



Participant Profile

for the
Turkish-German Strategy Workshop 2006
TÜBİTAK Marmara Research Center,
Istanbul- Gebze Turkey
13 – 15 December 2006



International Bureau (IB)
of the Federal Ministry of
Education and Research
(BMBF)

**Expertise,
technologies and
infrastructures
available in your
institution:**

Research activities / expertise: Communication acoustics, perceptive quality of systems, multimedia technology, speech processing, acoustic signal processing, theory of signals and systems

Methods: multimedia signal processing, communication acoustics, psychoacoustics, speech technology

Key technologies: speech synthesis, speech recognition, dialogue systems, non-speech acoustic signal processing (diagnosis etc.), assessment of perceptual quality

Infrastructures: Multimedia studio, anechoic chamber, reverberating room, laboratory for speech signal processing

Key publications:

Hoffmann: Signalanalyse und -erkennung, Springer 1998.

Eichner, Hoffmann et al.: Speech-enabled services in a web-based e-learning environment. *Advanced Technology for Learning* 1 (2004) 2, 91 – 98.

Werner, Eichner, Wolff, Hoffmann: Towards spontaneous speech synthesis. *IEEE Trans. on Speech and Audio Processing* 12 (2004) 4, 436 – 445.

Jekosch: Assigning Meaning to Sounds: Semiotics in the Context of Product-sound Design. In: Blauert (Ed.), *Communication Acoustics*. Springer 2005, 193 – 222.

Jekosch: *Voice and Speech Quality Perception. Assessment and Evaluation*. Springer 2005.

Hoffmann: *Speech Synthesis on the Way to Embedded Systems*. Invited paper, Proc. SPECOM 2006, pp. 17 – 26.

Hoffmann: *Speech, Text, and Braille Conversion Technology*. In: Hersh / Johnson (Editors), *Assistive Technology for the Blind and Vision-impaired*. Springer London 2006 (in print).



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2. Past and present research collaborations

Are you familiar
with the European
Framework
Programme?

Yes

No

- with Framework Programme 5
 with Framework Programme 6
 with Framework Programme 7

EU-projects you are
involved in:

Past projects

**Programme title / contract number / title / acronym / your function
(coordinator / partner / contractor)**

FP6, TC-STAR (Technology and Corpora for Speech to Speech Translation),
subcontractor of Siemens AG

Present projects

FP6, Information Society Technology, Contract 004171, HearCom (Hearing in the
Communication Society), contractor, coordinator of workpackage 4

**Other international
collaborations:**

Founding member of ECESS (European Center of Excellence in Speech
Synthesis)

Research cooperation with The Rensselaer Polytechnic Institute, School of
Acoustics, Troy, N. Y.

INTAS 04-77-7404: Development of multi-voice and multi-language Text-to-
speech and Speech-to-text conversion systems. Project coordinator.

INTAS 05-100007-426: Introduction of the automatic Russian speech
recognition system SIRIUS in telecommunication. Project coordinator.

**Name(s) and
contact details of
potential partners:**

**If you would like to suggest the participation of particular partners from the
partner country based on existing contacts or collaboration experience,
you are welcome to indicate their names and contact details below:**

Middle East Technical University, Ankara
Assoc.Prof.Dr. ÇİLOĞLU TOLGA
Department of Electrical and Electronics Engineering
06531 Ankara, Turkey



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3. Presentation at the Workshop

I will give a presentation at the workshop (approx. 10 min.) to present my institution, my expertise, and my collaboration interests. The contents of my presentations is summarised below (max. 1 page).

The Institute of Acoustics and Speech Communication of the Dresden University of Technology includes two research groups:

- Communication Acoustics (Prof. Ute Jekosch)
- System Theory and Speech Technology (Prof. Rüdiger Hoffmann)

In this way, the research topics of the institute cover a broad range of fundamentals of human-to-human and human-to-machine communication (Psycho- and Semioacoustics, Electroacoustics, Room acoustics) and its engineering components (general and multimedia signal processing, system theory). These fundamentals are applied to speech technology (speech recognition, speech synthesis) and other fields like musical signal processing or general pattern recognition. Special applications are directed to embedded systems and their application to communication devices and to aids for the handicapped.

Collaboration interest:

We are interested in cooperation regarding all human-to-human and human-to-machine communication problems from the engineering point of view. In the given context, the different languages of the partners should play an important role. Therefore, projects should be initiated which consider bilingual or multilingual aspects of the following topics (examples):

- systems for text-to-speech (synthesis)
- systems for speech-to-text (recognition)
- multimodal support for the systems mentioned above
- applications for speech dialog and speech translation
- applications for language learning and/or improving the pronunciation of second language learners
- applications in aids for the handicapped
- studies in the perceptual quality of systems
- personalization of the technical systems (modelling emotions and individual features)
- building an infrastructure for bi- or multilingual speech technology
- collecting large bi- or multilingual databases

I agree with the publication of my data on the Workshop website!

PLEASE FILL IN THIS FORM UNTIL 22 SEPT. 2006 AND RETURN IT TO:

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