

PRASANTA KUMAR GHOSH
ASSISTANT PROFESSOR
Department of Electrical Engineering
Indian Institute of Science
Bangalore-560012
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Professional Interests

Research in human speech communication science, engineering models for speech science and their application to speech technology development.

Research Interests

- Analysis and modeling of speech production, perception and communication with applications to health-care and education
- Non-stationary signal processing methods (with applications to speech and music),
- Auditory motivated Signal Processing for speech and audio,
- Sampling theory, Nonuniform sampling and interpolation.

Education

University of Southern California (USC), Los Angeles, USA
PhD in Signal Processing at Signal Analysis and Interpretation Laboratory (SAIL), August 2011.
(Supervisor: Prof. Shrikanth S. Narayanan)
Thesis: A computational framework for exploring the role of speech production in speech processing from a communication system perspective
Committee: Shrikanth S Narayanan (Chair), Louis Goldstein, Antonio Ortega, Keith Jenkins
CGPA - 4/4

Indian Institute of Science (IISc), Bangalore, India
M.Sc.(Engg.) in Signal Processing, July 2006.
(Supervisor: Prof. Thippur V. Sreenivas)
Thesis: Non-uniform sample based speech analysis and coding
Committee: T. V. Sreenivas, Dr. Surendra Prasad, K. V. S. Hari
CGPA - 7.5/8

Jadavpur University, Kolkata, India
B.E. in Electronics and Telecommunication Engineering, June 2003.
CGPA - 4.89/5 (2nd in the class)

Professional Experiences

Assistant Professor Aug 2014 – present
Dept. of EE, Indian Institute of Science (IISc), Bangalore, India.

INSPIRE Faculty Fellow Jan 2013 – Aug 2014
Dept. of EE, Indian Institute of Science (IISc), Bangalore, India.

Researcher Oct 2011 – December 2012
IBM India Research Lab, Delhi, India.
Text analytics of Call Center Transcripts

Research Assistant Aug 2006 – July 2011
SAIL, University of Southern California (USC), Los Angeles, USA.
 Speech production, processing, and modeling.

Research Intern March – July 2006
Microsoft Research India, Bangalore, India.
 Speaker Identification and Audio-visual Biometric Recognition.

MHRD Scholar Jan 2004 – July 2006
ECE, Indian Institute of Science (IISc), Bangalore, India.
 Non-uniform Sampling for Speech Processing

Software Engineer July – December 2003
Ushacomm India Pvt. Ltd., Kolkata, India.

Summer Intern June – July 2002
Embedded DSP Group, TATA Consultancy Services, Kolkata, India.
 Worked on “*Study and Simulation of Orthogonal Frequency Division Multiplexing (OFDM)*”.

Awards and Honors

1. **4-th place in Signal Processing Cup, 2015 competition** organized by IEEE Signal Processing Society
2. **SERB Start-Up Research Grant for Young Scientists in Engineering Sciences for the year 2015** from the Department of Science and Technology (DST), Govt. of India.
3. **INSPIRE Faculty Fellowship Award for the year 2012** from the Department of Science and Technology (DST), Govt. of India.
4. **Honorable mention for the best paper award for the year 2010-11** in the Ming Hsieh Department of Electrical Engineering, University of Southern California (USC).
5. **Ming Hsieh Institute (MHI) Ph.D. scholar for the year 2010-11** in the Ming Hsieh Department of Electrical Engineering, University of Southern California (USC).
6. **Center for Excellence in Teaching’s Award for Excellence in Teaching in the category of Electrical Engineering for the year 2010-11 in University of Southern California (USC).**
7. **Best TA awards for the year 2007-08 and 2008-09 for graduate class in the Ming Hsieh Department of Electrical Engineering, University of Southern California (USC).**
8. **Best M.Sc. (Engg) thesis award for the year 2006-07 in the Electrical Engineering Division at IISc**; thesis title: ‘Non-uniform Sample Based Speech Analysis and Coding’.
9. **IEEE Bangalore chapter, First Prize in Mr. BRV Varadhan Post-graduate Student Paper Contest 2005**; paper title: ‘ESTL: Novel Temporal Feature and Its Application to Speech Segmentation’.
10. **Ministry of Human Resources Development (MHRD), Govt. of India, scholarship Holder 2004-06.**

Publications Journals (accepted and published):

1. Abhay Prasad and **P. K. Ghosh**, “Information theoretic optimal vocal tract region selection from real time magnetic resonance images for broad phonetic class recognition”, *Computer Speech and Language*, Volume 39, 2016, pp 108–128.

2. Chiranjeevi Yarra, Om D. Deshmukh, and **P. K. Ghosh**, “A mode-shape classification technique for robust speech rate estimation and syllable nuclei detection”, *Speech Communication*, Volume 78, April 2016, pp 62-71.
3. Prathosh A. P., Sujith P, Ramakrishnan A. G., and **P. K. Ghosh**, “Cumulative Impulse Strength for Epoch Extraction”, *IEEE Signal Processing Letters*, Volume 23, No 4, January 2016, pp 424–428.
4. Navaneet K L, Pavan C Madhusudana, Pradyumna Suresha, Vijitha Periyasamy and **P. K. Ghosh**, “Multiple spectral peak tracking for heart rate monitoring from photoplethysmography signal during intensive physical exercise”, *IEEE Signal Processing Letters*, Volume 22, No 12, 2015, pp 2391–2395.
5. Ming Li, Jangwon Kim, Adam Lammert, **P. K. Ghosh**, Vikram Ramanarayanan, and Shrikanth Narayanan, “Speaker verification based on the fusion of speech acoustics and inverted articulatory signals”, *Computer Speech and Language*, Volume 36, 2016, pp 196–211.
6. Nisha Meenakshi and **P. K. Ghosh**, “Robust whisper activity detection using long-term log energy variation of sub-band signal”, *IEEE Signal Processing Letters*, Volume 22, No 11, Feb 2015, pp 1859–1863.
7. Shrikanth Narayanan, Asterios Toutios, Vikram Ramanarayanan, Adam Lammert, Jangwon Kim, Sungbok Lee, Krishna Nayak, Yoon-Chul Kim, Yinghua Zhu, Louis Goldstein, Dani Byrd, Erik Bresch, **P. K. Ghosh**, Athanasios Katsamanis and Michael Proctor, “Real-time magnetic resonance imaging and electromagnetic articulography database for speech production research”, *J. Acoust. Soc. Am.*, Volume 136, September 2014, pp 1307.
8. Afsan A. and **P. K. Ghosh**, “Improved subject-independent acoustic-to-articulatory inversion”, *Speech Communication*, Elsevier, Volume 6, 2015, pp 1–16.
9. Jangwon Kim, Adam Lammert, **P. K. Ghosh**, and Shrikanth Narayanan, “Co-registration of speech production datasets from electromagnetic articulography and real-time magnetic resonance imaging”, *Journal of the Acoustical Society of America Express Letter (JASAEL)*, Volume 135, Issue 2, 2014, pp EL115-EL121.
10. **P. K. Ghosh** and S. Narayanan, “On smoothing articulatory trajectories obtained from Gaussian mixture model based acoustic-to-articulatory inversion”, *Journal of the Acoustical Society of America Express Letter (JASAEL)*, Volume 134, Issue 2, July 2013.
11. A. Tsiartas, **P. K. Ghosh**, P. G. Georgiou and S. Narayanan, “High-quality bilingual subtitle document alignments with application to spontaneous speech translation”, (2012), in: *Computer, Speech, and Language*, Elsevier.
12. **P. K. Ghosh** and S. Narayanan, “Automatic Speech recognition using articulatory features from subject-independent acoustic-to-articulatory inversion”, *J. Acoust. Soc. Am. Express Letters (JASAEL)*, Volume 130, Issue 4, Sep 2011, pp EL251–EL257.
13. **P. K. Ghosh**, L. M. Goldstein, S. Narayanan, “Processing speech signal using auditory-like filterbank provides least uncertainty about articulatory gestures”, *J. Acoust. Soc. Am.*, Volume 129, Issue 6, Jun 2011, pp 4014–4022.
14. **P. K. Ghosh**, L. M. Goldstein, S. Narayanan, “Auditory-like filterbank: An optimal speech processor for efficient human speech communication”, *Springer Proceedings of Indian Academy of Sciences (Sadhana)*, Special Issue on Speech Processing. 36(5): 699-712, October 2011.
15. **P. K. Ghosh** and S. Narayanan, “A generalized smoothness criterion for acoustic-to-articulatory inversion”, *J. Acoust. Soc. Am.*, Volume 128, Issue 4, Oct 2010, pp 2162–2172.

16. **P. K. Ghosh** and S. Narayanan, “Joint source-filter optimization for robust glottal source estimation in the presence of shimmer and jitter”, *Speech Communication*, Elsevier, Volume 53, Issue 1, Jan 2011, pp 98–109.
17. **P. K. Ghosh**, A. Tsiartas, and S. Narayanan, “Robust voice activity detection using long-term signal variability”, *IEEE Trans. Audio, Speech and Language Processing*, Volume 19, Issue 3, March 2011, pp 600–613.
18. **P. K. Ghosh** and S. Narayanan, “Bark frequency transform using an arbitrary order allpass filter”, *IEEE Signal Processing Letters*, Volume 17, No. 6, June 2010, pp 543–546.
19. **P. K. Ghosh** and S. Narayanan, “Pitch contour stylization using an optimal piecewise polynomial approximation”, *IEEE Signal Processing Letters*, Volume 16, No. 9, September 2009, pp 810–813.
20. **P. K. Ghosh** and S. Narayanan, “Closure duration analysis of incomplete stop consonants due to stop-stop interaction”, *J. Acoust. Soc. Am. Express Letters*, Volume 126, Issue 1, July, 2009, pp. EL1–EL27.
21. **P. K. Ghosh** and T.V. Sreenivas, “Time-varying Filter Interpretation of Fourier Transform and its Variants”, *Signal Processing (Elsevier)*, Volume 86, Issue 11, November 2006, Pages 3258–3263.

Conferences (accepted and published):

1. Chiranjeevi Yarra, Om D. Deshmukh, and **P. Ghosh**, “An automatic detection of syllable stress using sonority based prominence features for pronunciation evaluation”, accepted in 2017 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), New Orleans.
2. Aravind Illa, Nisha Meenakshi G, and **P. Ghosh**, “A comparative study of acoustic-to-articulatory inversion for neutral and whispered speech”, accepted in 2017 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), New Orleans.
3. Gaurav Fotedar, Aditya Gaonkar P, Saikat Chatterjee, and **P. Ghosh**, “Automatic recognition of social roles using long term role transitions in small group interactions”, accepted in INTERSPEECH, 8-12 September, 2016.
4. Nazreen P.M., A. G. Ramakrishnan, and **P. Ghosh**, “A class-specific speech enhancement for phoneme recognition: a dictionary learning approach”, accepted in INTERSPEECH, 8-12 September, 2016.
5. Aditya Gaonkar P, Bhuthesh R, Dipanjan Gope, and **P. Ghosh**, “Robust Real-Time Pulse Rate Estimation From Facial Video Using Sparse Spectral Peak Tracking”, accepted in SPCOM, 12-15 June, 2016.
6. Abhishek Narwekar and **P. Ghosh**, “A Comparative Study of Articulatory Features From Facial Video and Acoustic-To-Articulatory Inversion for Phonetic Discrimination”, accepted in SPCOM, 12-15 June, 2016.
7. Supriya Nagesh, Chiranjeevi Yarra, Om D. Deshmukh, **P. Ghosh**, “A ROBUST SPEECH RATE ESTIMATION BASED ON THE ACTIVATION PROFILE FROM THE SELECTED ACOUSTIC UNIT DICTIONARY”, accepted in ICASSP, 21-25 March, 2016.
8. Amber Afshan, **P. Ghosh**, “Better acoustic normalization in subject independent acoustic-to-articulatory inversion: benefit to recognition”, accepted in ICASSP, 21-25 March, 2016.
9. Abhay Prasad and **P. Ghosh**, “Automatic classification of eating conditions from speech using acoustic feature selection and a set of hierarchical support vector machine classifiers”, in Proc. Interspeech, Sep 6-10 2015.

10. Satyabrata Parida, Patted Ashok Kumar and **P. Ghosh**, “Estimation of the air-tissue boundaries of the vocal tract in the mid-sagittal plane from electromagnetic articulograph data”, in Proc. Interspeech, Sep 6-10 2015.
11. Nisha Meenakshi and **P. Ghosh**, “A discriminative analysis within and across voiced and unvoiced consonants in neutral and whispered speech in multiple Indian languages”, in Proc. Interspeech, Sep 6-10 2015.
12. Sujith P, Prathosh A. P., Ramakrishnan A. G. and **P. Ghosh**, “An Error Correction Scheme for GCI Detection Algorithms using Pitch Smoothness Criterion”, in Proc. Interspeech, Sep 6-10 2015.
13. Adria Casamitjana, Martin Sundin, **P. Ghosh** and Saikat Chatterjee, “Bayesian learning for time-varying linear prediction of speech”, in Proc. EUSIPCO, Aug 31- Sep 4 2015, pp 325–329.
14. A. Prasad, V. Periyasamy and **P. Ghosh**, “Estimation of the invariant and variant characteristics in speech articulation and its application to speaker identification”, accepted for publication in ICASSP 2015.
15. Nisha Meenakshi and **P. Ghosh**, ‘Automatic Gender Classification Using the Mel Frequency Cepstrum of Neutral and Whispered Speech: a Comparative Study’, accepted for publication in NCC 2015.
16. Prasad Sudhakar and **P. Ghosh**, “Sparse smoothing of articulatory features from Gaussian mixture model based acoustic-to-articulatory inversion: Benefit to speech recognition”, accepted for publication in InterSpeech 2014.
17. Abhay Prasad, **P. Ghosh** and Shrikanth Narayanan, “Selection of optimal vocal tract regions using real-time magnetic resonance imaging for robust voice activity detection”, accepted for publication in InterSpeech 2014.
18. Sujith P and **P. Ghosh**, “Missing samples estimation in electromagnetic articulography data using equality constrained Kalman smoother”, accepted for publication in InterSpeech 2014.
19. Nisha Meenakshi, Chiranjeevi Yarra, B. K. Yamini and **P. Ghosh**, “Comparison of speech quality with and without sensors in electromagnetic articulograph AG 501 recording”, accepted for publication in InterSpeech 2014.
20. Sujith P. and **P. Ghosh**, “Maximum a-posteriori estimation of missing samples with continuity constraint in electromagnetic articulography data”, accepted for publication in ICASSP 2014.
21. Abhijith Mundanad Narayanan, **P. Ghosh** and K. Rajgopal, “Multi-Pitch Tracking using Gaussian mixture model with time varying parameters and Grating Compression Transform”, accepted for publication in ICASSP 2014.
22. Prasad Sudhakar, Laurent Jacques, **P. Ghosh**, “A sparse smoothing approach for Gaussian mixture model based acoustic-to-articulatory inversion”, accepted for publication in ICASSP 2014.
23. Andreas Tsiartas, **P. Ghosh**, Panayiotis Georgiou, and Shrikanth S. Narayanan, “Classification of clean and noisy bilingual movie audio for speech-to-speech translation corpora design”, accepted for publication in ICASSP 2014.
24. **P. K. Ghosh** and S. Narayanan, “Information theoretic acoustic feature selection for acoustic-to-articulatory inversion”, in Proc. Interspeech 2013, Lyon, France.
25. A. Tsiartas, T. Chaspari, N. Katsamanis, **P. Ghosh**, M. Li, M. V. Sebroeck, A. Potamianos and S. Narayanan, “Multi-band long-term signal variability features for robust voice activity detection”, in Proc. Interspeech 2013, Lyon, France.
26. M. Li, J. Kim, **P. Ghosh**, V. Ramanarayanan and S. Narayanan, “Speaker verification based on fusion of acoustic and articulatory information”, to appear in Proc. Interspeech 2013, Lyon, France.

27. Bhuthesh R, **P. K. Ghosh**, and Dipanjan Gope, “Enhanced Pulse Rate Measurement from Facial video by Automatic Detection of Sensitive Skin Regions”, in IEEE workshop on Computational Intelligence, IIT Kanpur, July 2013.
28. M. Li, A. Lammert, J. Kim, **P. K. Ghosh**, and S. Narayanan, “Automatic Classification of Palatal and PharyngealWall Shape Categories from Speech Acoustics and Inverted Articulatory Signals”, in Workshop on Speech Production in Automatic Speech Recognition, Interspeech 2013, Lyon, France.
29. S. Iqbal, A. Verma, **P. K. Ghosh**, K. Church, and J. Marcus, “Intent Focused Summarization of Caller-Agent Conversations”, in Proc. ICASSP 2013, Vancouver, Canada.
30. J. Kim, A. Lammert, **P. K. Ghosh**, and S. Narayanan, “Spatial and temporal alignment of multimodal human speech production data: real time imaging, flesh point tracking and audio”, in Proc. ICASSP 2013, Vancouver, Canada.
31. J. Kim, **P. K. Ghosh**, S. Lee and S. S. Narayanan, “A study of emotional information present in articulatory movements estimated using acoustic-to-articulatory inversion”, in APSIPA ASC 2012.
32. V. Ramanarayanan, **P. K. Ghosh**, A. Lammert and S. Narayanan, “Exploiting speech production information for automatic speech and speaker modeling and recognition – possibilities and new opportunities”, in APSIPA ASC 2012.
33. **P. K. Ghosh** and S. Narayanan, “Analysis of inter-articulator correlation in acoustic-to-articulatory inversion using generalized smoothness criterion”, in Proc. Interspeech, Florence, Italy, 2011.
34. S. Narayanan, E. Bresch, **P. K. Ghosh**, L. Goldstein, A. Katsamanis, Y. Kim, A. Lammert, M. Proctor, V. Ramanarayanan, and Y. Zhu, “A Multimodal Real-Time MRI Articulatory Corpus for Speech Research”, in Proc. Interspeech, Florence, Italy, 2011.
35. B. Xiao, **P. K. Ghosh**, Panayiotis G. Georgiou, and S. Narayanan, “Overlapped speech detection using long-term spectro-temporal similarity in stereo recording”, in Proc. ICASSP, Prague, Czech Republic, 2011.
36. A. Tsiartas, **P. K. Ghosh**, Panayiotis G. Georgiou, and S. Narayanan, “Bilingual audio-subtitle extraction using automatic segmentation of movie audio”, in Proc. ICASSP, Prague, Czech Republic, 2011.
37. **P. K. Ghosh** and S. Narayanan, “A subject-independent acoustic-to-articulatory inversion”, in Proc. ICASSP, Prague, Czech Republic, 2011.
38. **P. K. Ghosh**, Andreas Tsiartas, Panayiotis G. Georgiou, and S. Narayanan, “Robust voice activity detection in stereo recording with crosstalk”, Proc. InterSpeech, 26–30 Sep, 2010, Makuhari, Japan.
39. **P. K. Ghosh**, S. Narayanan, Pierre Divenyi, Louis Goldstein, and Elliot Saltzman, “Estimation of articulatory gesture patterns from speech acoustics”, Proc. InterSpeech, 6-10 Sep, 2009, Brighton, UK, pp 2803–2806.
40. A. Tsiartas, **P. K. Ghosh**, and S. Narayanan, “Context-driven bilingual movie subtitle alignment”, Proc. InterSpeech, 6-10 Sep, 2009, Brighton, UK, pp 444–447.
41. A. Tsiartas, **P. K. Ghosh**, P. Georgiou, and S. Narayanan, “Robust word boundary detection in spontaneous speech using acoustic and lexical cues”, In Proceedings of ICASSP, Taipei, Taiwan, Apr 2009.
42. S. Ananthakrishnan, **P. K. Ghosh**, S. Narayanan, “Automatic classification of question turns in spontaneous speech using lexical and prosodic evidence”, In Proceedings of ICASSP, Las Vegas, Nevada, April 2008.
43. **P. K. Ghosh**, A. Ortega, and S. Narayanan, “Pitch Period Estimation using Multipulse Model and Wavelet Transform”, Proc. Interspeech 2007, Page(s): 2761–2764.

44. **P. K. Ghosh**, “Speech Segmentation using Extrema-Based Signal Track Length Measure”, ICASSP 2007, Volume 4, 15-20 April 2007 Page(s):IV-1065–IV-1068.
45. **P. K. Ghosh** and T.V. Sreenivas, “Dynamic Programming Based Optimum Non-Uniform Samples For Speech Reconstruction and Coding”, ICASSP 2006, Volume 1, Page(s):I–I.
46. **P. K. Ghosh** and T.V. Sreenivas, “Waveform Reconstruction from Non-uniform Samples with Application to Speech Coding”, IEEE-EURASIP Workshop on Nonlinear Signal and Image Processing (NSIP), May 2005, Japan.
47. **P. K. Ghosh** and A. Konar, “Modification of the LMS Predictor to Reduce Signal Prediction Error in Linear Prediction”, International Conference on Communication, Devices and Intelligent Systems (CODIS 2004), Jan 2004, Kolkata, India.
48. **P. K. Ghosh** and T.V. Sreenivas, “Extrema based Unwarping for Time-varying Pitch Estimation”, in 12th National Conference on Communication (NCC) 2006.
49. A. Das, M. Balwani, R. Thota, **P. K. Ghosh**, “Face Recognition from Images with High Pose Variations by Transform Vector Quantization”, ICVGIP 2006, Pages:674–685.
50. A. Das, **P. K. Ghosh**, “Audio-Visual Biometric Recognition by Vector Quantization”, IEEE Spoken Language Technology(SLT) Workshop, Dec 2006, Page(s):166–169.

Patents (Filed):

1. Shajith I Mohamed, Kenneth W Church, Ashish Verma, **P. K. Ghosh**, “System and method for identification of intent segment in caller-agent conversations”, filed February 2013.
2. Shajith Ikbal Mohamed, **P. K. Ghosh**, Ashish Verma, Jeffrey Marcus, Kenneth Church, “A system and method for caller intent labelling of the call-center conversations” filed December 2013.

Tutorials/Talks/Posters

1. Tutorial offered on “Speech production research – opportunities and challenges” at the International Conference on Emerging Trends in Engineering, Science and Technology, Government Engineering College Trichur, Thrissur 680009, Dec, 2015.
2. Tutorial offered on “A communication perspective to speech processing” at the winter school on Speech and Audio Processing (WiSSAP) 2015 at the Dhirubhai Ambani Institute of Information and Communication Technology, Gandhinagar, Gujarat, Jan, 2015.
3. Tutorial offered on “Speech Processing and Its Applications” at the workshop on “Digital Signal Processing and Information Processing” at Nitte Meenakshi Institute of Technology, Karnataka, August 2013.
4. International Seminar on Speech Production (ISSP), Montreal, Canada, June 2011.
5. Ratheon BBN Technologies, Cambridge, Massachusetts, USA, May 2011.
6. CSAIL, Massachusetts Institute of Technology (MIT), Cambridge, Massachusetts, USA, May 2011.
7. IBM Watson Research Center, New York, USA, May 2011.
8. Haskins Laboratories, Yale University, New Haven, Connecticut, USA, May 2011.

9. Information Theory and Applications (ITA) Workshop, University of California, San Diego (UCSD), California, USA, Feb 2011.
10. Indian Statistical Institute (ISI), Kolkata, India, December, 2010.
11. EE Department Seminar, Indian Institute of Science (IISc), Bangalore, India, December, 2010.
12. Indian Institute of Technology, Madras (IITM), Chennai, India, December, 2010.
13. STCS Seminar, Tata Institute of Fundamental Research (TIFR), Mumbai, India, December, 2010.
14. Indian Institute of Technology, Kharagpur (IITKGP), West Bengal, India, December, 2010.
15. Acoustical Society of America (ASA) Meeting, Cancun, Mexico, November, 2010.
16. Information Theory School (ITS), University of Southern California, Los Angeles, USA, August, 2010.

Sponsored Research Projects

1. *A communication theoretic approach to understand human speech communication system*, funded by the Department of Science and Technology (DST), Govt. of India [January 2013 - December 2017].
2. *Synthesis of affective facial gestures for natural human-machine communication* funded by the Department of Science and Technology (DST), Govt. of India [July 2015 - June 2018].
3. *Real time processing of VoIP Speech for Spoken keywords* funded by DRDO, India.

Teaching Experiences

Instructor at EE, IISc

Time-Frequency Analysis (Jointly with Chandra Sekhar S) (Jan-May 2013, 2014, 2015)

Dynamics of Linear Systems (Aug-Dec 2013, 2014, 2015)

Speech Information Processing (Jointly with Sriram Ganapathy) (Jan-May 2016)

Teaching Assistant (TA), USC

Introduction to Probability and Statistics for Electrical Engineering (Fall 2006)

Probability Theory for Engineers (Spring 2007)

Random Processes in Engineering (Fall 2007 and Spring 2008)

Student Mentoring

Current PhD students

Chiranjeevi Yarra

Nisha Meenakshi

Aravind Illa

Balaji P

Current M.Sc.(Engg) student

Achuth Rao MV

Girija Karthik

Pavan Karjol

Current M.E. students (project topics)

Samik Sadhu

Past students

Sujith P (M.E. 2014)
Abhijith M N (M.E. 2014)
Madhumonti Roy (M.E. 2014)
Ataur Rehman (M.E. 2015)

Professional Activities

Organizational activity

1. Technical Program Committee, area chair, Interspeech, San Francisco, USA, 2016.
2. Tutorial Chair, International Conf. on Signal Processing and Communication (SPCOM), June, 2016.
3. Technical Program committee member, 2nd International Conference on "Perception and Machine Intelligence (PerMin'15)", 26-27 February, 2015.
4. Publication Chair, The ninth Indian Conference on Computer Vision, Graphics, and Image Processing (ICVGIP2014), 14-17 December, 2014.
5. Publication Chair, International Conf. on Signal Processing and Communication (SPCOM), 22-25 July, 2014.
6. Session Chair, Speech Signal Processing, International Conference on Signal Processing and Communications (SPCOM), 22-25 July, 2014.
7. Technical Program committee member, International Conf. on Signal Processing and Communication (SPCOM), 22-25 July, 2014.
8. Session Chair, Fourth Electrical Sciences Divisional Symposium, Indian Institute of Science, February 20-21, 2014.
9. Secretary, IEEE Signal Processing Society, Bangalore Chapter (2014 onwards).
10. Session Chair, IEEE CONECCT 2014 (2014 IEEE Conference on Electronics, Computing, and Communication Technologies), 6-7 January, 2014.
11. Technical Program committee member, International Conf. on Signal Processing and Communication (SPCOM), 22-25 July, 2012.

Reviewing activity

Journals

1. IEEE Trans. Audio, Speech, and Language Processing (TASLP),
2. IEEE Trans. Multimedia (TM),
3. IEEE Signal Processing Letters (SPL),
4. Journal of the Acoustical Society of America (JASA),
5. Computer Speech and Language (CSL),
6. Speech Communication, Elsevier,
7. Signal Processing, Elsevier,
8. Circuits, Systems, and Signal Processing, Springer,
9. EURASIP Journal on Audio, Speech, and Music Processing,
10. Sadhana (Journal of the Indian Academy of Sciences)
11. ISA Transactions, ELSEVIER,

Conferences

1. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP),
2. Conference of the Internal Speech Communication Association (INTERSPEECH),
3. International Conference on Signal Processing and Communications (SPCOM),
4. National Conference on Communications (NCC),
5. IEEE Conference on Electronics, Computing, and Communication Technologies (IEEE-CONNECT).

Membership

1. ASA member,

2. IEEE member, IEEE SP Society member,
3. ISCA member.

SPIRE research reported in public media

1. **Speech Disorder (Nov, 2015)**: Deccan Herald reports ongoing work on speech disorders in SPIRE Lab
2. **Whispered Speech (Aug, 2015)**: Deccan Herald reports ongoing work on whispered speech in SPIRE Lab