

## Challenging the limits of detection technology

Marcus Mueller<sup>1</sup>, Luca Piazza<sup>2</sup>

<sup>1</sup>*DECTRIS Ltd.* <sup>2</sup>*DECTRIS Ltd*

*marcus.mueller@dectris.com*

Hybrid Photon Counting (HPC), the combination of hybrid-pixel technology and single-photon counting, has radically transformed X-ray detection in diffraction techniques in the past 20 years. DECTRIS was at the forefront of this transformation, developing state-of-the-art, reliable, and easy to use detectors and making them widely available.

With our recent advances, DECTRIS keeps challenging the limits of detection technology. EIGER2 features superior count rates, dual energy discrimination, simultaneous read/write, and kilohertz frame rates. Two different sensor options provide high quantum efficiency over a wide range of X-ray energies. Now, new hybrid-pixel detectors like QUADRO, ELA, and SINGLA bring the advantages of direct electron detection and fast, noise-free counting to electron microscopy applications. This presentation will highlight the recent advances of DECTRIS in X-ray and electron detection.