Automatic Simultaneous Translation – a service developed by the Interactive Systems Labs

The Lecture Translator: A service for students in the lecture halls or international meetings
The Automatic Simultaneous Translation – a service developed by the Interactive Systems Labs (Karlsruhe Institute of Technology and Carnegie Mellon University)

The Interactive Systems Lab at KIT focuses on technologies that facilitate the human experience, human mutual understanding and communication. Research ranges from speech recognition, translation, speech synthesis, language, vision technologies, person tracking and recognition, multi-modal and cross-modal perceptual interfaces, smart rooms and pervasive computing.

Since 2012, Karlsruhe Institute of Technology (KIT) has installed the Automatic Simultaneous Lecture Translator to translate lectures for foreign students and for hearing-impaired students. This service was first addressed by the scientific team of Professor Alex Waibel. Similar to subtitles in films, students can read the lecture in real time on a computer screen (via the internet). “Our research and the service for our students is advancing constantly”, says Prof. Alex Waibel. Additional challenges result as a lecturer does often not complete sentences, has an unclear pronunciation, or does not pay attention to punctuation. Significant improvements were reached through neural networks, a part of artificial intelligence. Scientists also continue to work on achieving adequate translation of technical terms, and on the automatic adaption to new languages. Other universities have shown interest in the lecture translation system and first field tests are already taking place. The Karlsruhe Information Technology Solutions - kites GmbH is the competent partner to develop individual solutions.

https://lecture-translator.kit.edu/
The Lecture Translator on video:

Lecture Translator, general introduction (2019)

Lecture Translator, challenges (2019)

EU-funded project EU-BRIDGE (2014)

Translation on a Phone (Jibbigo), commercial Apple video

Interface of the Lecture Translator

Scan the code and visit our YouTube-Page!
The Lecture Translator in the news:

Selection of some articles:
The Guardian: Is the era of artificial speech translation upon us? UK, 2019, 02-19

Management und Krankenhaus, Wie kommt das Weltwissen in die Spracherkennung Germany, 2019, 08-07 (in German)

More detailed and overview articles on our research:


The Lecture Translator can also be beneficial in international meetings!
The Interactive Systems Labs – our “firsts“:

For more than 25 years our lab is doing research in the field of speech technology. Some of our „firsts“ are:

- **1991**: the first speech-to-speech-translation system in Europe and the US, JANUS
- **1992**: C-STAR (Consortium for Speech Translation Advanced Research) was founded and in 1993 the first speech translation system for spontaneous requests was developed
- **2000**: the first prototype of a mobile translation system for traveling
- **2003**: the first domain unlimited speech translation system
- **2005**: the first simultaneous translation system for lectures in real time
- **2007**: our speech-to-speech translation was used for the first time in humanitarian operations
- **2009**: the first commercial App for speech-to-speech translation on a mobile device became available
- **2013**: we presented the simultaneous translation service for university lectures (German into English)
- **today**: the simultaneous lectures translation runs as a service in different lecture halls

Head of the Interactive Systems Lab is Prof. Alex Waibel
Further information, links and addresses:

https://lecture-translator.kit.edu/

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Karlsruhe Institute of Technology
Adenauerring 2
76131 Karlsruhe, Germany
http://isl.anthropomatik.kit.edu/

Prof. Dr. Alex Waibel
Institute for Anthropomatics and Robotics – Interactive Systems Labs
Phone: +49 (0)721 608-44730
E-mail: alexander.waibel@kit.edu

Karlsruhe Information Technology Solutions
Managing Director: Dr. Sebastian Stüker
Moningerstr. 3
76135 Karlsruhe, Germany
Phone: +49 (0)721 7540 3733
E-mail: sebastian.stueker@karlsruhe-it-solutions.com
http://www.karlsruhe-it-solutions