PRINCETON ACM / IEEE-CS CHAPTERS
MARCH 2016 JOINT MEETING

Using Automated Speech Recognition and Natural Language Processing to Assess Non-Native English

Can we automatically rate "speaking proficiency" of non-native English speakers?

As English continues to grow as the international language for business and education, there is an increasing demand for automated assessments of non-native English speaking proficiency that can provide reliable scores in a timely and cost effective manner. This talk will describe the foundational Research and Development efforts at Educational Testing Service to develop technologies to address this need. The talk will provide an introduction to SpeechRater, the ETS capability for automated assessment of non-native English. It will also include an overview of how Automated Speech Recognition (ASR) and Natural Language Processing (NLP) techniques are used to extract features from the speech signal to assess different aspects of English speaking proficiency, including pronunciation, fluency, intonation, grammar, vocabulary, and content appropriateness, and how these features are combined together into a statistical model to provide a proficiency score. The presentation will conclude with a discussion of some recent approaches designed to assess non-native speech in an interactive, task-based manner using Spoken Dialog Systems technology.

Keelan Evanini is a Managing Senior Research Scientist in the Research & Development division at Educational Testing Service in Princeton, NJ. As a member of the Speech and Natural Language Processing group, he has conducted research into automated assessment of spoken language for non-native speakers. Some of his main research interests while at ETS have included developing linguistically informed methods of assessing non-native pronunciation and intonation and designing interactive, conversation-based tasks for English learning and assessment. He also manages the Speech & NLP Applications group which focuses on applied engineering and capability implementation for ETS automated scoring engines. Keelan holds a Ph.D. in Linguistics from the University of Pennsylvania and a B.A. in Linguistics from the University of California, Berkeley.

Date:	Thursday, March 17, 2016, 8:00 pm. (Refreshments and networking at 7:30 pm.)
Place:	Small Auditorium, Room CS 105 Computer Science Building, Princeton University
Information:	Dennis Mancl (908) 285-1066
On-line info:	**http://PrincetonACM.acm.org**

All Princeton ACM / IEEE-CS meetings are open to the public. Students and their parents are welcome. There is no admission charge, and refreshments are served.

A pre-meeting dinner is held at 6:00 p.m. at Ruby Tuesday's Restaurant on Route 1. Please send email to **princetonacm@gmail.com** in advance if you plan to attend the dinner.