

# Laboratory Course for Main Studies

## “Automatic Speech Recognition”

### WS 2011/12

Type	Schedule / Room	Start	Instructor
Ü2	by arrangement / terminal room Lehrstuhl Informatik 6	1st meeting: follow announcem.	Prof. Dr.–Ing. H. Ney, Dr. rer.nat. R. Schlüter M. Sundermeyer

#### Content:

The course will cover the implementation of a dynamic decoding algorithm for automatic speech recognition in C++. Given the trained probabilistic models, the goal of such a search algorithm is to find the most probable word sequence. Based on the state-of-the-art speech recognition software of the chair, we will implement a fast variant of a dynamic search method. To reduce the search effort, we will apply several pruning techniques. Finally, we will evaluate the software on a recognition task.

#### Assignment:

Applied Computer Science/ Field of Specialization

#### Requirements:

- Vordiplom/Bachelor
- Participation in at least one of the lectures “Pattern Recognition and Neural Networks”, “Automatic Speech Recognition”, or “Statistical Methods in Natural Language Processing” is compulsory.
- If a “Leistungsnachweis” was done in one of the above lectures, the participation in the seminar is guaranteed.
- Practical experience with the programming language C/C++ are helpful.

#### References:

Lecture notes und References from lecture “Automatic Speech Recognition”

#### Recurrence:

Each winter term.

#### Others:

The **first meeting** will take place at the beginning of the term in the seminar room of the Lehrstuhl für Informatik 6.

In agreement with the participants the lab course will take place during the term or as a block at the end of the term. Among others its goal is to introduce candidates of hiwi-jobs and diploma works to the methods used at the Lehrstuhl für Informatik 6.

Enquiries to:

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