RIT
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CHAI

CHAI Seminar Series

DATE: **Monday, October 3, 2022, 12:00-1:00 PM**

SPEAKER: **Matthew Seita**
Ph.D. Student, RIT Computing & Information Sciences

TITLE: Designing Automatic Speech Recognition Technologies to Improve Accessibility for Deaf and Hard-of-Hearing People in Small Group Meetings

REGISTRATION LINK:
https://rit.zoom.us/webinar/register/WN_DLMM6CPHT_uvwzLXKEs69Q

ABSTRACT: Deaf and hard of hearing (DHH) individuals face several barriers to communication in the workplace, particularly in small-group meetings with their hearing peers. The impromptu nature of these meetings makes scheduling sign-language interpreting or professional captioning services difficult. Recent advances in Automatic Speech Recognition (ASR) technology could help remove some of these barriers that prevent DHH people from becoming involved in group meetings. However, ASR is still imperfect, and it contains errors in its output text in many real-world conversation settings. Despite this limitation, the DHH community still has strong interest in using ASR in professional settings.

Motivated by this, our research investigates how to improve the usability of ASR technologies by focusing on their HCI aspect, in particular on augmenting ASR technologies with design features which would encourage hearing speakers to speak more clearly while in conversation. Clearer speech would help reduce some errors in captioning as well as improve the communication experience for DHH conversational partners. In this talk, we present empirical research findings on how ASR technology may influence the behaviors of hearing speakers. We will also discuss the communication needs and preferences of DHH individuals, a virtual co-design methodology we used to ideate new features, and the implementation and testing of these features in natural conversational settings.

BIO: **Matthew Seita** is a sixth-year Computing and Information Sciences PhD student at the Rochester Institute of Technology (RIT), and is expected to graduate in May 2023. He is an accessibility and human-computer interaction researcher at the Center for Accessibility and Inclusion Research (CAIR) Lab at RIT and is advised by Dr. Matt Huenerfauth. His work is generously supported by the National Science Foundation Graduate Research Fellowship and the RIT AWARE-AI NRT Fellowship. He has published his work at leading HCI research venues, including the ACM CHI and ASSETS conferences. Matthew is profoundly Deaf and fluent in English and American Sign Language.