



# Diplomarbeit/Master Thesis

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## Development of a new type of sensor for measuring blood pressure from the head

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Munich, 07. June 2010

### Research area

High Blood pressure is a treacherous condition, as the sufferer often feels perfectly healthy even when their blood pressure is dangerously high. Every second death in Germany can be attributed to it. Hypertension is often only detected when the problem is seriously advanced, at a stage where the heart, blood vessels, brain and kidneys are already damaged. Early detection of high blood pressure enables an individually tailored therapy to be developed, significantly reducing the risk of secondary damage, such as Heart attacks and strokes. The diagnosis of Hypertension is enormously important, however extremely difficult, as blood pressure can fluctuate widely between measurement times.

### Description of Project

The thesis focuses on the development of a new type of blood pressure sensor that, in contrast to previously developed measurement instruments, will be applied to the head. The development of this technique should enable a more or less continuous measurement of the patient's blood pressure in course of their daily life.

The task consists of the development of a sensor on the basis of a completely new measurement principle, the evaluation of the biosignals and the first concept tests.

### Candidate Requirements

We expect a fundamental proficiency and interest in medical electronics and medical engineering, interdisciplinary thinking and the ability to work independently.

### We offer

- Professional guidance in a challenging interdisciplinary work area
- Attentive supervision, in an intensive academic working atmosphere

### Contact

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