Debasish Ray Mohapatra

debasishray19.github.io
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EDUCATION

University of British Columbia, Vancouver   Jan 2025 (Expected)
Ph.D., Electrical and Computer Engineering
- Advisor: Dr. Sidney Fels, P.Eng.

University of British Columbia, Vancouver   Apr 21
M.A.Sc., Electrical and Computer Engineering
- Thesis: Talking Tube - A novel approach for vocal tract acoustic modelling using the finite-difference time-domain (FDTD) method.
- Advisor: Dr. Sidney Fels, P.Eng.

Siksha 'O' Anusandhan University, Bhubaneswar   Aug 13
B.Tech., Electronics and Communication Engineering
- Project: Image segmentation based on mutual information
- Advisor: Sunita Samant, M.Tech.

PROFESSIONAL EXPERIENCE

Tata Consultancy Services (TCS)   Jan 2014 - Mar 2017
Software Test Engineer
- Functional and regression testing of the front-end (Web app) and back-end (ETL system) applications.

RESEARCH EXPERIENCE

VocalTractLab, TU Dresden   Jun 2022 - Aug 2022
Visiting Research Scholar
Project: A comparative analysis of vocal tract centreline determination algorithms.
Advisor: Dr.-Ing. Peter Birkholz

Human Communication Technologies Lab, UBC   Sep 2018 - Present
Graduate Research Assistant
Project: Vocal tract acoustic modelling.
Advisor: Dr. Sidney Fels, P.Eng.

TEACHING EXPERIENCE

University of British Columbia, Vancouver
Teaching Assistant
Human-Computer interfaces in engineering design, CPEN 441
Introduction to computation in engineering design, APSC 160
Introduction to microcomputers, CPEN 211

University of British Columbia, Vancouver
Peer Tutor, Center for Accessibility
Computational thinking, CPSC 100
Basic algorithms and data structures, CPSC 221

FELLOWSHIPS & GRANTS

- **Interspeech Student Travel Grant**, ISCA (600 EUR)   2022
  Travel grant to attend Interspeech 2022 at Incheon, South Korea

- **UBC Language Sciences Trainee Travel Fund**, UBC (3000 CAD)   2022
  Travel fund for a short-term visit to TU Dresden, Germany

AWARDS & HONORS

- **Graduate Student Travel Award**, UBC   2022
  (500 CAD)

- **Go Global Self-Directed Research Award**, UBC   2022
  (1500 CAD)

- **Graduate Covid Program Delay Tuition Award**, UBC   2021
  (1917 CAD)

- **President's Academic Excellence Initiative PhD Award**, UBC   2021-Present
  (1545 CAD/year)

- **International Tuition Award**, UBC   2018-Present
  (3200 CAD/year)

- **Certification of Appreciation for outstanding contribution**, TCS   2015

CONFERENCE PROCEEDINGS

[6] Mohapatra, D., Fleischer, M., Zappi, V., Birkholz, P., & Fels, S. (2022). "Three-dimensional finite-difference time-domain acoustic analysis of simplified vocal tract shapes," Proc. of Interspeech, pp. 764-768, Incheon, Korea.

[5] Mohapatra, D., Saha, P., Liu, Y., Gick, B., & Fels, S. (2021). "Vocal tract area function extraction using ultrasound for articulatory speech synthesis," Proc. of Speech Synthesis Workshop (SSW), pp. 90-95, Budapest, Hungary.

[4] Mohapatra, D., Zappi, V., & Fels, S. (2020). "A comparative study of two-dimensional vocal tract acoustic modeling based on Finite-Difference Time-Domain methods," International seminar on speech production (ISSP), pp. 154-157, Rhode Island, USA.

[3] Mohapatra, D., Zappi, V., & Fels, S. (2019). "An extended two-dimensional vocal tract model for fast acoustic simulation of single-axis symmetric three-dimensional tubes," Proc. of Interspeech, pp. 3760-3764, Graz, Austria.

[2] Mohapatra, D., & Fels, S. (2018). "Limitations of source-filter coupling in phonation," Proc. of the Acoustic Week in Canada (AWC), pp. 60-61, British Columbia, Canada.

[1] Saha, P., Mohapatra, D., Srungarapu, P., & Fels, S. (2018) "Sound-Stream II: Towards real-time Gesture Controlled articulatory sound synthesis," Proc. of the Acoustic Week in Canada (AWC), pp. 58-59, British Columbia, Canada.

MISCELLANEOUS

Leadership & Volunteer

- **Human Communication Technologies Lab Ambassador**
  Role: Voluntarily worked as the lab representative for the <u>HCT</u> lab, UBC.

Students Mentored

- Rongshuai Wu, University of British Columbia   2022