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Multimodal nonlinear imaging and manipulation of biomaterials

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Multiphoton microscopy is quickly becoming a multimodal image contrast tool. Initially, multiphoton microscopy was essentially the domain of two-photon absorption fluorescence microscopy, but with the discovery of third-harmonic microscopy and the renaissance of second-harmonic microscopy, it is becoming increasingly interesting to simultaneously exploit all of these contrast mechanisms (and more!). As the image content explodes, so too does the ability to manipulate materials within the image using these same lasers. Multicontrast, three-dimensional images and manipulation will be presented in this talk.