

Advanced Interaction Models in Ptychography

Benedikt Diederichs

Ptychography became one of the leading techniques for atomically resolved scanning transmission electron microscopy over the last decade. It can be rephrased as a phase retrieval problem for the Short Time Fourier Transform. And while this inverse problem has a compelling mathematical solution, real world data comes with a whole package of problems, including dynamical scattering and partial coherence. Here we elaborate how these can be overcome.