Dr. DEBI PRASAD DAS

Scientist
CSIR-Institute of Minerals and Materials Technology,
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Education:

- **Ph.D.** (Electronics and Instrumentation Engineering),
  National Institute of Technology, Rourkela., India 2004
  Thesis title: Active Noise Control Using DSP and Soft Computing Techniques
- **M.Sc. (Electronics),** Sambalpur University, Orissa. First Class (Rank II) 1998
- **B.Sc. (Physics Hons**.), Utkal University. First Class with Distinction, 1996
- **+2 Science**, CHSE Orissa, First Class, 1993
- **HSC**, BSE, Orissa, First Class,1991

Experience:

1. **Scientist-C,** *CSIR-IMMT, Bhubaneswar from 5th May 2008 till now*
2. **Assistant Professor,** AcSIR, India from April 2014 till now
3. **Guest Faculty,** School of Electrical Sciences, IIT Bhubaneswar Spring Semester 2012
4. **BOYSCAST Fellow (Postdoctoral work),** *School of Mechanical Engineering, The University of Adelaide, Australia from 6th September 2010 to 2nd September 2011*
5. **Scientist-B,** *CSIR-Central Electronics Engineering Research Institute, Pilani, (CSIR) from 15th April 2005 to 2nd May 2008*
6. **Postdoctoral Research Associate,** *Electrical Engineering Dept., Indian Institute of Technology, Kharagpur, INDIA (from October 2004 to April 2005)*
7. **Assistant Professor,** *Dept. of Electronics, Silicon Institute of Technology, Bhubaneswar. (from 1st August 2003 to 13th October 2004)*

Awards and Honors:

1. **Certificate of Merit**: in Leadership Development Program (09-05), Organized by CSIR-New Delhi, at HRDC, Ghaziabad
2. **BOYSCAST FELLOWSHIP** 2009-2010 by Department of Science and Technology, Govt. of India
3. **CSIR Young Scientist Award** -2009 by CSIR, Govt. of India
4. **Orissa Young Scientist Award**-2004
5. Selected to be listed in **Who's Who in Science and Engineering 2011-2012**
6. **First prize** and cash award of Rs. 10000/- from BITS Pilani for best model in the convention of Entrepreneurship through innovation in academia
7. ***Narayan Mishra IT Award*** in Sixth International Conference on Information Technology (CIT) 2003 for best paper submitted from Orissa in the conference
8. ***Second Position*** in order of merit in Sambalpur University in M.Sc. (Electronics)
9. ***National Scholarship*** in Class X (1991-96) Index no. -210/91

Professional Activities:

1. Regular reviewer of *IEEE, IEE(IET), Elsevier, EURASIP, Springer Journals*
2. Member IEEE, ISCA, IPA, LM OBA
3. Member of Senate, AcSIR (2010-2012)
4. Member of management council, CSIR-IMMT (2011-2013)

Teaching Experience:

1. **Courses taught:** Basic Electronics, Digital Electronics, Digital Signal Processing, Microprocessor, Computer System Architecture, Soft Computing, VLSI Design and Instrumentation.
2. **Organizations where taught:**
   NIT Rourkela, Silicon Institute of Technology (Asst. Prof.), IIT Kharagpur (Instrumentation lab), CEERI Pilani (Mechatronics Course), IMMT (Course Coordinator of PCI Course of PGRPE-09 batch), visiting faculty at a number of private Engineering Colleges, Guest Faculty at IIT, Bhubaneswar.

Thesis Guidance

PhD: Two-Submitted, Four-Continuing
(KIIT University-One, SOA University-Two, NIT Rourkela-One, AcSIR-Two)
M.Tech: 8 Completed

Research and Developmental Interest:

1. Research: Active Noise Control, Adaptive Filters, Transform Domain Signal Processing, Neural Network, Fuzzy Logic, Genetic Algorithm, Intelligent Instrumentation, Thermal Plasma Diagnostics using Spectroscopy.
2. Development: Electronics system, PC based instrumentation, Microcontroller based system, labView and dSpace based rapid prototyping, Matlab based simulation and hardware interfacing.

Recent Training:

1. Digital Signal Processor and Applications, short term training jointly organized by ADSP and IIT Madras (12 days) 7th June 2004 to 19th June 2004
2. VLSI Subsystem Design, IEP training by IC Design Group, CEERI, PILANI, India, sponsored by MIT, Govt. of INDIA, during 11th Dec. 2000 to 22 Dec. 2000
3. DST-SERC School on “Plasma Diagnostics” at Institute for Plasma Research, Gandhinagar, during 20th July to 31st July 2009
4. Leadership Development program (LDP-0905) of CSIR, HRDC Ghaziabad, India
5. DST-SERC School on Tokamaks and Magnetized Plasma Fusion 25th Feb to 15th March, 2013, IPR, Gandhinagar

Patents:

1. S. Raghunath, P. Dhar. J. L. Raheja, P. C. Panchariya, **D. P. Das**, V. Mishra, G. R. Naik, V. K. Singh, M. R. Saharan “A System useful for Localization of Disaster and Identification of Trapped Miners in Underground Mines,” Indian patent applied. **0369DEL2008. dated 12th Feb., 2008**

2. SK Behera, **D.P. Das**, S. Bhuyan, S. rath, S.K. Mishra, S.K. Biswal, B.K. Mishra, “A method and Apparatus for controlling the speed of pelletization disc using image processing based pellet-size-distribution trend to reduce recycling load” **3830DEL2013 dated 31/12/2013**.

Electronics Tool Knowledge:

- Microcontroller system development tools
- Matlab, labView
- DSpace hardware and its Matlab interface for DSP prototyping
- Hardware design using ICs and components
- Embedded system, PC interfacing: Parallel, serial port programming, data acquisition system using Visual basic
- Wireless system development using Zigbee OEM and GSM modems

Personal Details:

Date of Birth: 14 May 1977
Sex: Male
Marital Status: Married
Nationality: Indian

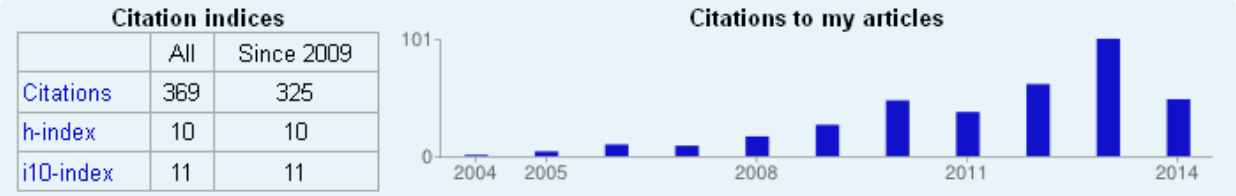
Permanent Address:
Dr. Debi Prasad Das
S/O: Dr. Harihar Das
AT/P.O.: Chhanagiri
Via: Jankia, Distt.: Khurda
State: Orissa, PIN: 752020, INDIA

List of Publication:

Scholar Google Citation

http://scholar.google.com/citations?user=iGszGD8AAAAJ&hl=en

(4th Aug 2014)



Journals:

1. S. K. Behera, **D. P. Das**, B. Subudhi, "Functional link artificial neural network applied to active noise control of a mixture of tonal and chaotic noise", **Applied Soft Computing** (Elsevier), vol. 23, October 2014, Pages 51–60

2. P. Pattanaik, S. Das, S. Khuntia, S. K. Kamilla, **D.P. Das**, and D. K. Mishra, "Performance Evaluation of ZnO Coated Film on Al and Ag Electrodes for Potassium Sensing Applications"**, Advanced Sci. Lett. (American Scientific Publishers)** 20, 597-600 (2014).

3. P. Pattanaik, S. K. Kamilla, **D. P. Das**, D. K. Mishra, "Experimental and simulated study of electrical behaviour of ZnO film deposited on Al substrate for device applications", **Journal of Materials Science: Materials in Electronics** (Springer), July 2014, Volume 25, Issue 7, pp 3062-3068

4. P. Pattanaik, S.K. Kamilla, J. Mohapatra, B.K. Jena, **D.P. Das**, D.K. Mishra, "Deposition of ZnO-Valinomycin film on Al substrate for the detection of K+ in KOH solution", **Nanoscience and Nanotechnology Letters (American Scientific Publishers),** Volume 6, Number 3, March 2014, pp. 216-220.

5. S.B. Behera, **D.P. Das**, N.K. Rout, "Nonlinear feedback active noise control for broadband chaotic noise" **Applied Soft Computing** (Elsevier), 15, February 2014, pp. 80–87

6. **D.P. Das**, D.J. Moreau, B.S. Cazzolato, “A computationally efficient frequency-domain filtered-X LMS algorithm for virtual microphone,” ***Mechanical Systems and Signal Processing*** (Elsevier), 37, May-June, 2013, pp. 440-454.

7. **D.P. Das**, D.J.. Moreau, B.S. Cazzolato, “Nonlinear active noise control for headrest using virtual microphone control,” ***Control Engineering Practice*** (Elsevier), volume 21, Issue 4, April 2013, pp. 544–555.

8. **D.P. Das,** DJ Moreau, B.S. Cazzolato, “A nonlinear active noise control algorithm for virtual microphones controlling chaotic noise,” ***Journal of the Acoustical Society of America***, 132 (2), August 2012 pp. 779–788.

9. **D.P. Das**, D.J. Moreau, B.S. Cazzolato, "Adjoint nonlinear active noise control algorithm for virtual microphone," ***Mechanical Systems and Signal Processing*** (Elsevier) Volume 27, Feb. 2012, pp. 743–754.

10. N. K. Rout, **D. P. Das**, G. Panda, “Particle swarm optimization based active noise control algorithm without secondary path identification,” ***IEEE Transactions on Instrumentation and Measurement.*** Volume: 61, Issue: 2, February 2012, pp. 554 – 563**.**

11. S. P. Das, **D. P. Das**, S. K. Behera, B. K. Mishra, “Interpretation of mill vibration signal via wireless sensing,” ***Minerals Engineering*** (Elsevier), Volume 24, Issues 3-4, February-March 2011, pp 245-251.

12. P.V. Kumar, K. M. M. Prabhu and **D. P. Das**, “Block filtered–s LMS algorithm for active control of nonlinear noise systems,” ***IET Signal Processing*****,** Volume 4, Issue 2, April 2010, pp. 168–180.

13. S. K. Mishra, G. Panda, **D. P. Das**, “A novel method of extending the linearity range of LVDT using artificial neural network,” ***IEEE Transactions on Instrumentation and Measurement***, Volume 59 ,Issue 4, April 2010, pp. 947–953.

14. E. P. Reddy, **D. P. Das**, K. M. M. Prabhu, “Fast exact multichannel FSLMS algorithm for active noise control” ***Signal Processing*** (Elsevier), Volume 89, Issue 5, May 2009, pp. 952-956.

15. E. P. Reddy, **D. P. Das**, K. M. M. Prabhu, "Fast adaptive algorithms for active control of nonlinear noise processes " ***IEEE Transaction on Signal processing*** 2008, Volume 56, Issue 9, September 2008 pp. 4530–4536.

16. **D. P. Das,** G. Panda and S. M. Kuo, “New block filtered-x lms algorithms for active noise control systems,” ***IET Signal Processing***,1, (2), June 2007, pp. 73-81, (Formorly IEE proceedings on vision, image and signal processing).

17. **D. P. Das**, S. R. Mohapatra, A. Routray and T. K. Basu, “Filtered-s LMS algorithm for multichannel active noise control of nonlinear noise processes” ***IEEE Trans. on Speech and Audio Processing,*** Volume 14, no. 5, September 2006, pp. 1875-1880.

18. **D. P. Das**, G. Panda, “Active mitigation of nonlinear noise processes using a novel filtered-s lms algorithm,” ***IEEE Trans. on Speech and Audio Processing***, Volume 12, Issue: 3, May 2004, pp.313 – 322.

19. G. Panda, **D. P. Das** "Higher order statistics for estimation of the degree of noncausality in active noise control system", ***IETE Journal of Research***, Volume 49, No 4, July-August, 2003, pp. 251-257. .

20. G. Panda, **D. P. Das**, "Adaptive filter based active noise controller under acoustic feedback", ***IETE Journal of Research***, Volume 49, No 6, November-December, 2003, pp. 439-444.

Conferences:

1. Behera, S.B., **Das, D.P**., Rout, N.K., Behera, S.K. "Block frequency domain implementation of feedback active noise control algorithm" International Conference on Advanced Electronic Systems (ICAES), 2013 DOI: 10.1109/ICAES. 2013.6659360, 2013, Page(s): 54 – 57
2. Satapathy, A., **Das, D.P.**, "A system for remote operation of devices: Helpful for elderly and disabled people" International Conference on Advanced Electronic Systems (ICAES), 2013, DOI: 10.1109/ICAES.2013.6659429, 2013, Page(s): 350 – 353.
3. **Das, D.P.**, Moreau, D.J., Cazzolato, B.S., "Multichannel FSLMS algorithm based active headrest" International Conference on Advanced Electronic Systems (ICAES), 2013, DOI: 10.1109/ICAES.2013.6659361, 2013 , Page(s): 58 – 63.
4. **D. P. Das**, D. J. Moreau and B. S. Cazzolato, Active Control of Transformer Noise by Using Power Line Signal as Reference, in proc. IEEE Conference ICIEA2013, Melbourne, pp. 953-956.
5. S. Das, **D. P. Das**, S. K. Behera, Enhancing the linearity of LVDT by two-stage functional link artificial neural network with high accuracy and precision, in proc. IEEE Conference ICIEA2013, Melbourne 2013, pp. 1358-1363.
6. **D. P. Das**, D.J. Moreau, B.S Cazzolato, "Performance evaluation of an active headrest using the remote microphone technique" ACOUSTICS 2011 Gold Coast, Australia, 2-4 Nov. 2011, Paper Number 69.
7. P.C. Panchariya, A.H. Kiranmayee, **D. P. Das**, S. Kumar, S. Raghunath, P. Bhanu Prasad, "Hybrid Communication System for Localization of Disaster and Tracking of Miners in Underground Coal Mines" International Conference on Trends in Industrial Measurements and Automation TIMA–2011 January 6-8, 2011., TS7-3, pp. 361-363.
8. **D. P. Das**, D. J. Moreau, B. Cazzolato (2010), "Nonlinear Active Noise Control with Virtual Sensing Technique" in proc. Sixth International Conference on Intelligent Sensors, Sensor Networks and Information Processing (ISSNIP 2010), Brisbane, Australia, Dec 2010, pp. 321-326.
9. P.V. Kumar, K. M. M. Prabhu, **D. P. Das** "Processor-efficient FFT Implementation Scheme for Active Noise Control Applications," in International conference, SITIS 2010, Malaysia, Dec 2010, pp. 134-140.
10. N. K. Rout, **D. P. Das** and G. Panda, "Performance Evaluation of Particle Swarm Optimization Based Active Noise Control Algorithm," in Proceedings International

Conference on Swarm, Evolutionary and Memetic Computing SEMCCO 2010, India, DEC 2010, vol. 6466/2010, pp. 531-536 (Springer LNCS).

11. S.P. Das, **D.P. Das**, S.K. Behera and B.K. Mishra, "Interpretation of vibration signal of tumbling mills, Comminution '10, Cape Town, South Africa, April 13-16, 2010.N. Kunchakoori.
12. A. Routray, **D.P. Das**, "An Energy Function Based Fuzzy Variable Step Size FxLMS Algorithm for Active Noise Control" *IEEE Region 10 and the Third international Conference on Industrial and Information Systems, 2008. ICIIS 2008*. 8-10 Dec. 2008 Page(s):1 – 7.
13. A. Kale, S.K. Kaul, **D. P. Das**, S. Raghunath, "A smart system for remote monitoring of patients and SMS messaging upon critical condition", *Proc. Third International Conference on Wireless Communication and Sensor Networks, 2007. WCSN '07*.13-15 Dec. 2007 Page(s):141 – 144.
14. **D. P. Das**, A. Sagar, S. Raghunath, "Development of Hartley domain filtered-s LMS algorithm for active noise control system," *proc. International conf. ACTIVE-2006*, Australia
15. **D. P. Das**, G. Panda, and D. K. Nayak, "Development of Frequency Domain Block Filtered-s LMS (FBFSLMS) Algorithm for Active Noise Control System" *proc. IEEE Conference ICASSP-2006*, France, pp. V-289-V292.
16. **D.P. Das**, P. Dhayani, S. Raghunath, "Digital Channel Equalization For RS485 Data Communication" SCTII-2007, Rourkela, India.
17. **D. P. Das**, R. Saini, "Neural Network based Handwritten Numeral Identification" SCT 2006, Rourkela, India.
18. S. K. Mishra, G. Panda, **D. P. Das**, S. Pattnaik, M. R. Meher, "A novel method of designing LVDT using artificial neural network," *proc. IEEE conf. ICISIP 2005*, pp. 223-227.
19. **D. P. Das**, G. Panda, S. Sabat, "Development of FLANN based multireference controller for active control of nonlinear noise processes," *proc. ICONIP 2004 Springer Verilag LNCS*. pp.1198-1203.
20. G. Panda and **D. P. Das** "Functional link artificial neural network for active control of nonlinear noise processes" *proc. International Workshop on Acoustic Echo and Noise Control* (*IWAENC-2003*), Kyoto, Japan, Sept 8-11, 2003, pp. 163-166.
21. **D. P. Das**, G. Panda, and S. Meher, "A Fast Block Implementation of Active Noise Control System based on Rectangular Transform," *proc. International Conference CIT-2003*. India, Dec. 22-25, 2003 pp. 351-354.
22. **D. P. Das** and G. Panda, "Performance improvement of online feedback cancellation in active noise control system under narrowband noise case", proceedings NCC 2006, Delhi, India.
23. **D. P. Das**, S. R. Mohapatra, A. Routray and T. K. Basu, "A Novel Filtered-s LMS Algorithm for Multichannel Active Noise Control of Nonlinear Noise Processes" proceedings IPROM 05.
24. **D. P. Das,** G. Panda and P. Nayak, "Development of Filtered-s RLS Algorithm for Active Control of Nonlinear Noise Processes," International conference on signal processing, Turkey., Dec. 2004.
25. G. Panda, **D. P. Das**, B. Majhi, S. K. Meher, and S. Meher, "Intelligent text recovery using an efficiently trained radial basis function neural network," International Conference on Intelligent Signal Processing and Robotics, India Feb 20-23, 2004.

26. G. Panda, **D. P. Das**, S. K. Mishra, S. K. Panda, S. Meher and K. K. Mahapatra, " Development of an efficient intelligent pressure sensor using RBF based ANN technique. International Conference on Intelligent Signal Processing and Robotics, India Feb 20-23, 2004.

27. P. K. Dash, **D. P. Das**, S. Dash ,"Electricity distribution data mining using soft computing and modified wavelet transform," International Conference CIT-2003. India, Dec. 22-25, 2003 pp. 420-423.

28. **D. P Das,** G. Panda, P. Nayak, M. Das, "Research issues in active noise control," proceedings National conference on Recent advances in power signal processing and control (APSC 2004) INDIA, pp.93-98.

29. G. Panda, **D. P. Das**, and S. K. Panda, " Adaptive control of Magnetic noise pollution due to electric machine," Technical Annual 44th session, The Institution of Engineers (INDIA), OSC, Bhubaneswar-19th Jan 2003.

30. G. Panda, **D. P. Das**, S. Sankhua, B. Pradhan, P.C. Mishra, " A Novel Data Farming Linked Artificial Neural Network Structure for Forecasting of Water Quality Indices," Proceedings IEEE ACE 2002, Kolkata, India.

31. G. Panda, Vishal R. Joshi, **D.P.Das** "A Novel Adaptive Sigmoidal Neural Network Model For Linear And Nonlinear Applications", Proceedings of AES 2002, India, February 2002, pp. 15-19.

32. G. Panda, **D. P. Das** " Issues And Implementation Of Active Acoustic Noise Canceller", pp C-49-C-55, Proceedings XXXVI Annual Convention, CSI Kolkata, India, Nov-2001.

33. G. Panda, **D. P. Das** "Field Programmable Gate Array Based Design Of Algorithm-Agile Encryption In ATM Network" pp C-20 - C-24, Proceedings XXXVI Annual Convention, CSI Kolkata, India, Nov-2001.