



Dr. Sakuntala Mahapatra, Ph.D.

Professor and HOD

Area: Soft Computing, Image Processing, Microprocessors & Microcontrollers VLSI, MEMS & Nanotechnology.

Affiliation: Department of Electronics and Telecommunication Engineering, Trident Academy of Technology

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Year of Joining: July 2008

Education

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| Ph.D. | Electronics | Berhampur University |
| PGDCA | Computer Applications | Berhampur University |
| M.Sc. | Electronics | Berhampur University |

Other details

- ✚ Guide for 3 Ph.D students (1 candidate from Berhampur University, 2 candidate from BPUT)
- ✚ Guide for 2 M. Tech students and guiding 2 M.Tech. students (from BPUT)
- ✚ Guide for 40 B.Tech. students
- ✚ Received Best Teacher Award from Indian Society for Technical Education (ISTE), Odisha Section for the year 2014.
- ✚ Member of the Editorial Board for International Journal of Smart Sensors and Ad Hoc Networks (IJSSAN)

Academic Experience

- ✚ **Awarded** Ph.D in Electronics with specialization Signal Processing, Soft Computing, DSP Processor based embedded systems in 2004 from Berhampur University. Title of the Ph.D. work is Neuro-fuzzy models for tracking and adaptive filtering of Oscillatory Signals
- ✚ **Asst. Professor** (Permanent post) in the C.V. Raman College of Engineering, Bhubaneswar (BPUT), Affiliated to AICTE, New Delhi for a period of 4 years (from 2004-2008).
- ✚ **Professor and HOD** (Permanent post) in Trident Academy of Technology Bhubaneswar (BPUT), Affiliated to AICTE, New Delhi for a period of 7 years 8 months (2008 till date)

Research Focus

- ✚ Neural Networks, Fuzzy Logic, Evolutionary computations, Particle Swarm Optimization, Image Processing using soft computing, DSP based systems, VLSI Design, Microprocessors & Microcontrollers, MEMS & Nanotechnology.

Publications

✚ INTERNATIONAL PUBLICATIONS

1. **Sakuntala Mahapatra**, S.L.Sabat, S.K.Nayak, "An intelligent instrument for tracking and adaptive filtering of oscillatory signals using Hebbian learning rules", Measurement, Vol.26, pp.221-227,1999, ISSN No. 0263-2241.
www.sciencedirect.com/science/article/pii/S0263224199000408
2. **Sakuntala Mahapatra**, S.K.Nayak et al., "Neuro-fuzzy model for adaptive filtering of oscillatory signals", Measurement, Vol. 30 No.4 Dec., pp.231-239, 2001, ISSN No. 0263-2241.
www.sciencedirect.com/science/article/pii/S0263224101000070
3. S.L. Sabat, S.K.Nayak, **Sakuntala Mahapatra**, "WNN based intelligent energy meter", Measurement (Elsevier), Vol. 41, pp.357-363,2008, ISSN No. 0263-2241.
www.sciencedirect.com/science/article/pii/S0263224107000887
4. **Sakuntala Mahapatra**, Subhendu K. Behera, R. N. Satpathy et al, "Adaptive Filtering of Speech Signal Using Functional Link Artificial Neural Network", Journal of Neural Computing Systems, Vol. 2, No. 2, pp. 185-197, December 2009, ISSN No. 0974-4401.
5. **Sakuntala Mahapatra**, R. N. Satpathy, "Overview of Data Hiding of Gray Scale Images by using Steganographic algorithm in image processing", International Journal of Image Processing and Applications, Vol. 1, No.2, July-December 2010, ISSN No. 0975-8178.
6. Chandrakant Mallick, **Sakuntala Mahapatra**, Rajendra Kumar Das, Satyabrata Das "A seamless Vertical handsoff Algorithm in 4G Network", ACSAT-12", IEEE Xplore, Pg. No. 92-99, Nov. 2012, DOI 10.1109.
<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6516333>
7. **Sakuntala Mahapatra**, Raju Daniel, Deep Narayan Dey, Santanu Kumar Nayak, "Induction Motor Control Using PSO-ANFIS", Procedia Computer Science (Elsevier), Vol. 48, pp. 754-769, 2015.
<http://www.sciencedirect.com/science/article/pii/S1877050915007218>
8. **Sakuntala Mahapatra**, Sumant Kumar Mohapatra, Biswa Ranjan Swain, Sushil Kumar Mahapatra, "Simulation Based Algorithm for Tracking Multi-Moving Object using Gaussian Filtering with Lucas-Kanade Approach", Procedia Computer Science (Elsevier), Vol. 48, pp. 790-795, 2015.
<http://www.sciencedirect.com/science/article/pii/S1877050915007255>

9. **Sakuntala Mahapatra** ,Sumant Kumar Mohapatra, Sushil Kumar Mahapatra, Biswa Ranjan Swain, " Simulation Based Algorithm for tracking Fish Population in Unconstrained Underwater", IEEE ICMOCE 2015, IIT Bhubaneswar, ISBN:978-1-4673-6981-7/15, Dec 2015.
10. Sumant Kumar Mohapatra, Sushil Kumar Mahapatra, Sakuntala Mahapatra, Shuvendra Tripathy, " Muscle Degradation Detection –A Practical Medical Application Analysis" , IEEE ICMOCE 2015, IIT Bhubaneswar, ISBN:978-1-4673-6981-7/15, Dec 2015.
11. **Sakuntala Mahapatra**, Debasis Mohanta, Prasant Mohanty, Santanu kumar Nayak, Pranab kumar Behari, "A Neuro-fuzzy based model for analysis of an ECG signal using Wavelet Packet Tree", Procedia Computer Science (Elsevier), ICCS-2016. (Elsevier).
12. **Sakuntala Mahapatra**, Sumant Kumar Mohapatra, Sushil Kumar Mahapatra, Shuvendra Tripathy, "A Proposed Multithreading Fuzzy C-Mean Algorithm for Detecting Underwater Fishes " , IEEE CINE 2016, KIIT Bhubaneswar, Jan 2016
13. Sakuntala Mahapatra, Sumant Kumar Mohapatra, Sushil Kumar Mahapatra, Rabin-dra Bhojray, "Multimoving Human Sperm Tracking Using CGM- CS Approach And Comparative Analysis For Proper Diagnosis In Infertility", IEEE CINE 2016, KIIT Bhubaneswar, Jan 2016.
14. Sakuntala Mahapatra, Sumant Kumar Mohapatra, Sushil Kumar Mahapatra, Monalisa Rout, "Simulation Based Advanced MTP Algorithm for Detecting and Tracking Fast Moving Air craft", IEEE ICBIM, NIT Durgapur, January 2016.

CONFERENCE PUBLICATIONS

International:

1. Rakesh Ku Pati, S.K Mohammed Ali, **SakuntalaMahapatra**, M.Panigrahi " Surface Acoustic Wave Sensor Using Piezoelectric Materials" COMSOL International Conference ,17-18 October 2013, Bangalore, ISBN NO. 978-0-9910001-5-9.
http://www.comsol.co.in/conference2013/india/abstract/id/15793/saw_abstract.pdf
2. Sk.Mohammed Ali,Arpita Das,Amrita Nandy,**Sakuntala Mahapatra**,Minu Samantaray " Tunable MEMS capacitor for millimeter & micrometer wave generation" COMSOL International Conference , 17-18 October 2013, Bangalore, ISBN NO. 978-0-9910001-5-9.
http://www.comsol.co.in/conference2013/india/abstract/id/16329/ali_abstract.pdf
3. Arpana Kumari, Mohammed Ali, **Sakuntala Mahapatra**, Ankita Singh, Lipsa Kanhara, Millee Panigrahi " Cancer Detection using Coagulation Therapy with Coaxial Antenna" Accepted at COMSOL International Conference , 13-14 November 2014, Bangalore, ISBN NO. 978-0-9910001-5-9.
http://www.comsol.co.in/conference2014/india/file/id/19341/file/26211_ali_paper.pdf

National:

1. S. K. Nayak, **Sakuntala Mahapatra** and S.L.Sabat, "Neuro-fuzzy model for tracking and adaptive filtering of oscillatory signals", Proc. Of NSIMC-2000 at Chennai, Conference proceeding, pp.221-230, 25-26 February 2000.
2. S. K. Nayak, S. Panda, **Sakuntala Mahapatra** et al, "Adaptive nonlinear Normalized least square based Echo-canceller " Published on proceeding of National conference on advances in Engineering studies (NCAES-2010) at HIT BBSR , pp. 48-51, 28-30 January 2010.
3. **Sakuntala Mahapatra**, S. K. Behera et al, "Image compression using wavelet transform techniques" published on proceeding of National seminar on recent advances in science & Technology at ABIT, Cuttack, pp. 7-16, 12-13 February 2010.
4. **Sakuntala Mahapatra**, S. K. Behera et al , "Design consideration for multilayered mobile communication systems", proceedings of AICTE Sponsored National Seminar on Wireless Communication & Mobile Computing at ABIT, Cuttack, pp. 10-12, 8-9 October 2010.
5. S. K. Behera, **Sakuntala Mahapatra** et al, " Neural Network based Intelligent Routing in Random Multistage interconnection on Networks in Telecommunication", Proceedings of National conference on Recent Trends in Communication Technology at KIST, BBSR, pp. 33-36, 22-23 January 2011, ISBN NO. 978-81-920559-1-6.
6. Tanmaya Kumar Das, **Sakuntala Mahapatra**, Satyabrata Das, "Humidity sensing behaviors of Graphene Oxide Bridge", Proceedings of National Seminar on MEMS & Nanotechnology(NSOMN-2012), pp. 36-41, 2012, ISBN NO. 978-81-921034-3-8, 4-5 October 2012.
7. **Sakuntala Mahapatra**, Rina Mahakud, "Technical & commercial application of MEMS sensors", Proceedings of National Seminar on MEMS & Nanotechnology(NSOMN-2012), pp. 45-50, 2012, ISBN NO. 978-81-921034-3-8, 4-5 October 2012.
8. **Sakuntala Mahapatra**, Minu Samantaray, "NEMS-Application & challenges" Proceedings of National Seminar on MEMS & Nanotechnology(NSOMN-2012), pp. 55-63, 2012, ISBN NO. 978-81-921034-3-8, 4-5 October 2012.
9. **Sakuntala Mahapatra**, Millee Panigrahi, "Effect of Generation & Recombination Noise in GaN/AlGaIn based devices" Proceedings of National Seminar on MEMS & Nanotechnology (NSOMN-2012), pp. 64-72, 2012, ISBN NO. 978-81-921034-3-8, 4-5 October 2012.
10. Sriguru Jaydev Krushnadas Kar , Bijaya kumar Sahoo ,**Sakuntala Mahapatra**, Tanmaya Kumar Das "Detection Of Antigen By Cantilever Sensor", Paper No. 16, Proceedings of 6th ISSS National Conference on MEMS, Smart materials, Structures and Systems, 6-7 September 2013, Pune, Supported by DRDO, BRNS.

http://www.academia.edu/5116421/DETECTION_OF_ANTIGEN_BY_CANTILEVER_SENSOR

11. Shantanu Kumar Pradhan , Abhisek Mishra, **Sakuntala Mahapatra**, Tanmay Kumar Das “Thermoelectrical Structural Analysis By Using Microresistor Beam” Proc. of 6th ISSS National Conference on MEMS, Smart materials, Structures and Systems, 6-7 September 2013, Pune, Supported by DRDO, BRNS
http://www.isssonline.in/pdf/Programme/ISSS_NC6.pdf
12. Sk.Mohammed Ali, **Sakuntala Mahapatra**, “Electrical characteristics of Graphene and Carbon Nanotube” AICTE Sponsored National Seminar on Nanosensors & Applications, pp.19-22 ,ISBN No.978-93-83060-14-6, 4-5 October, NSNA-2013.
www.irnetexplore.ac.in/.../NSNA_Bhubaneswar_4-5October13.html
13. **Sakuntala Mahapatra**, Raju Daniel, Deep Narayan Dey, “Control of Plasma Column in a Fusion Reactor Correlated to DC Motor Control Using PSO-ANFIS”,NF-179, 28th National Symposium on Plasma Science & Technology,Plasma 2013,December 3-6 ,2013, KIIT University, Bhubaneswar.
14. **Sakuntala Mahapatra**, Sk. Mohammed Ali, Arpana Kumari Jha, Avipsa S. Panda “A Novel Design Using Coagulation Therapy with Coaxial Antenna For The Detection Of Hepatic Cancer”, ISSS National Conference on MEMS Smart Materials, Structures and Systems September, 2015, Kochi, India

Book Chapters

NIL

Professional / Academic Affiliation

✚ Serving as an active member of:

- ISTE (Life Member (LM 70937))
- PSSI Life Member
- ISSS Life Member

✚ Acted as:

- Editorial Board Member for International Journal of Smart Sensors and Ad Hoc Networks (IJSSAN)
- Convener of FDP on MATLAB sponsored by BPUT, Odisha (16-18th March 2012)
- Convener of National seminar on Nanosensors & Applications sponsored by AICTE, New Delhi (4-5th October 2013)

- Convener of the workshop “A Graphical Programming Language LabVIEW and its Real time Applications in Engineering” sponsored by AICTE, New Delhi (15-31st December 2013)














 Worked as PI in:

- Project entitled “Prediction and Control of Plasma Column in a Fusion Reactor Using Hybrid PSO-ANFIS” funded by Board of Research in Fusion Science & Technology(BRFST), Institute of Plasma Research, Govt. of India, Ahmedabad. (2012-2014)
- Five (5) IEDC projects funded by IEDC, DST, Govt. of India. (May 2013 onwards)
- Innovation Promotion Scheme (IPS) sponsored by AICTE, New Delhi (2015-16)

 Working as co-ordinator for:

- The National MEMS Design Centre set up in the Department in collaboration with Indian Institute of Science, Bangalore, under the NPMAS program

Seminars/Conferences/Workshops Attended

-  Participated in a National Symposium on “Intelligent Measurement and Control” (NSIMC-2000) at Chennai during 25-26 February 2000.
-  Participated in a National seminar on “VLSI Technology and Embedded Design” (VED) at C.V. Raman College of Engineering during 17-18 February 2007.
-  Participated in BOSS, organized by CDAC at Trident Academy of Technology, Bhubaneswar.
-  Participated in a National Workshop on “Advanced Signal and Image Processing (WASIP-2008)” at Silicon Institute of Technology, Bhubaneswar during 11-13 December 2008.
-  Participated in a “National Conference on Embedded Systems Current Issues and Applications’ at Trident Academy of Technology, Bhubaneswar during 14-15 February 2009.
-  Participated in a DST sponsored National Workshop on “Swarm Intelligence: Theory and Applications” at ITER (SOA University), Bhubaneswar during 20-21 March 2010.
-  Participated in a National conference on “Advances in Engineering studies” (NCAES-2010) at Hi-Tech Institute of Technology, Bhubaneswar during 28-30 January 2010.
-  Participated in a National seminar on “Recent Advances in Science & Technology” at ABIT, Cuttack, during 12-13 February 2010.
-  Participated a National seminar on Wireless Communication & Mobile Computing” at ABIT Cuttack , during 8-9 October 2010.
-  Participated in a National conference on “Recent Trends in Communication Technology” at Konark Institute of Science & Technology, Bhubaneswar during 22-23 January 2011.
-  Participated in a National Workshop on Plasma Processing for Thermonuclear Fusion and Industrial Applications (PPTFIA-2011), at KIIT University Bhubaneswar, during 10-11 November 2011.
-  Participated in 6th ISSS International conference on smart materials structures & systems(ISSS-2012) at IISc, Bangalore during 4th -7th January 2012.
-  Participated in a National Workshop on New and Nano Materials (WNNM-12) at Bhubaneswar, 20-21 January, 2012.

- ✚ Participated in 28th National Symposium on Plasma Science & Technology, Plasma 2013, December 3-6 ,2013, KIIT University, Bhubaneswar.
- ✚ Participated in the Workshop on State Spatial Data Infrastructure at Bhubaneswar, 4-5 September 2014 by NSDI.

Motivational Note

Never give up, there is no such thing as an ending – just a new beginning.