

## **Book, Book Chapter**

### **2011**

1. Ginisha Elizabeth George, Leena Mary, “Multiple complementary features for voice activity detection”, in proceeding of International Conference on Emerging Research Areas, Kottayam, India, April 2011(Recognized as the Best Paper of the Conference), International Journal of Emerging Research.

### **2012**

1. Leena Mary, “Extraction and representation of prosody for speaker, speech, and language recognition”, Book, Springer briefs in Speech Technology, 2012, ISBN 978-1—4614-1158-1.

### **2013**

1. Leena Mary, “Prosodic features for speaker recognition”, Book Chapter 13, Speaker Forensics, 2011, Springer Netherlands.

## **Journal Publications**

### **2012**

1. Leena Mary, Anish Babu K. K. and Aju Joseph, “Analysis and detection of mimicked speech based on prosodic features” International Journal of Speech Technology, Volume 15, Number 3 (2012), 407-417, DOI: 10.1007/s10772-012-9163-3, Springer Netherlands 2012.

### **2013**

1. Augustus P. P. and David Solomon George, ”Watermarking technique for self-recovery and authentication” International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE), Vol. 2, Special Issue 1, Dec. 2013, ISSN (Online): 2320-3765, ISSN (Print): 2278-8875.
2. Sreena P. H and David Solomon George, “Natural Language Querying for Content Based Image Retrieval System” International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE), Vol. 2, Special Issue 1, Dec. 2013, ISSN (Print): 2320-3765.

3. Jobin George, Anila Cyril, Bino I. Koshy, Leena Mary, "Exploring vehicle sound signature for detection and classification using ANN", International Journal on Soft Computing, ISSN:2229-6735 (online), ISSN:2229-7103 (print), 2013.

## **2014**

1. Deekshitha G., Leena Mary, "Implementation of Automatic Segmentation of Speech Signal for Phonetic Engine in Malayalam", International Journal of Engineering and Technical Research Vol. 2, No. 11, , pp. 295-298,ISSN: 2321-0869, Nov 2014.
2. Deekshitha G., Leena Mary, " Broad Phoneme Classification Using Signal Based Features", International Journal on Soft Computing", Vol. 5, No. 3, ISSN:2229-6735 (online), ISSN:2229-7103 (print)Nov 2014.
3. Sophia Susan George, Anil P. Antony and Leena Mary, "Prosody Based Speaker Verification System- Effect of Voice disguise", International Journal of Engineering Research and Technology, Vol. 3, Issue 12, ISSN: 2278-0181, Dec 2014.

## **2017**

1. Leena Mary, Anil Antony, Ben P. babu, "Automatic Syllabification of Speech Signal using Vowel Onset Points and STE Valleys", International Journal of Speech Technology (IJST) Springer (Scopus indexed), 2017.

## **2018**

1. Tomson Devis and Manju Manuel, "Multirate and Filter bank Approaches in Digital Hearing Aid Design: A Review," IOP Conf. Series: Materials Science and Engineering, 396(1):1-8, 2018. (SCOPUS).
2. Sreekumar G., Leena Mary and Unnikrishnan A, Experimental verification of quadratic chirp detection using modified fractional Fourier transform, The Journal of Acoustical Society of India ((DRDO Refereed Journal), Vol. 45, No. 3, 2018 (pp. 141-149).
3. Sreekumar G., Leena Mary, and Unnikrishnan A, Doa Estimation of Broad-Banded Linear and Quadratic Chirps Using Nested and Co-Prime Arrays, International Journal of Computer Sciences and Engineering (UGC Refereed Journal), Vol.6, Issue-7, July 2018(pp.141-149).
4. Leena Mary, Extraction of Prosody for Automatic Speaker, Language, Emotion and Speech Recognition, Edition 2, Springer briefs in Speech Technology Springer, Netherlands, 2018, 978-3-319-91170-0.

## **2019**

1. Sreekumar G., Leena Mary and Unnikrishnan A, Performance Analysis of Fractional Fourier Domain Beam-Forming Methods for Sensor Arrays, SmartScience, Taylor & Francis (Scopus Indexed), vol. 7, no. 1, pp. 28 - 38, January 2019.
2. Leena Mary and Deekshitha G., “Searching Speech Databases: Features, Techniques and Evaluation Measures”, Springer Briefs in Speech Technology, Springer Nature, Switzerland AG. DOI: 978-3-319-97761-4 (2019).

## **2020**

1. Sreekumar G., Leena Mary and Unnikrishnan A(2020), Beam-forming of broad-band QFM signals using generalized time-frequency transform, The Journal of Electronics, Taylor and Francis (SCI), DOI:10.1080/00207217.2019.1666307.
2. Deepa Abraham, Manju Manuel, “Design of Transmultiplexer Filter Banks Using Ramanujan Sums”, National Academy Science Letters, February 2020, DOI 10.1007/s40009-020-00943-x(SCIE).
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4. Abraham, D. and Manuel, M., “Signal periodicity detection using Ramanujan subspace projection”, Journal of Electrical Engineering, vol. 71, no. 5, pp. 326–332, 2020. doi:10.2478/jee-2020-0044. Impact factor: 0.647.
5. Deekshitha G and Leena Mary, “A Two-Stage Spoken Term Detection System for UnderResourced Languages”, IET Signal Processing, Vol. 14, Issue 9, pp. 602-613, Jul. 2020. (SCI/SCIE) DOI: 10.1049/iet-spr.2019.0131.
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7. Starlet Ben Alex, Ben P. Babu and Leena Mary (2020), Attention and Feature Selection for Automatic Speech Emotion Recognition Using Utterance and Syllable-Level Prosodic Features, Circuits, Systems and Signal Processing, Springer, vol, 1–29 (SCI Indexed).

## **2021**

1. Deekshitha G and Leena Mary, “Multilingual Broad Phoneme Recognition and Language-independent Spoken Term Detection for Low-resourced Languages,” Journal of King Saud

University Computer and Information Sciences, Aug. 2021, doi: <https://doi.org/10.1016/j.jksuci.2021.08.012> (SCIE).

2. Tomson Devis and Manju Manuel, "Hardware-efficient auto-reconfigurable hearing aids using 3-level octave interpolated filters for auditory compensation applications," *Physical and Engineering Sciences in Medicine*, Springer, 44(3):785–798, 2021. (SCIE IF:1.43).
3. Tomson Devis and Manju Manuel, "Design and Implementation of a Smart Cost-effective Hearing Aid using Fractional Interpolated Filters", *Journal of Information Science and Engineering*, 2021, (Published online). (SCIE).
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## **International Conferences**

### **2013**

1. Sreena P. H and David Solomon George, "Content Based Image Retrieval System with Fuzzified Texture Similarity Measurement" IEEE International conference on control, communication and computing (ICCC) 2013.
2. S., Aju Joseph, Anish Babu K.K., "Isolated Digit Recognition for Malayalam- An Application Perspective.", Proc.of IEEE International Conference on Control Communication and Computing (IEEE ICC), Dec. 2013.
3. Karthik Selvan and Anish Babu K.K., "Text Independent Speaker Recognition System in Malayalam", IEEE International Conference on Advanced Computing & Communication Systems (IEEE ICACCS 2013), pp. 33, Sri Eshwar College of Engineering, December 2013.
4. Karthik Selvan, Aju Joseph and Anish Babu K.K., "Speaker Recognition System for Security Applications", Proceedings of 2nd IEEE Recent Advances in Intelligent Computational Systems (IEEE RAICS 2013), Indian Institute of Space Science & Technology, December 2013.
5. Renjith S., Leena Mary, Anish Babu K.K., Aju Joseph, Gibin M. George, " Prosody based voice forgery detection by SVM", International Conference on Control, Communication and Computing, Dec 12-13, Trivandrum ( indexed in IEEE explorer).
6. Jobin George, Leena Mary, Riyas K S, " Vehicle detection and classification from acoustic signature using ANN and KNN", International Conference on Control, Communication and Computing, Dec 12-13, Trivandrum ( indexed in IEEE explorer).

7. Sreejith A., Leena Mary, Riyas K.S., Aju Joseph, Anish Augustine, " Automatic phonetic labeling and broad phonetic engine in Malayalam" International Conference on Control, Communication and Computing, Dec 12-13, Trivandrum ( indexed in IEEE explorer).
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## **2014**

1. Drisya Vasudev, Suryakanth V Gangashetty, Anish Babu K. K, Riyas K.S "Unsupervised Keyword Spotting using Bessel Features ," in International Conference on Contemporary Computing and Informatics, November 2014.
2. Drisya Vasudev, Suryakanth V Gangashetty, Anish Babu K. K, Riyas K. S "Query-by-Example Spoken Term Detection using Bessel Features", International Conference on Natural Language Processing (ICON-2014), December 2014.[Communicated].
3. Drisya Vasudev, Anish Babu K. K "Bessel Features for Malayalam Language based Speaker Identification," in 2014 Science and Information Conference (SAI).
4. Drisya Vasudev, Anish Babu K. K "Speaker Identification using FBCC in Malayalam Language," Proceedings of 2014 International Conference on Advances in Computing, Communications and Informatics (ICACCI), 24-27 Sept. 2014, pp. 1759-1763.

## **2015**

1. Drisya Vasudev, Suryakanth V Gangashetty, Anish Babu K. K, Riyas K. S "Performance Analysis of Bessel Feature Based Query-by-Example Spoken Term Detection System", in IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems (IEEE SPICES), February 2015.
2. Gayathri S, Anish Babu K K, "A Novel Approach In Channel Independent Speaker Verification System Using GMM-SVM Frame Work", in IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems (IEEE SPICES), February 2015.
3. Deekshitha G and Leena Mary, "Prosodically Guided Phonetic Engine ", in IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems (IEEE SPICES), February 2015.

4. Deekshitha G. and Leena Mary, "Segmentation of continuous speech for broad phonetic engine", in IEEE International conference on Electrical, Computer and Communication Technologies ICECCT 2015, Coimbatore, Mar 5-7, 2015.
5. Gayathri S, Anish Babu K.K., "A Novel Approach in Channel Independent Speaker Verification System for Malayalam Database Using GMM-SVM Frame Work" in International Conference on Industrial Instrumentation and Control (ICIC), Pune, 28-30 May 2015.
6. Athira Jess Cheriyan, Leena Mary, "Effect of VoIP on Prosodic Features for Speaker Verification," International Conference on Control, Communication and Computing, Nov 2015, Trivandrum.
7. Lekshmi M Nair and Leena Mary, "Pair-wise language discrimination using phonotactic information," International Conference on Control, Communication and Computing, ICC 2015.

## **2016**

1. Piyush Purushothaman, Leena Mary, "Vehicle Classification and Detection Using Audio Visual Cues," International Conference on Signal Processing and Integrated Networks (SPIN16), Feb 2016, Noida.
2. Tossy Thomas, Anu George, K P Indiradevi, "Effective Iris Recognition System," International Conference on Recent Advancement and Effectual Researches in Engineering Science and Technology (RAEREST), Apr 2016.
3. Veena Mohanan, Leena Mary, "Prosody Based Emotion Recognition Using SVM," International Conference on Speech and Signal Processing (ICSSP'2016), September 2016.
4. Lincy Babykutty, Anu George, Leena Mary, "Development of Multilingual Phonetic Engine for Four Indian Languages," International Conference on Next Generation Intelligent Systems (ICNGIS 2016) Sep 2016.
5. Christin Daniel, Leena Mary, "Fusion of Audio Visual Cues for Vehicle Classification," International Conference on Next Generation Intelligent Systems (ICNGIS 2016) Sep 2016.
6. Deekshitha G. and Leena Mary, "A study on Audio Search Techniques", International Conference on Signal and Speech Processing (ICSSP), Kollam, 2016, pp-267-271.
7. Veena Mohanan and Leena Mary, "Prosody Based Emotion Recognition using SVM", International Conference on Signal and Speech Processing (ICSSP), Kollam, 2016.
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1. Deekshitha G., Sreelakshmi K R, Ben P Babu and Leena Mary, "Development of Spoken Story Database in Malayalam Language," in Proc. IEEE Int. Conference on Electrical Energy Systems (ICEES-2018), Chennai, pp. 530-533, Feb. 2018.
2. Deekshitha G, Hansa Hathoon K I, and Leena Mary, "A Novel Two-Stage System for Spotting Fricative and Plosive Regions from Continuous Speech," in Proc. IEEE Int. Conf. on Commn. and Signal Processing (ICCSP), Chennai, India, pp. 0775-0779, Apr. 2018.
3. Smitha Paul, Ben P. Babu and Leena Mary, Assessment of Articulation Disorder using Objective Quality Measures, International Conference on ICCPCCT-2018, IEEE International Conference on Control, Power, Communication and Computing Technologies, Kannur, India, vol.2, pp. 604-609.
4. Smitha Paul, Sreelakshmi K R, Anu George and Leena Mary, "Automation of Malayalam Articulation Test using Automatic Speech Recognition Techniques," Workshop on Speech Processing for Voice, Speech and Hearing Disorders (WSPD 2018) -Satellite event of Interspeech 2018, All India Institute of Speech and Hearing, Mysore, India.
5. Tomson Devis and Manju Manuel, "A 17-Band Non-uniform Interpolated FIR Filter Bank for Digital Hearing Aid," in Proc. IEEE International Conference on Communication and Signal Processing (ICCSP-18), Chennai, pp. 456-460, April 2018.
6. Shinimol Salim, Deekshitha G., Anu George and Leena Mary, Automatic Spotting of Vowels, Nasals and Approximants from Continuous Speech, International Conference on Control, Communication and Computing (IC4), Trivandrim, July 2018.
7. G. Deekshitha, and L Mary, "Speech Signal Based Broad Phoneme Classification and Search Space Reduction for Spoken Term Detection," TENCON 2018 - IEEE Region 10 Conference, Jeju, South Korea, pp. 1607-1612, Oct. 2018
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9. Linta Antony, Sreekumar G., Leena Mary and Unnikrishnan A., "Novel Rank Enhancing Algorithm for 2D Sparse Arrays with Contiguous Coarrays", 8th International Conference on Advances in Computing and Communication (ICACC-2018), Procedia Computer Science 143 (2018) 277–284.
10. Starlet Ben Alex, Ben P. Babu and Leena Mary, Utterance and Syllable Level Prosodic Features for Automatic Emotion Recognition, International Conference on Recent Advances in Intelligent Computational Systems (RAICS), IEEE, (Xplore Digital Library), Thiruvananthapuram, Dec 2018.

## **2019**

1. Nimmy George, Manju Manuel, "A Four Grade Brain Tumor Classification System Using Deep Neural Network," Second International Conference On Signal Processing and Communication, 2019, Karunya University, Coimbatore.
2. Anuja Prasad and Leena Mary, "A comparative study of different features for vehicle classification ", in 2019 International Conferences on Computational Intelligence in Data Science (ICCIDS),pp.1-5,IEEE,2019.
3. Betty Kurian, V. R Sreehari and Leena Mary, "PNCC for Forensic Speaker Recognition", International Conference on Microelectronics, Signals & Systems (ICMSS), Kollam, Kerala, 2019.
4. Remya Susan John, Starlet Ben Alex, Sinith M S and Leena Mary, "Significance of Prosodic Features For Automatic Emotion Recognition", *International Conference on Microelectronics, Signals & Systems (ICMSS), Kollam, Kerala, 2019.*
5. Rosemol Thomas, Anu George and Leena Mary, " Language Identification Using Deep Neural Network For Indian Languages", International Conference on Microelectronics, Signals & Systems (ICMSS), Kollam, Kerala, 2019.
6. Abidha Abdul Karim Rawther and Leena Mary, "Design and Implementation of Sobel Edge Detection in FPGA", International Conference on Microelectronics, Signals & Systems (ICMSS), Kollam, Kerala, 2019.
7. Sangeetha S, Deekshitha G, Anu George and Leena Mary, " Language Independent Broad Phoneme Classification", IEEE Int. Conf. on Intelligent Computing, Instrumentation and Control Technologies (ICICICT), Kannur, Kerala, July. 2019, pp. 1-6.



## **2020**

1. Alishamol K. S., Fousiya T. T., Jasmine Babu K., Sooryadas M. and Leena Mary, "System for infant cry emotion recognition using DNN", *International Conference on Smart Systems and Inventive Technology (ICSSIT)*, Thirunelveli, Tamil Nadu, pp. 865-870, Aug. 2020.
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## **2021**

1. D. Abraham and M. Manuel, "Implementation of Sparse Ramanujan Sequence (SRS) based transforms in FPGA," 2021 International Conference on Communication, Control and Information Sciences (ICCISc), 2021, pp. 1-6, doi: 10.1109/ICCISc52257.2021.9484952.
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3. Greeshma Unnikrishnan, Anu George and Leena Mary, "Non-uniform Region Based Features for Automatic Language Identification" Fourth International Conference on Microelectronics, Signals and Systems ICMSS 2021, Kollam, Kerala, Nov 2021.
4. Devi Krishna, Leena Mary and Anu George, "Automatic Severity Evaluation of Articulation Disorder in Speech using Dynamic Time Warping", Fourth International Conference on Microelectronics, Signals and Systems ICMSS 2021, Kollam, Kerala, Nov 2021.

## **2022**

1. Deepa Abraham and Manju Manuel, "Sparse Ramanujan Sequence (SRS) transform based signal denoising, IEEE International Conference on next generation intelligent systems,29,30 &31 July 2022.