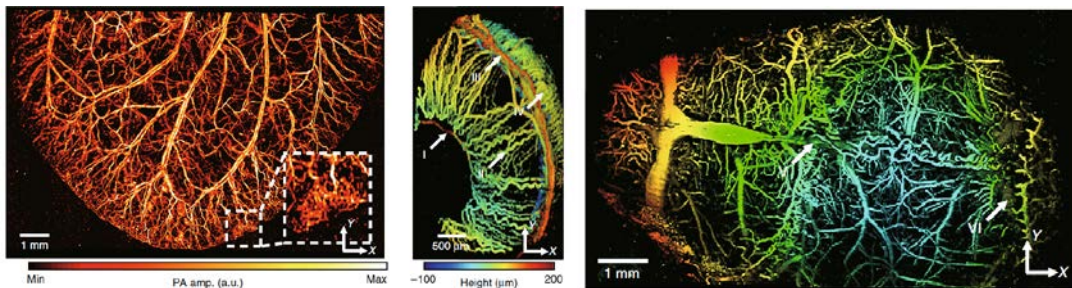


# 2021 IEEE Denver EMBS Distinguished Lecture

## Trans-Energy Multimodal Imaging: from Development to Commercial Products via Clinical Translation

**Chulhong Kim, Ph.D.**

Mueunjae Chair Professor of Electrical Engineering,  
Convergence IT Engineering, and Mechanical Engineering  
Director of Medical Device Innovation Center  
Pohang University of Science and Technology, South Korea  
Visiting Scholar of Radiology, Stanford University  
Chief Executive Officer, Opticho, Inc



Trans-energy imaging modalities have been significantly explored to overcome existing problems in conventional imaging modalities with respect to spatial/temporal resolutions, penetration depth, signal-to-noise ratio, contrast, and so on. Among them, photoacoustic imaging, an emerging hybrid modality that can provide strong endogenous and exogenous optical absorption contrasts with high ultrasonic spatial resolution, has overcome the fundamental depth limitation while keeping the spatial resolution. The image resolution, as well as the maximum imaging depth, is scalable with ultrasonic frequency within the reach of diffuse photons. In this presentation, the following topics will be discussed; (1) multiscale and multiparametric trans-energy imaging systems, (2) novel deep-learning powered image processing, (3) recent clinical study results, and (4) efforts to commercialization.

**Date/Time:** January 19, 2021 3PM – 4PM, MST (United States)

**Registration Link:** <https://events.vtools.ieee.org/m/252875>

**Contact:** Jing Zhao ([zhaojing1120@gmail.com](mailto:zhaojing1120@gmail.com))

