

LightTrans' talks at SPIE Photonics West 2019

Physical-optics simulation of optical interferometry systems

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Modern interferometer-based optical-metrology technologies play an important role in many applications, and often consist of multi-disciplinary components. This reveals new ways of improving the performance or enriching the functionality of the system, while at the same time causing certain difficulties in system analysis and assembly. To overcome this, we present a physical-optics-based simulation approach. It starts from an electromagnetic representation of sources, which enables the modeling of coherence and polarization. We demonstrate how to integrate new components (from microscopy objectives to diffractive, micro- and nanostructures) in selected classical interferometric setups, and gauge whether the resulting system fulfills the desired functionality.

