Recent advances in multimodal neurotechnologies have opened new avenues for recording and manipulation of neuronal activity. Multimodal approaches include physical interactions between modalities, as in the use of ultrasound (US) to steer the light and US-assisted focusing, as well as combinations of modalities which extend the spatiotemporal scale, resolution, and specificity achievable by each modality alone.

This special section aims to highlight hybrid photonic/X neurointerfaces including the underlying methodologies and the application of these hybrid tools to studies of brain in health and disease. We welcome submissions from efforts combining a broad range of tools to image, record, and manipulate brain structure and function across animal species and in humans. The individual modalities include but are not limited to:

- Optogenetics
- Optoacoustic simulation
- Photobiomodulation
- Ultrasound-assisted focusing
- Single- and multiphoton fluorescent, phosphorescence and bioluminescent imaging
- Hemodynamic, vascular and metabolic optical imaging
- Photoacoustics
- Microendoscopy and microfiber-based imaging
- fMRI
- Electrophysiological recordings with optically transparent and integrated neurophotonic probes
- Implantable multimodal probes and interfaces for imaging, recording and closed/open loop control
- Multimodal molecular reporters and actuators.

Submissions deadline: **1 December 2021**. See the full call for papers at [www.spie.org/NeurophotonicsCalls](http://www.spie.org/NeurophotonicsCalls). Submit online at [https://neurophotonics.msubmit.net](https://neurophotonics.msubmit.net).

For information on how to prepare a manuscript for *Neurophotonics*, please visit our website [www.spie.org/NPhauthorinfo](http://www.spie.org/NPhauthorinfo).