Contribution ID: **325** Type: **Talk**

【9】Synthetic holography with spatial light modulators for biophotonics applications

Thursday 29 August 2019 09:40 (40 minutes)

Optical wavefront shaping with spatial light modulators (SLMs), such as deformable mirrors, digital micro-mirror devices or liquid crystal (LC) panels, has become a powerful tool in Biophotonics. "Holographic optical tweezers"are well-known and widespread, but an SLM can also be integrated into optical imaging systems, making the microscope programmable and adaptable with respect to the needs of specific samples. A particular strength of the approach with programmable phase masks is the possibility to multiplex, which means that one can 'pack'several tasks into one computer-generated hologram. Wavefront shaping with SLMs also enables targeting structures for optogenetical stimulation of neurons in 3D, or imaging into deeper depth in scattering media.

Author: Prof. RITSCH-MARTE, Monika (Med. Uni Innsbruck)

Presenter: Prof. RITSCH-MARTE, Monika (Med. Uni Innsbruck)

Session Classification: Plenary Session