

## ISCA Distinguished Lecturer Report

Submitted by Professor Helen Meng, The Chinese University of Hong Kong, DL (September 2016)

### 1. Visit to Macau

My visit to Macau was hosted by University of Macau's Vice Rector (Academic Affairs), Professor Lionel Ni. The DL visit was very well publicized ahead of time with a nicely designed poster and an online registration mechanism (see Photo 1).

The poster features a decorative background of overlapping colored rectangles in shades of purple, blue, and green. At the top right, the University of Macau logo and name are displayed in Chinese and English. The main title is centered in a red, serif font. Below the title, a light blue box contains the speaker's name and affiliation, accompanied by a portrait of Prof. Helen Meng. A QR code is positioned on the left side of the event details. The event details are listed in a bold, black font. At the bottom, an abstract of the talk is provided in a smaller font, followed by contact information for the organizer.

 澳門大學  
UNIVERSIDADE DE MACAU  
UNIVERSITY OF MACAU

*Development of Automatic Speech  
Recognition and Synthesis  
Technologies to Support Chinese  
Learners of English:  
The CUHK Experience*

**Prof. Helen Meng**  
Professor and Chairman  
Department of Systems Engineering and  
Engineering Management  
The Chinese University of Hong Kong





**Date:** 26 January, 2016 (Tuesday)  
**Time:** 3:00 pm - 4:30 pm  
**Venue:** E4-G051  
**Language:** English  
**Registration:**  
[https://isw.umac.mo/evm/register/helen\\_meng](https://isw.umac.mo/evm/register/helen_meng)

*Abstract of the Talk*

*Prof. Helen Meng is going to present her group's ongoing research in the area of computer-aided pronunciation training (CAPT) for Chinese learners of English. Their goal is to develop technologies in automatic speech recognition (ASR) to support productive training for learners. Prof. Meng's research group focuses on modeling possible errors due to negative transfer from L1 (i.e. Chinese) of Chinese learners to L2 (English). ASR techniques trained by deep learning are used for fine phonetic analyses to achieve mispronunciation detection and diagnoses. Audio and visual speech synthesis to provide corrective feedback for learners are also developed. This talk presents an overview of the technologies, related experimental results and ongoing work as well as future plans.*

**Enquiry:**  
**Organizer :** Office of the Vice Rector (Academic Affairs)  
**Tel :** 8822 8037; **Email :** VaniaChang@umac.mo

Photo 1. Poster for Distinguished Lecture visit (well publicized ahead of time with online registration).

My visit started with a tour of the new campus. The University of Macau is undergoing rapid and exciting development and they have moved to a beautiful new campus with abundant space for future development. There are wonderful facilities enjoyed by both their staff and students (see Photo 2).



Photo 2: Tour of the new campus of University of Macau. With me is Ms. Vania Chang of the Office of the Vice-Rector (Academic Affairs)

I visited the Faculty of Science and Technology, and had a good discussion with Associate Dean of Research and Graduate Studies, Professor Kam Weng Tam. He is an expert in wireless technologies and heads the Wireless Technology Laboratory. I also toured his laboratory, and saw an intelligent kiosk that is developed by his research team and has been deployed to support library logistics (see Photo 3). The kiosk is a potential platform that can be enhanced with a speech interface.



Photo 3. With Professor Kam Weng Tam, Associate Dean of Research and Graduate Studies of the Faculty of Science & Technology (right) and his research staff member. The intelligent kiosk is developed in his laboratory (the Wireless Technology Laboratory) to support library logistics. It is a potential platform that can be enhanced with a speech interface.

I also visited the Natural Language Processing & Portuguese-Chinese Machine Translation Laboratory (NLP<sup>2</sup>CT) (see Photo 4), which is directed by Professor Derek Wong and Professor Lidia Chao. NLP and MT are core areas that are making rapid progress at University of Macao. I saw a demonstration of their system performing parsing and machine translation. I also saw the posters displaying their research work with former ISCA President Professor Isabel Trancoso, who visited Macau in 2012 and conducted joint work with the research team (see Photo 5).



Photo 4. Visit to the Natural Language Processing & Portuguese-Chinese Machine Translation Laboratory, which is directed by Professor Derek Wong (right), with Associate Dean Professor Kam Weng Tam (left).



Photo 5. Posters on display in NLP²CT, which included collaborative work between Professors Derek Wong, Lidea Chao and former ISCA President Professor Isabel Trancoso.

I also visited with Dean Hong Gang Jin at the Faculty of Arts and Humanities, who is also Chair Professor of Applied Linguistics. My discussions with Vice-Rector Professor Lionel Ni and Dean Jin allowed me to learn about their vision in promoting eLearning and language enhancements. This also opens up many potential collaborations as the topic is well matched with my research interests. My distinguished lecture was very well attended at the large auditorium. Aside from engineers and linguistics, there were also many language instructors. The audience asked plenty of very good questions. I thoroughly enjoyed the interaction and was inspired by some of the questions (see Photo 6).



Photo 6. Picture after giving the distinguished lecture. From left to right – Professor Derek Wong, Dean Hong Gang Jin, myself and Professor Lidia Chao.

Upcoming Visits:

2. Bangkok, Thailand. Hosted by Professor Kosin Chamnongthai, King Mongkut's University of Technology Thonburi, (week of November 28)

3. Vietnam. Hosted by Dr Luong Chi Mai, Institute of Information Tehnology, Vietnam Academy of Science and Technology (week of December 5 est.)