

Universität Bern  
Institut für Angewandte Physik  
Sidlerstrasse 5  
3012 Bern, Schweiz

Telefon:+41 (0)31 631 89 11  
E-Mail: iapemail@iap.unibe.ch  
www.iap.unibe.ch



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## **Seminar über Ultrafast Science and Technology**

**Referent/in:** Tobias Schweizer

**Titel:** Ptychographic reconstruction of optical vector fields

Over the past few years a plethora of extensions to the spatial Ptychographic Iterative Engine (PIE) have been proposed, many of which are useful in Time Domain Ptychography (TDP) as well. In this talk we discuss the adaptation of TDP to vector fields, allowing for the reconstruction of the time resolved state of polarisation of a given laser pulse. We take a look at the necessary changes to the underlying model and the algorithm itself. Some simulations are presented, both as a proof of concept and as a benchmark for the retrieval capabilities of the algorithm. Thereafter some preliminary results obtained from an in-house setup will be discussed. Current challenges and ideas for the future will be highlighted towards the end of the talk.

**Zeit:** Donnerstag, 22.04.2021, 11.15 Uhr

**Ort:** <https://unibe-ch.zoom.us/j/95614042821>