Nonlinear Microscopy of Tissues and Embryo Morphogenesis

Emmanuel Beaurepaire
Ecole Polytechnique, Palaiseau, France

Nonlinear microscopy is attractive for live tissue imaging. Second- and third-harmonic generation (SHG, THG) signals can provide structural information from unstained tissues, in conjunction with fluorescence.

We will discuss recent applications to zebrafish embryogenesis and human cornea imaging, and ongoing developments such as pulse shaping and wavefront control.