Jitterbug efficiently identifies and corrects for STEM scanning and drift problems improving both image resolution and signal-noise ratio (SNR) [1].

Scan-noise in the STEM causes atomic columns to appear ‘sliced’ and ‘torn’ while stage/sample drift distorts crystal lattice planes and distances.

Example (upper-left) shows HAADF image of [100] SrTiO$_3$ suffering scan-noise and drift. After correction resolution was improved by 15%, SNR by 84% and correct lattice angles were restored [2].

Key Features

◆ Automated and robust image peak finding.
◆ Correction of STEM scan-noise and image/stage drift.
◆ Built-in image resolution (peak width) and SNR quantification tools.
◆ Compatible with interfaces, defects, edges, nano-particles etc.
◆ Frequency spectrum analysis for horizontal scan (fast scan) gives an insight for your EM-suite instability (lower-left) [1].

References:
