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## Multiple-plane phase retrieval in the terahertz frequency range: a practical experience

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Terahertz (THz) phase imaging has emerged as a crucial tool for the real-time inspection of biomedical samples and the study of hidden structures and properties in various materials. However, there is a significant gap in a comprehensive evaluation of iterative phase retrieval algorithms within the THz frequency range. This talk is aimed at the practical assessment of the multiple-plane iterative phase retrieval algorithms used in the THz frequency range. In addition, essential components, such as detectors, sources of THz radiation, and key considerations for practical phase measurements will be reviewed. Some new important practical applications will also be highlighted, such as the design and inspection of the THz optical components and diffractive optical elements.



### **Short Bio:**

**Nikolay V. Petrov** received his PhD degree in Optics from ITMO University, Russia. He is a leading professor there and visiting professor of Harbin Engineering University, China.