

Abhinav Misra

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EDUCATION **The University of Texas at Dallas**, Richardson, TX, USA
Ph.D. (Electrical Engineering) **Sept 2011 - Present**

Panjab University, Chandigarh, India
B.S.E.E. (Passed with honors) **Sept 2005 - May 2009**

EMPLOYMENT HISTORY **The University of Texas at Dallas**, Richardson, TX, USA
Research Assistant **Sept 2011 - Present**
Center for Robust Speech Systems (CRSS)

Intel, Portland, OR, USA
Graduate Engineering Intern **May 2016 - Aug 2016**

Jibo Inc., Redwood City, CA, USA
Assistant Speech Technology Developer **May 2015 - Aug 2015**

Indian Institute of Technology - Guwahati , Assam, India
Junior Project Fellow **Dec 2009 - July 2011**
Electro Medical and Speech Technology lab (EMST)

EXPERIENCE As a part of PhD, my current research is focused on improving performance of robust speaker and language recognition systems. I've also worked on Automatic Speech Recognition as a summer intern in Intel (2016) and Jibo (2015).

Relevant graduate coursework: DSP I, DSP II, Random Processes, Speech Processing, Speech and Speaker Recognition, Detection and Estimation Theory, Pattern Recognition, Signal Theory, Machine Learning, Probabilistic Graphical Models in Machine Learning

PROJECTS

- **NIST Language Recognition I-vector Machine Learning Challenge (2015):**
Secured rank 3 amongst all the labs that participated from world over. For further details, please see the publication - *Chengzhu Yu et al., "UTD-CRSS System For The NIST 2015 Language Recognition I-Vector Machine Learning Challenge", Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Shanghai, 2015.*
- **NIST Speaker Recognition I-vector Machine Learning Challenge (2013):**
Secured rank 2 amongst more than 100 labs that participated from world over. For further details, please see the publication - *Gang Liu et al., "Investigating State-of-the-Art Speaker Verification in the Case of Unlabeled Development Data", Proc. Odyssey speaker and language recognition workshop, Joensuu, Finland, 2014.*
- **NIST Speaker Recognition Evaluation (SRE-2012)**

System submission selected for oral presentation at NIST SRE Workshop (2012). Further details-
Taufiq Hasan et al. "UTD-CRSS systems for 2012 NIST speaker recognition evaluation", Proc. NIST SRE Workshop, 2012.

AWARDS

Best Paper Award: BC Haris, G Pradhan, **A Misra**, S Shukla, R Sinha, SRM Prasanna, "Multi-variability speech database for robust speaker recognition", National Conference on Communications (NCC), 2011.

Winner of the IEEE Ganesh N. Ramaswamy Memorial Student Grant, Sponsored by IBM Corporation: Chunlei Zhang, Shivesh Ranjan, Qian Zhang, **Abhinav Misra**, Gang Liu, Mahesh Kumar Nandwana, Finnian Kelly, John H.L. Hansen, "Joint Information From Nonlinear And Linear Features For Spoofing Detection: An I-vector/DNN Based Approach", IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Shanghai, 2016

BRIEF SKILL SET

Scripting Languages:

Bash, Perl (Use mainly for text processing).

Python (Implemented several machine learning algorithms like Expectation Maximization, K-means, Naive Bayes etc.)

Middle Level Languages: C, C++ (Implemented a MAP adaptation code in a GMM-UBM framework, and few toolkits that rely on reading language models in arpa format).

Others: MATLAB (Use mainly to simulate research ideas).

PROFESSIONAL ACTIVITIES

Membership:

Institute of Electrical and Electronics Engineers (IEEE)

(**Chairman** of IEEE student branch of Panjab University from 2008-2009).

IEEE Signal Processing Society.

SELECTED PUBLICATIONS

[1] **Abhinav Misra**, Shivesh Ranjan and John H.L. Hansen, "Locally Weighted Linear Discriminant Analysis for Robust Speaker Verification," in Interspeech 2017, Stockholm, Sweden, 2017.

[2] **Abhinav Misra**, Qian Zhang, Finnian Kelly and John H.L. Hansen, "Between-Class Covariance Correction For Linear Discriminant Analysis in Language Recognition," in Odyssey 2016, Bilbao, Spain, 2016.

[3] **Abhinav Misra**, Shivesh Ranjan, Chunlei Zhang and John H.L. Hansen, "Anti-spoofing System: An Investigation of measures to Detect Synthetic and Human Speech," in Interspeech 2015, Dresden, Germany, 2015.

[4] **Abhinav Misra** and John H.L. Hansen, "Spoken Language Mismatch in Speaker Verification: An Investigation with NIST-SRE and CRSS Bi-Ling Corpora," in Spoken Language Technology Workshop, 2014. SLT 2014, Dec 2014.

[5] B C Haris, G Pradhan, **A Misra**, SRM Prasanna, RK Das, R Sinha, "Multivariability speaker recognition database in Indian scenario," in International Journal of Speech Technology, Springer,

2012.