Dr. CHANDRASHEKAR H M

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Education

	Degree	Year	Institute	Specialization
1	B.E	1999	National Institute of Engineering, Mysore	Electronics & Communication
2	M. Tech	2002	Sri Jayachamarajendra College of Engineering, Mysore	Industrial Electronics
3	Ph. D	2022	SIT Tumkur - Under VTU Belagavi	Speech Processing

Professional Experience

	Date (from-to)	Designation	Organization
1	01-01-2011 to till date	Assistant Professor	SIT, Tumkur
2	07-09-2007 to 31-12-2010	Senior Lecturer	SIT, Tumkur
3	07-09-2002 to 06-09-2007	Lecturer	SIT, Tumkur

(Please fill in reverse order. Current designation should be at the top)

Positions held

(Please give details of any administrative posts, coordinator roles/responsibilities held)

- Department Placement Coordinator
- Convener – Institute Squad Committee
- President – SIT Employees' Housing Co-operative Society Ltd.
- Technical Symposium Convener – Technisium 2009

Affiliations of Professional organizations

- IEEE Membership

Awards and Honors

- 2002 – II Rank in Master of Technology, Visvesvaraya Technological University, Belagavi, Karnataka, INDIA
- 2002 – Certificate of Merit, JSS Mahavidyapeeta, Mysore.
- 2025 – Best PhD Thesis Award for the Year 2022, by BITES in recognition of outstanding research, excellence and academic contribution
- 2025 – NPTEL Star: NPTEL DISCIPLINE STARS in Data Science Discipline, May/June 2025
- 2025 – NPTEL Domain Scholar: NPTEL Domain Scholars in Data Science domain, May/June 2025

Courses Taught

Undergraduate Courses

- Network Analysis
- Speech Processing
- Signals and Systems
- Computational Methods
- Digital Signal Processing
- Multimedia Communication
- Biomedical Signal Processing
- Information Theory and Coding
- DSP Algorithms and Architecture
- Advanced Microprocessors and Microcontrollers

Postgraduate Courses

- Modern DSP
- Speech Processing
- Advanced Digital Signal Processing
- Communication System Design Using DSP Algorithms

Research Guidance

Sl. no	Name of the Scholar	Title	Year of completion
	Nil		

Research Areas

- Signal Processing
- Pathological Speech Processing
- Artificial Intelligence/Machine Learning/Deep Learning

Sponsored Projects

Ongoing Projects:

1. Title: Center for Pathological Speech Processing
   Funding Agency: VGST CESEM
   Amount: 40 Lakh
   Duration: 2 Years
   Role: Co-Principal Investigator

Completed Projects:

Nil

Publications

Journals

- Goutham Y A, Himasagar T S, Karjigi V, Chandrashekar H M, and Sreedevi N, “Isolated Word Classification of Hearing Impaired Speech Using Time Frequency Representations,” *Circuits Systems and Signal Processing*, Year 2025.
- Roopa S, Karjigi V, and Chandrashekar H M, “Analyzing fricative confusions in healthy and pathological speech using modified S-transform,” *International Journal of Speech Technology*, Volume 27 (4), pp. 977-985, 2024.
- Karjigi V, Roopa S, and Chandrashekar H M, Investigation of different time–frequency representations for detection of fricatives, *International Journal of Speech Technology*, Volume 27(3), pp. 599-611, 2024.
- Chandrashekar H M, Karjigi V, and Sreedevi N, “Speech Intelligibility Assessment of Dysarthria using Fisher Vector Encoding,” *Computer Speech and Language (Elsevier)*, Volume77, January2023, 101411, ISSN0885-2308.
- Chandrashekar H M, Karjigi V, and Sreedevi N, “Investigation of Different Time-Frequency Representations for Intelligibility Assessment of Dysarthric Speech,” *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, vol. 28, no. 12, pp. 2880-2889, December 2020.
- Chandrashekar H M, Karjigi V, and Sreedevi N, “Spectro-temporal representation of speech for intelligibility assessment of dysarthria, *IEEE Journal of Selected Topics in Signal Processing*, vol. 14, no.2, pp. 390-399, February 2020.

Conference Proceedings

- Chandrashekar H M, Anushree T R, Chaitra T P, Meghana K, Monisha T U, and Sreedevi N, "Automatic Recognition of Hearing-Impaired Children's Kannada Speech with Limited Vocabulary," *2025 3rd International Conference on Smart Systems for applications in Electrical Sciences (ICSSES*), Tumakuru, India, 2025, pp. 1-5.
- Akshatha B M, Khanum A, Harshitha P, Rashmi H D, and Chandrashekar H M, Sreedevi N, “Analysis and Classification of Speech of Children with Hearing Impairment in Kannada,” *2024 2nd International Conference on Smart Systems for applications in Electrical Sciences (ICSSES)*, Tumakuru, India, 2024, pp. 1-
- Goutham Y A, Himasagar T S, Likhith G S, Bharath Gowda N, Karjigi V, and Chandrashekar H M, “Digit Classification System for Normal and Pathological Speech,” *2024 2nd International Conference on Smart Systems for applications in Electrical Sciences (ICSSES)*, Tumakuru, India, 2024, pp. 1-5.
- Akshatha K, Lohith T N, Bhat S U, Sunil R, and Chandrashekar H M, “Automatic Early Detection of Dysarthria using Deep Neural Network,” *2023 International Conference on Smart Systems for applications in Electrical Sciences (ICSSES)*, Tumakuru, India, 2023, pp. 1-4.
- Reethunandh, Yashwanth H R, Venkata Sandeep T S, Subramanya Navada K R, and Chandrashekar H M, “Classification of ECG Arrhythmia Using a Convolution Neural Network,” *2023 International Conference on Smart Systems for applications in Electrical Sciences (ICSSES)*, Tumakuru, India, 2023, pp. 1-8.
- Chandrashekar H M, Karjigi V, and Sreedevi N, “Intelligibility Assessment of Dysarthric Speech Using Extreme Learning Machine,” *International Conference on Wireless Communications Signal Processing and Networking*, Chennai, India, March 2022, pp. 208-212.
- Chandralekha, Chandrashekar H M, Nijesh P S, Sreejith Pai P S, and Ghosh M K, “Anomaly detection in recorded CAN log using DBSCAN and LSTM Autoencoder,” *IEEE 3rd Global Conference for Advancement in Technology (GCAT)*, Bangalore, India, 2022, pp. 1-7.
- Chandrashekar H M, Karjigi V, and Sreedevi N, “Region Based Prediction and Score Combination for Automatic Intelligibility Assessment of Dysarthric Speech,” *IEEE 2021 International Conference on Computing, Communication, and Intelligent Systems*, Greater Noida, India, 2021, pp. 407-412.
- Chandrashekar H M, Karjigi V, and Sreedevi N, “Breathiness indices for classification of dysarthria based on type and speech intelligibility,” *International Conference on Wireless Communications Signal Processing and Networking*, Chennai, India, March 2019, pp. 266-270
- Pratibha K, and Chandrashekar H M, “Estimation and tracking of pitch for noisy speech signals using EMD based autocorrelation function algorithm,” *2nd IEEE International Conference on Recent Trends in Electronics, Information and Communication Technology*, pp.2040-2044, 20th May 2017, India.

- Priyanka D N, and Chandrashekar H M, “Implementation and Comparison of Echo Cancellation Algorithms using Adaptive Filtering Techniques in TMS320C6748 DSK,” *2nd IEEE International Conference on Recent Trends in Electronics, Information and Communication Technology*, pp.2040-2044, 20th May 2017, India.
- Pallavi M, and Chandrashekar H M, “Study and Analysis of ECG Compression Algorithms,” *International Conference on Communication and Signal Processing*, Melmaruvathur, India, 2016, pp. 2028-2032.

Book Chapters

- Pavithra K.S, Chandrashekar H.M, Karjigi V, “Neural Network Based Curve Fitting to Enhance the Intelligibility of Dysarthric Speech,” *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, Volume 13721 LNAI, Year 2022, Pages 545-553.

Reviewer of Journals

- IEEE Journal of Selected Topics in Signal Processing
- Elsevier's Computers, Systems & Signal Processing (CSSP) journal

Editor/ Reviewer of Journal

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Patents

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Invited Lectures, talks and workshops

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