FACULTY PROFILE

Name : **Dr. Pandurangarao N. Kulkarni**

Designation : **Professor, Dean (Academic)**

Department : **Electronics and Communication Engineering**

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Google Scholar ID : 0D0rYJsAAAAJ

Qualification : MTech, PhD

Professional Experience
Teaching experience : 33
:

Administrative :
1. Dean (Academic), From 20th Nov.2020 till date
2. Head, Department of Electronics and Communication Engineering, From 25th Aug. 2015 till 1st Nov 2020.

Responsibilities		3. Assistant Placement Officer, From 2007 to 2015. 4. Coordinator, All India Survey on Higher Education (AISHE) from 2010 till date. 5. Member, Board of Studies in Electronics and Communication Engineering, from 2007 till date. 6. Member, Board of Examiners in Electronics and Communication Engineering, from 2010-2011.
Teaching No. of Projects Guided		
UG	**:**	40
PG	**:**	05
Research Interest Area	**:**	Speech Signal Processing
No. of Research Scholars Pursuing	**:**	03
Awarded	**:**	01
Patents	**:**	1. AN APPROACH FOR FOREST CHANGE DETECTION USING AUTOREGRESSIVE MODEL BASED KERNEL FUZZY CLUSTERING, Patent Application No: 202121009025, filed on 4th March 2021 (Under Review)
Research Grants	**:**	1. AICTE_RPS grants of INR 5,50,000/-was received for the Project titled "Speech Processing for Improving Speech Production and perception" in the year 2010.
Publications Books/Chapters	**:**	1. Madhuri Mulik , V. Jayashree , P . N. Kulkarni, Emerging Trends in Engineering Research and Technology Vol. 4, Chapter 4, A Forest Change Detection Using Auto Regressive Model-based Kernel Fuzzy Clustering: Advanced Study, pp. 139-146, Print ISBN: 978-93-90149-56-8, eBook ISBN: 978-93-90149-01-8, DOI: 10.9734/bpi/etert/v4
Journals (with citations)	**:**	(1) P. N. Kulkarni, P. C. Pandey, and D. S. Jangamashetti, "Binaural dichotic presentation to reduce the effects of spectral masking in moderate bilateral sensorineural hearing loss," Int. J. Audiology Vol. 51, No. 4, 334-344. doi:10.3109/14992027.2011.642012 Link:http://informahealthcare.com/doi/abs/10.3109/14992027.2011.642012 (2) P. N. Kulkarni, P. C. Pandey, and D. S. Jangamashetti, "Multi-band frequency compression for improving speech perception by listeners with moderate sensorineural hearing loss," Speech Communication, vol. 54, No. 3, pp. 341-350, March 2012. DOI: 10.1016/j.specom.2011.09.005. Link: http://dx.doi.org/10.1016/j.specom.2011.09.005 (3) P. N. Kulkarni, P. C. Pandey, and D. S. Jangamashetti, "Multi-band frequency

compression for reducing the effects of spectral masking," Int. J. Speech Tech. vol. 10, 219-227.

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(4) P. N. Kulkarni, P. C. Pandey, and D. S. Jangamashetti, "Perceptually balanced filter response for binaural dichotic presentation to reduce the effect of spectral masking," (abstract) J. Acoust. Soc. Am. 120, pp. 3253.

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(5) Rajani S. Pujar, P. N. Kulkarni, "Wiener filter based noise reduction algorithm with perceptual post filtering for hearing aids," Int. J. Image, Graphics, and Signal Processing. vol. 11, No. 7, 69-81, 2019.

(6) Madhuri Mulik , V. Jayashree , P . N. Kulkarni, "A Forest Change Detection using auto Regressive Model-Based Kernel Fuzzy Clustering", International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958, Volume-9 Issue-1S6, pp. 43-47, December 2019.

(7) Madhuri Mulik , V. Jayashree , P . N. Kulkarni, "A Comparative Study of Various Methods for Forest Change Detection", International Journal of Grid and Distributed Computing, Vol. 12, No. 3, (2019), pp. 227-244.

Conferences   :

(1) S. G. Kambalimath, P. C. Pandey, P. N. Kulkarni, S. S. Mahant-Shetti, and S. G. Hiremath, "FPGA-Based Design of a Hearing Aid with Frequency Response Selection through Audio Input" in Proc. IEEE VLSID 2016, Kolkata, India 13–15 Jan. 2016

(2) S. G. Kambalimath, P.C. Pandey, P. N. Kulkarni, S. S. Mahant-Shetti, and S. G. Hiremath, "FPGA-based implementation of comb filters using sequential multiply-accumulate operations for use in binaural hearing aids," in Proc. IEEE INDICON 2014, Pune, India, 11–13 Dec. 2014.

(3) S. G. Kambalimath, P. C. Pandey, P. N. Kulkarni, S. S. Mahant-Shetti, S. G. Hiremath, "FPGA based implementation of comb filters for use in binaural hearing aids for reducing intraspeech spectral masking," Proc. of the 10th Annual Conference of the IEEE India Council, Mumbai, December 13-15, 2013 (IEEE Indicon 2013), Paper ID 531 doi: 10.1109/INDCON.2013.6726012

http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6726012&isnumber=6725842

(4) N. Tiwari,N. P. C. Pandey, and P. N. Kulkarni, "Real-time implementation of multi-band frequency compression for listeners with moderate sensorineural impairment," Proc. 13th Annual Conference of the International Speech Communication Association (Interspeech 2012), Portland, Oregon, September 9-12, 2012, paper no. 689

(5) P. N. Kulkarni, P. C. Pandey, and D. S. Jangamashetti, "Study of perceptual balance for designing comb filters for binaural dichotic presentation," Proc. 20th Int. Cong. Acoust. (ICA 2010, Sydney, Australia, 23-27 Aug. 2010), Paper no. 556.

(6) D. S. Jangamashetti, A. N. Cheeran, P. N. Kulkarni, P. N., and P. C. Pandey, "Simulation of increased masking in sensorineural hearing loss for a preliminary evaluation of speech processing schemes," Proc. 20th Int. Cong. Acoust. (ICA 2010, Sydney, Australia, 23-27 Aug. 2010), Paper no. 980.

paper_dsjangamashetti_ica2010.pdf

(7) P. N. Kulkarni, P. C. Pandey, and D. S. Jangamashetti, "Multi-band frequency compression for sensorineural hearing impairment," Proc. 16th Int. Conf. Digital Signal Processing, (DSP 2009, Santorini, Greece), Paper S4P.1.

(8) P. N. Kulkarni, and P. C. Pandey, "Optimizing the comb filters for spectral splitting of speech to reduce the effect of spectral masking," Proc. IEEE Int. Conf. Signal Processing Networking (ICSCN-08, Chennai, India), 69-73.

(9) P. N. Kulkarni, P. C. Pandey, and D. S. Jangamashetti, D. S. "Study of perceptual balance in comb filter based spectral splitting of speech signal to reduce the effect of frequency masking," Proc. Frontiers of Research in Speech and Music (FRSM 2008, Jadavpur University, Kolkata, India), pp. 101-105.

(10) P. N. Kulkarni, and P. C. Pandey, "Frequency mapping for multi-band frequency compression for improving speech intelligibility," Proc. 14th National Conference

on Communications (NCC 2008, Indian Institute of Technology Bombay, Mumbai, India), pp. 437-441.

(11) P. N. Kulkarni, and P. C. Pandey, "Effect of binaural dichotic presentation with critical bandwidth based comb filters on source localization," Proc. 19th Int. Cong. Acoust. (ICA 2007, Madrid, Spain), paper PPA-09-005.

(12) R. S. Allurkar H. K. Verma, and P. N. Kulkarni, "Hearing aid research: a brief review," Proc. Frontiers of Research in Speech and Music (FRSM 2006, Lucknow, India).

(13) R. S. Allurkar H. K. Verma, and P. N. Kulkarni, "Hearing aid research: Issues, Current trends, and Challenges," Proc. DEAFEXPO- 2006, Khanpur, India.

(14) Rajani S. Pujar, P. N. Kulkarni, " ", Proc. 16th IEEE India Council International Conference (INDICON 2019), Marwadi University, Rajkot, 13th to 15th December 2019

(15) Rajani S. Pujar, P. N. Kulkarni, "Cascaded Structure of Wiener Filter with FBS Based Spectral Splitting and Dynamic Range Compression for Listeners with Sensorineural Hearing Loss", Proc. 15th IEEE India Council International Conference (INDICON 2018), Amrita Vishwa Vidyapeetham, Coimbatore, 16th to 18th December 2018

(16) Rajani S. Pujar, P. N. Kulkarni, "Frequency Compression of Speech for Improving Speech Perception in Sensorineural Hearing loss: FBS Approach", Proc. IEEE International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET-2017), pp. 501-506, SSN College of Engineering, Chennai, India, March 22-24, 2017.

(17) Rajani S. Pujar, P. N. Kulkarni, ―Effect of Noise Reduction Algorithms on Temporal Splitting of Speech Signal to Improve Speech Perception for Binaural Hearing Aids‖, Proc. 13th Western Pacific Conference on Acoustics (WESPAC-2018), CSIR-NPL, New Delhi, 11th – 15thNovember 2018.

Events Organized	:	1. TEQIP–II Sponsored Faculty Development Programme on "Implementation of Signal Processing Algorithms using FPGAs", 23rd–25th May, 2013. Coordinators Prof. S. G. Kambalimath and Dr. P. N. Kulkarni.
		2. TEQIP–II Sponsored Short Term Training Programme on "Data Security and Network", 4th–8th Jan, 2015, Jointly organized with GCE Goa at Govt. Engg college Goa. Coordinators Dr. Hassanali Virani and Dr. P. N. Kulkarni.
Conferences/ Symposiums/ Workshops/ Training Programs Attended	:	1. Intensive Tutorial on Digital Signal Processing, 30th Dec-1990 PDA College, Gulbarga. 2. Optical Fiber Communication, 02-14 Dec-1991, Anna University Madras. 3. Digital Communication and the ISDN, 18th -30th May-1992, REC, Calicut 4. Short Term Course on Digital Communication Through Satellite, 5 -17 July-1993, MCE, Hassan 5. Electronic Design Automation Tools, 19th to 21st Oc-1995, BEC, Bagalkot 6. Advanced Computer Networking, 14-27 Sep-1998, BEC, Bagalkot 7. Train the Trainer, Motorola, 18th -22nd Oct-2000, VTU 8. Technical Education and Challenges in the New Millennium, 3-4 Nov-2001, ISTE, Delhi 9. Advanced in Signal Compression Technology, 6th to 17th Jan 2003, NIT, Calicut 10. Intellectual Property Rights, 16th April-2004, BEC, Bagalkot 11. Semiconductor Physics and VLSI Design, 07-19 Feb-2005, BEC, Bagalkot 12. Internet Protocols, 21st – 26th Aug-2006, BEC, Bagalkot 13. Digital Signal Processor and its Applications, 25th-30th Sep-2006, BEC, Bagalkot 14. Signal Processing and its Applications, 9th -11th Oct-2006, BEC, Bagalkot 15. Modern Sensor and Their Applications, 17th and 18th Nov-2006, BEC, Bagalkot 16. Shrishti 2007, 4th -7th May -2007, BEC, Bagalkot 17. Recent Trends in Industrial Engg, 26-02-2007 to 02-03-2007, BEC,Bagalkot 18. Frontiers of Research on speech and Music (FRSM-2008), 20-21 Feb-2008. ITC Sangeet Research Academy, Kolkata

19. Digital Signal Processing, 5-7 July-2009, Santorini- Greece
20. Winter School on speech and Audio Processing, 12-15 Jan -2010, IIT Bombay
21. Recent advanced in wireless networks, 16th-18th May-2013, BEC, Bagalkot
22. Winter school on speech and audio processing, 17th -20th Jan -2014, IIIT Hyderabad
23. Multi band Spectral Subtraction for Electro laryngeal speech processing, National conference on trends in engineering and technology SVC, Tirupati, 13-06-2015
24. MHRD's National Mission for Teachers and Administrators Management Capacity Enhancement Programme IIM, Indore 16th to 22nd July-2015.