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**Assessment of the Individual
Auditory Perception
via Evoked Potentials**

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For the linguistic communication as social key core, humans need the capability to transmit and to receive. According to the current opinion, two processing strategies occur in the hearing as receiver: in a so-called bottom-up process physical sound events are transformed in neural pulses and features are extracted; in a simultaneous top-down process, these features are verified by expectations and experiences which are provided in higher centres.

The experiences are acquired in the early childhood.

Learning disorders during this age – caused by an impairment of the auditory perception – may result in serious consequences for the language development at first, and later for the human fluency.

The aim of the current work is to provide objective diagnostic tools for auditory perception disorders which are independent from the cooperation of the patient on the one hand and independent from the interpretation of the investigator on the other hand.

The measurement of auditory evoked potentials proves to be an adequate approach.

There, an EEG is recording during acoustic stimulation.

In the EEG, the physiologic processes of the auditory perception are reflected in the brain's neural response to the acoustic stimulus.

In the current work, methods for the objective measurement of auditory discrimination abilities and for the determination of the temporal auditory resolution are introduced.

Further, the relevant mechanisms of the precognitive speech processing are assessed and an approach for their clinical exploitation is suggested.

The achieved contributions show that auditory evoked potentials are well-suited for the modelling of perception processes.

If they reach the selectivity which is demanded for audiological diagnostics has to be investigated in further works.