



## **Ultrahigh speed imaging by multiplexed ptychography**

Oren Cohen

Technion Department of, University of Technion, Israel

**Abstract:** I will describe a new type of microscope for recording dynamics of non-repetitive events that is based on time-resolved imaging by multiplexed ptychography. In our microscope, time-resolved complex-valued multiple frames of the object are recovered algorithmically from the data measured in a single CCD exposure of a ptychographic imaging system. I will present the development and applications of the microscope.