Abstract

A data-driven misregistration parameter configuration and measurement system and method including simulating a plurality of measurement simulations of at least one multilayered semiconductor device, selected from a batch of multilayered semiconductor devices intended to be identical, using sets of measurement parameter configurations, generating simulation data for the device, identifying recommended measurement parameter configurations, selected from the sets of measurement parameter configurations, providing a multilayered semiconductor device selected from the batch, providing the at least one recommended set of measurement parameter configurations to a misregistration metrology tool having multiple possible sets of measurement parameter configurations, measuring at least one multilayered semiconductor device, selected from the batch, using the recommended set, thereby generating measurement data for the device, thereafter identifying a final recommended set of measurement parameter configurations and measuring misregistration of at least one multilayered semiconductor device, selected from the batch, using the final recommended set.