



First CLICS-Winter School Seattle, US Dec. 04-09, 2016

**New Challenges in Automatic Speech Recognition**

## Agenda

### Sunday, December 4<sup>th</sup>, 2016

18.00 Welcome Dinner

### Monday, December 5<sup>th</sup>, 2016

09.00 - 10.00 Joint Breakfast (Pike Place Fish Market, Seattle)

10.00 - 12.00 Touristic Tour through Seattle

13.00 - 14.00 IWSLT 2016, history, purpose, program (Margit Rödder)

14.00 - 19.00 Challenges in Automatic Speech Recognition – what comes next?  
*Short talks & presentations by all participants and discussion*

### Tuesday, December 6<sup>th</sup>, 2016

**CLICS-Winter School @ Microsoft Research, Bldg. 99 (meeting at main entrance)**

**Welcome Remarks**  
*Will Lewis, Microsoft*

**Introduction**  
*Alex Waibel*

**Text and Speech Translation at MSR**  
*Arul Menezes, Microsoft*  
Discussion

**Low-latency ASR for LT**  
*Thai-Son Nguyen*  
Discussion

**Spoken Language Translation**  
*Eunah Cho*  
Discussion

## Lightly Supervised Quality Estimation

*Matthias Sperber*

Discussion

### Break

## Recent Advances in Multi-Lingual Acoustic Modeling

*Markus Müller*

Discussion

## Multi-Lingual NMT

*Thanh-Le Ha*

Discussion

## Customizing Neural Machine Translation Using Pre-translation

*Jan Niehues*

Discussion

## Speech and Language Technologies in a Different Flavor: Breaking the Unwritten Language Barrier and Media Monitoring

*BULB und Sebastian Stüker*

Discussion

19.00

## Joint Dinner

*Burger Restaurant*

### Wednesday, December 07<sup>th</sup>, 2016

10.00 - 14.00

**Individual talks with Prof. Alex Waibel & Prof. Satoshi Nakamura**  
(For appointments: please contact Margit Rödter)

Afternoon

**Possible meeting with this years IWSLT - participants**  
(For appointments: please contact Margit Rödter)


and/or/afterwards

**At your disposal**

**For Winterschool organizers:** participate at IWSLT Steering Committee Meeting @ Microsoft Research, Bldg. 99

### December 08<sup>th</sup> and 09<sup>th</sup>, 2016

International Workshop on Spoken Language Translation, IWSLT at Microsoft Research Campus, Bldg. 92, Seattle – Redmond



IWSLT 2016  
International Workshop on  
Spoken Language Translation  
Dec. 8<sup>th</sup> - 9<sup>th</sup>, 2016

13th International Workshop on Spoken Language Translation  
Program

Thursday, December 8<sup>th</sup>, 2016

- 08:30 - 09:15      Workshop Registration
- 09:15 - 09:30      Welcome Remarks  
*Alex Waibel (General Chair)*  
*Karlsruhe Institute of Technology, Germany; Carnegie Mellon University, USA*
- 09:30 - 10:30      Report on the 13th IWSLT Evaluation Campaign, IWSLT 2016
- 10:30 - 11:00      Coffee Break
- 11:00 - 12:30      **Evaluation Campaign**
- 11:00 - 11:30      The 2016 KIT IWSLT Speech-to-Text Systems for English and German  
*Thai Son Nguyen, Markus Müller, Matthias Sperber, Thomas Zenkel, Kevin Kilgour, Sebastian Stüker and Alex Waibel*  
*Karlsruhe Institute of Technology, Germany*
- 11:30 - 12:00      The RWTH Aachen Machine Translation System for IWSLT 2016  
*Jan-Thorsten Peter, Andreas Guta, Nick Rossenbach, Miguel Graca and Hermann Ney*  
*RWTH Aachen University, Germany*
- 12:00 - 12:30      QCRI's Machine Translation Systems for IWSLT'16  
*Nadir Durrani, Fahim Dalvi, Hassan Sajjad and Stephan Vogel*  
*Qatar Computing Research Institute, Qatar*
- 12:30 - 14:00      Lunch



13th International Workshop on Spoken Language Translation  
Program, December 8<sup>th</sup>

**14:00 - 16:00**      **Oral Session I**

14:00 - 14:30      Microsoft Speech Language Translation (MSLT) Corpus: The IWSLT 2016 Release for English, French and German  
*Christian Federmann and William D. Lewis*  
*Microsoft Research, USA*

14:30 - 15:00      Audio Segmentation for Robust Real-Time Speech Recognition Based on Neural Networks  
*Micha Wetzel, Matthias Sperber and Alexander Waibel*  
*Karlsruhe Institute of Technology, Germany*

15:00 - 15:30      Multilingual Disfluency Removal using NMT  
*Eunah Cho, Jan Niehues, Thanh-Le Ha and Alex Waibel*  
*Karlsruhe Institute of Technology, Germany*

15:30 - 16:00      Towards Improving Low-Resource Speech Recognition Using Articulatory and Language Features  
*Markus Müller, Sebastian Stüker and Alex Waibel*  
*Karlsruhe Institute of Technology, Germany*

**16:00 - 16:30**      **Coffee Break**

**16:30 - 18:00**      **Poster Session**

The IOIT English ASR System for IWSLT 2016  
*Van Huy Nguyen, Trung-Nghia Phung, Tat Thang Vu and Chi Mai Luong*  
*Institute of Information Technology, Vietnam*

FBK's Neural Machine Translation Systems for IWSLT 2016  
*Rajen Chatterjee, Mohammad Amin Farajian, Costanza Conforti, Shahab Jalalvand, Vevake Balaraman, Mattia Di Gangi, Duygu Ataman, Marco Turchi, Matteo Negri and Marcello Federico*  
*Fondazione Bruno Kessler, Italy*

Adaptation and Combination of NMT Systems: The KIT Translation Systems for IWSLT 2016  
*Eunah Cho, Jan Niehues, Thanh-Le Ha, Matthias Sperber, Mohammed Mediani and Alex Waibel*  
*Karlsruhe Institute of Technology, Germany*



13th International Workshop on Spoken Language Translation  
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The RWTH Aachen LVCSR System for IWSLT-2016 German Skype Conversation Recognition Task  
*Wilfried Michel, Zoltán Tüske, M. Ali Basha Shaik, Ralf Schlüter and Hermann Ney*  
RWTH Aachen University, Germany

QCRI's Machine Translation Systems for IWSLT'16  
*Nadir Durrani, Fahim Dalvi, Hassan Sajjad and Stephan Vogel*  
Qatar Computing Research Institute, Qatar  
LIMS@IWSLT'16: MT Track  
*Franck Burlot, Matthieu Labeau, Elena Knyazeva, Thomas Lavergne, Alexandre Allauzen and François Yvon*  
Laboratoire d'Informatique pour la Mécanique et les Sciences de l'Ingénieur, France

RACAI Entry for the IWSLT 2016 Shared Task  
*Sonia Pipa, Alin-Florentin Vasile, Ioana Ionascu, Stefan Daniel Dumitrescu and Tiberiu Boroş*  
Research Institute for Artificial Intelligence "Mihai Drăgănescu", Romania

The MITLL-AFRL IWSLT 2016 Systems  
*Michael Kazi, Elizabeth Salesky, Brian Thompson, Jonathan Taylor, Jeremy Gwinnup, Timothy Anderson, Grant Erdmann, Eric Hansen, Brian Ore, Katherine Young and Michael Hutt*  
Massachusetts Institute of Technology Lincoln Laboratory - Air Force Research Laboratory, USA

The RWTH Aachen Machine Translation System for IWSLT 2016  
*Jan-Thorsten Peter, Andreas Guta, Nick Rossenbach, Miguel Graca and Hermann Ney*  
RWTH Aachen University, Germany

The 2016 KIT IWSLT Speech-to-Text Systems for English and German  
*Thai Son Nguyen, Markus Mueller, Matthias Sperber, Thomas Zenkel, Kevin Kilgour, Sebastian Stueker and Alex Waibel*  
Karlsruhe Institute of Technology, Germany

UFAL Submissions to the IWSLT 2016 MT Track  
*Ondřej Bojar, Roman Sudarikov, Tom Kocmi, Jindřich Helcl and Ondřej Cifka*  
Charles University, Czech Republic



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The UMD Machine Translation Systems at IWSLT 2016: English-to-French  
Translation of Speech Transcripts  
*Xing Niu and Marine Carpuat*  
*The University of Maryland, USA*

The University of Edinburgh's Systems Submission to the MT Task at IWSLT  
*Marcin Junczys-Dowmunt and Alexandra Birch*  
*The University of Edinburgh, UK*

19:30

**Social Event: Dinner**





13th International Workshop on Spoken Language Translation  
Program, December 9<sup>th</sup>

Friday, December 9<sup>th</sup>, 2016

- 09:00 - 10:00      Invited Talk:  
Achieving Human Parity in Conversational Speech Recognition  
*Geoffrey Zweig*  
*Microsoft Research, USA*
- 10:00 - 10:30      Open Discussion  
The Future of the IWSLT Evaluation Campaign
- 10:30 - 11:00      **Coffee Break**
- 11:00 - 12:30      **Oral Session II**
- 11:00 - 11:30      Is Neural Machine Translation Ready for Deployment? A Case Study on  
30 Translation Directions  
*Marcin Junczys-Dowmunt, Tomasz Dwojak and Hieu Hoang*  
*Adam Mickiewicz University in Poznan, Poland; The University of*  
*Edinburgh, UK*
- 11:30 - 12:00      Toward Multilingual Neural Machine Translation with Universal Encoder  
and Decoder  
*Thanh-Le Ha, Jan Niehues and Alex Waibel*  
*Karlsruhe Institute of Technology, Germany*
- 12:00 - 12:30      Factored Neural Machine Translation Architectures  
*Mercedes García Martínez, Loïc Barrault and Fethi Bougares*  
*Laboratoire d'Informatique de l'Université du Maine, France*
- 12:30 - 13:45      **Lunch**
- 13:45 - 15:15      **Oral Session III**
- 13:45 - 14:15      Investigating Cross-lingual Multi-level Adaptive Networks: The Importance  
of the Correlation of Source and Target Languages  
*Alexandros Lazaridis, Ivan Himawan, Petr Motlicek, Iosif Mporas and*  
*Philip N. Garner*  
*Idiap, Switzerland; Queensland University of Technology, Australia; University of*  
*Hertfordshire, UK*
- 14:15 - 14:45      Integrating Encyclopedic Knowledge into Neural Language Models  
*Yang Zhang, Jan Niehues and Alex Waibel*  
*Karlsruhe Institute of Technology, Germany*



**13th International Workshop on Spoken Language Translation  
Program, December 9<sup>th</sup>**

- 14:45 - 15:15      Two-Step MT: Predicting Target Morphology  
*Franck Burlot, Knyazeva Elena, Lavergne Thomas and François Yvon*  
*Laboratoire d'Informatique pour la Mécanique et les Sciences de*  
*l'Ingénieur, France*
- 15:15 - 15:30      **Coffee Break**
- 15:30 - 16:30      **Oral Session IV**
- A Verb Lexicon Model with Source-side Syntactic Context for String-to-Tree Machine Translation  
*Maria Nadejde, Alexandra Birch and Philipp Koehn*  
*The University of Edinburgh, UK; Johns Hopkins University, USA*
- Joint ASR and MT Features for Quality Estimation in Spoken Language Translation  
*Ngoc Tien Le, Benjamin Lecouteux and Laurent Besacier*  
*Laboratoire d'Informatique de Grenoble, France*
- 16:30 - 16:45      **Closing Remarks**