Abstract

DETECTION AND CORRECTION OF SYSTEM RESPONSES IN REAL-TIME

Embodiments may include methods, systems, and apparatuses for correcting a response function of an electron beam tool. The correcting may include modulating an electron beam parameter having a frequency; emitting an electron beam based on the electron beam parameter towards a specimen, thereby scattering electrons, wherein the electron beam is described by a source wave function having a source phase and a landing angle; detecting a portion of the scattered electrons at an electron detector, thereby yielding electron data including an electron wave function having an electron phase and an electron landing angle; determining, using a processor, a phase delay between the source phase and the electron phase, thereby yielding a latency; and correcting, using the processor, the response function of the electron beam tool using the latency and a difference between the source wave function and the electron wave function.

FIG. 8