

Ulrich Schreiber

### **Optical metrology in space geodesy**

With the first verified detections of gravitational waves the year 2016 has seen a major achievement for optical interferometry. Sagnac interferometry has also achieved a point of maturity where the measurement of LoD is a reasonable goal. Last but not least, optical atomic clocks become realistic candidates for a geodetic height system, including highly accurate long distance optical frequency comparisons. Against this background we find that optical frequency combs play a major roll in this enormous boost that the field of photonics has shown. On closer inspection it turns out that most of these very successful key technologies have a strong relationship with SLR. This talk provides some thoughts on how SLR fits into this rapidly developing field of photonics in order to stimulate discussions.