Oct. 2016.

- Chaired technical session at IEEE International conference on power, control, signals and instrumentation engineering (ICPCSI 2017), Saveetha Engg. College, Chennai during 21-22 September 2017.

Invited Talks Delivered

- Delivered an invited talk on "Artificial Neural Network and its applications" to B. Tech, M.Tech. students and faculty members of Dadi Institute of Engineering and Technology, Vishakhapatnam during 10-11 Dec. 2010.

- Delivered an invited talk on "On DNA Microarray data analysis", in National Workshop on Genomic Signal Processing at Jawaharlal Nehru Technical University Kakinada during 19-20 March 2011.

- Delivered an invited talk on "Soft computing applications to system identification and channel equalization" at AICTE sponsored National Workshop on Advanced Digital Signal Processing and its applications at Gyatri Vidya Parisad College of Engineering for Women, Vizag during 2-4 July 2011.

- Delivered an invited talk on "Data mining applications using Soft and evolutionary computing" at National conference on Recent trend in Data mining at Orissa Engg. College, Bhubaneswar during 3-4 Sept. 2011.

- Delivered an invited talk on "Application of Neural Network to Computational Finance" at National symposium on Where is Intelligent Computing at C. V. Raman College of Engg., Bhubaneswar during 9th Sept. 2011.

- Delivered an invited talk on "System Identification using Genetic Algorithm" at AICTE sponsored Faculty development program on Advanced Signal Processing Algorithm: It's Application in Engineering Research(ASPA)" at Centurian University, Bhubaneswar held during 17-30 June, 2013.

- Delivered an invited talk on "Literature review" in the Interaction Programme for Ph. D. students organized by UGC-Academic Staff College of Guru Ghasidas Vishwavidyalay, Central University, Bilaspur held during 21/03/2014 to 11/04/2014.

- Delivered an invited talk on "Financial forecasting", in the One Day workshop organized at Rungta Institute of Technology, Bhilai on 13th September 2014.

- Delivered an invited talk on "Soft computing applications to financial data prediction", in IEEE conference on Electrical. Electronics and Optimization Techniques, Chennai, 3-5 March., 2016.

- Delivered an invited talk at Workshop on Big Data analytics : Deriving causal inferences using statistical & computational techniques , NIT Surathkaul, 1-2 April 2016.

- Delivered an invited talk at International Conference on Signal processing, communication, power and embedded system (SCOPES), Centurion University, Paralakhemundi, 3-5 Oct. 2016.

- Delivered and invited talk at International Conference International Conference on recent trends in engineering, science and technology, St. Peter's Engg. College, Hyderabad, 25-27 Oct. 2016.

- Delivered and invited talk at IEEE International conference on power, control, signals and instrumentation engineering (ICPCSI 2017), Saveetha Engg. College, Chennai during 21-22 September 2017.

- Delivered an Invited talk at IEEE International Conference on Recent Innovations in Electrical, Electronics and Communication Engg.(ICRIEECE 2018), KIITS university, Bhubaneswar during 27-28th July 2018.

- Delivered an Expert Lecture on 'Machine Learning applications to Data Mining', Raghu Institute of Technology, Vishakhapatnam,29th Dec. 2018.

Workshop/Symposium/Conference conducted
- Convener of DST sponsored National Workshop on "Swarm Intelligence : Theory and Applications held during 20-21 March 2010.

- Organizing committee member of Symposium on "Where is intelligent computing?" held at C. V. Raman College of Engg, Bhubaneswar organized by International neural network society(INNS) Indian Regional Chapter during 9th September 2011.

- Convener of SERB(DST) and CGCOST sponsored National Conference on Data Analytics, Machine Learning and Security held during 15-16 Feb. 2018 at GGV, Bilaspur.

International Conference organized
- Member of the organizing committee of IEEE International Conference on Biologically Inspired Computing and Applications (BICA 09), Bhubaneswar, 21-22 December 2009.

- Member of the organizing committee of IEEE International Conference on Energy, Automation, and Signals (ICEAS-2011), Bhubaneswar held during 28-30, Dec. 2011.

Member of the organizing committee of IEEE International Conference SCOPES 2016, Paralakhemundi, 3-5Oct. 2016.

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Membership in professional bodies : Senior Member IEEE(90528410), USA
Member of Association of Agrometerologists, Gujrat, India
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Foreign Visits:
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Sl. No.	Country Visited	Year	Purpose
1	Kota Kinabalu, Malyasia	2006	Paper presentation
2	Singapore	2007	Paper presentation (CEC 2007)
3	University of Edinburgh, Scotland, UK	2008	Collaborative research work (UKIERI Project)

4	Trodheim, Norway	2009	Paper presentation(CEC 2009)
5	University of Edinburgh, Scotland, UK	2009	Collaborative research work (UKIERI Project)
6	University of Edinburgh, Scotland, UK	2010	Collaborative research work (UKIERI Project)
7	University of Sheffield, UK	2011-12	Postdoctoral Research work
8	University of Warwick, UK	2012	Research discussion

Conference/Workshop attended and presented papers:
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- Participated and presented in IEEE conference on Electrical. Electronics and Optimization Techniques, Chennai, 3-5 March., 2016.

- Participated and presented in AICON, 2015.

- Participated and presented in IEEE International conference on Power, Communication and Information Technology, Bhubaneswar,15-17 Oct. 2015.

- Participated and presented in International Conference on advanced research applications in engineering and technology (Shaastrarth 2015), Bhilai, 29-30 June 2015.

- Participated and presented in International Seminar on Non-Conventional Energy Sources for Sustainable Development of Rural Areas, 21-22, March 2015, Bhillai.

- Participated and presented in IEEE Conference on Electrical, electronics, signals, communication and optimization (EESCO), Vishakhapatnam, during 24-25,Jan 2015.

- Participated in the 5th National Symposium on Frontiers of Engineers sponsored by Indian National Academy of Engineering (INAE), New Delhi at Siksha O Anusadhan University, Bhubaneswar during 3-4th August 2010.

- Attended and presented paper at IEEE International Conference on Biologically Inspired Computing and Applications (BICA 2009), Bhubaneswar during 20-22 Dec. 2009.

FDP/Summer/Winter Courses attended

1.	21st Orientation Program	21Days(11/05/2015 to 6/6/2015)	UGC-HRDC, GGV, Bilaspur
2.	Refresher course on Advances in Engineering and Technology	5th June to 24th June 2017 (18days)	UGC-HRDC, GGV, Bilaspur
3.	Nature inspired computing	5days (2-6 April 2015)	Malviya National Institute of Technology Jaipur
4.	ARPIT refresher course on Neural Network and Deep Learning	01/11/2018 to 28/02/2019	ARPIT,UGC Prof. Laxmidhar Behera IIT Kanpur

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Co-curricular activities :
_____
G. G. Vishwavidyalaya, Central University, Bilaspur
- Computer Lab-in-charge during 1/1/2013-30/06/2013.
- Member of the Doctoral Research Committee during 1/1/2013 – till date
- Member of the Departmental purchase committee during 1/1/2013 – till date.
- Departmental Examination Coordinator during 1/07/2013-30/06/2014, 1/07/2018 -30/6/2019.
- Departmental Coordinator of Integrated UG/PG Course during 1/07/2013-30/6/2014.
- Faculty advisor for B.Sc. First semester students for the academic session 2013-14.
- Member of Admission Committee during July 2014-15, July 2015-16, July 2016-17, July 2017-18 and 2018-19.
- Faculty-in-charge students' attendance for July 2014-June 2015 session and July 2015 –June 2016..
- Lab-in-charge of Digital electronics for 2014-15 and 2015-16 sessions.

- Question setter of VET 2015(MCA) and VERT 2015(Ph. D.)
- Member Skill development cell, GGV from 2016-2018.
- Question setter and examiner for Bilaspur University, Bilaspur
- Question setter for Sundarlal open university, Bilaspur
- Faculty-in-charge IUMS, 2016-17
- Member of technical verification committee(PC), 2016.
- NIRF data verification coordinator, 2016.
- Member of Flying-sqaud July –Dec.2016.
- Faculty in charge Training and Placement(Departmental) July 2017-June 2018.
- Faculty-in-charge Exam(Unit Tests) from July 2018 to June 2019.
- Member of Smart Class room, UTD
- Member of UGC-Care list of GGV
- Member of data validation for NIRF 2019.
- Question setter for Sagar University, MP.
- Faculty-in-charge Time Table July 2019 –June 2020.

Subjects Taught (UG/PG/Pre Ph. D.):

- Programming methodologies using C
- Data Structure using C
- Computer Programming and Numerical Analysis
- Probability and Statistics
- Introduction to Artificial Neural Network
- Data Mining and Data Warehousing
- Soft Computing
- Digital Signal Processing
- Management information system
- E-Commerce
- Nature Inspired Computing (Pre PhD. Course)
- Fundamentals of Research in Science(Pre PhD Course)

List of Referees :

(1) Prof. Ganapati Panda, FNAE, FNASc., SMIEE
Professional Fellow,
Ex-Professor, School of Electrical Sciences and Ex-Deputy Director
Indian Institute of Technology Bhubaneswar
Samantapuri, Bhubaneswar-751013, Odisha
Phone : 0674 - 230106, Cell : 9437048906
Email : ganapati.panda@gmail.com / gpanda@iitbbs.ac.in

(2) Prof. Banshidhar Majhi
Director, IIIT Kanchipuran and
Professor, Dept.of Computer Science and Engineering
National Institute of Technology Rourkela, Odisha
Phone : 0661-2462355 Cell : 9437221124
Email : bmajhi@nitrkl.ac.in / bm_nitrkl@yahoo.com

(3) Prof. Siba Kumar Udgata
School of Computer Science and Information
University of Hyderabad, Gaccibowli, Hyderabad – 500046
Mob. No. : 9705395136

Email : udgatacs@uohyd.ernet.in , skudgata@gmail.com

Babita Majhi