forum | IKS

as part of the IKS series of events Dr.-Ing. Raphael Koning, Head of R&T Sound Coding, Advanced Bionics, will give a lecture with the title:

„From Surgery to Sound Perception - Signal Processing in Cochlear Implants“

The cochlear implant (CI) is a successful treatment for people with severe to profound sensorineural hearing loss. It restores the sound perception by directly stimulating the auditory nerve fibers. In CIs, different signal processing techniques are used at various stages of a CI user’s hearing journey. Auditory nerve responses such as the cochlear microphonic are recorded during surgery, and electrically compound action potentials during and after surgery help with fitting. Each requires different techniques in terms of noise reduction and artifact rejection. For electrical hearing, a sound coding strategy transforms the incoming microphone signals to a series of electrical pulses to drive the intra-cochlear electrodes hence representing the frequency and energy of the audio signal. Additionally, techniques such as directional microphones exploit the spatial distribution of sound sources while other speech enhancement schemes remove as much of the interfering background noise as possible without introducing excessive speech distortion. Both approaches substantially reduce background noise, leading to improved speech perception.

After the lecture, the guests have the opportunity to join an open discussion during a snack.

Dr.-Ing. Raphael Koning, Advanced Bionics, Hannover
Termin: 3. Juli 2019 | 17.00 Uhr
Ort: Hörsaal 4G
Muffeter Weg 3a