



About the Cover: *Advanced Photonics Nexus* Volume 2, Issue 4

Computational imaging holds the potential to revolutionize optical imaging by providing wide field-of-view and high-resolution capabilities. In coherent computational imaging, joint reconstruction of amplitude and phase expands the dimension and throughput of optical imaging, unlocking new insights for diverse fields, including biomedicine, crystallography, and astronomy. However, most of the existing large-scale coherent imaging techniques rely on multiple scanning or modulation processes to achieve high-resolution and signal-to-noise ratio, which poses feasibility challenges in application due to tradeoffs among speed, resolution, and quality. Deep learning emerges as a promising solution to surmount these limitations by learning

statistical priors from training data, propelling the advancement of coherent computational imaging.

The image on the cover for *Advanced Photonics Nexus* Volume 2 Issue 4 illustrates a complex-domain neural network to represent a complex wavefront with a multidimensional framework. It can exploit latent coupling information between amplitude and phase components, resulting in strong generalization and robustness. The image is based on original research presented in the article “[Complex-domain-enhancing neural network for large-scale coherent imaging](#),” by Xuyang Chang, Rifa Zhao, Shaowei Jiang, Cheng Shen, Guoan Zheng, Changhui Yang, and Liheng Bian.