PARIS (Parallel ILIAS) in lens set-up

Lens set-up
State of the art coarse lithographic lens set-up consists of ILIAS, FOCAL and DISTO tests. A proposal is done to phenomenologically represent gain and offset in each of the tests. A data-driven method to construct the model is introduced. This model can be related to a PARIS-based set-up test. Constraints are defined for a PARIS-based test to replace the current lens calibration tests.

PARIS
The parallel ILIAS measures in one scan (atomic machine action) the wave front at multiple locations in the exposure slit. ‘X-stitching’ (reticle grating and detector shifted one neighbor) and PARIS ‘fading’ (scans at multiple y positions) are explored by algorithm development and sensor plate layout modification respectively. Software implementation of the stitching functionality and an optimal stitching scheme are proposed to introduce PARIS as absolute measurement device. Also reticle mask rotation as means to calibrate lens from reticle errors is introduced.