

## Fabrication of bioelectronic thin film-based devices

### **Abstract:**

The main purpose of this lecture is to demonstrate fabrication possibilities in CEITEC core facilities ISO-5 cleanroom. Since the laboratory is equipped with a broad spectrum of tools for surface and bulk microfabrication techniques, this talk will be addressed to employment of these instruments for fabrication of different bioelectronic devices such as flexible stimulation electrodes, microelectrode arrays or vertical organic electrochemical transistors. Bioelectronic thin film-based devices are usually specific due to demands on biocompatibility and longtime stability and performance. Additionally, flexible bioelectronic devices combine many aspects known from microelectromechanical systems and integrated circuits, which makes their fabrication more difficult while the biocompatibility as the main factor must be preserved. Therefore, it is important to perform several iteration steps between design, fabrication and testing before the final device is ready for real in-vivo experiments.