**Arosha W. Goonesekera** received his Ph. D in Physics from the University of Nebraska-Lincoln in 1998. After a postdoctoral position at Stanford University, he moved to the semiconductor industry in the year 2000. Arosha started his carrier with wafer metrology tool developments for thin-film measurement involving ellipsometry and reflectometry. Then, he moved to the photomask industry with a focus on application and algorithm development in defect detections on reticles. Over the past twelve years, Arosha has worked at leading semiconductor tool manufacturing and photomask manufacturing companies as a photomask inspection tool applications developer and an end-user overlooking all types of photomask defect detection platforms. Also, during this time he engaged in application development for printability verification tools. He has contributed to several key publications that address the algorithm and detection strategy developments for the latest technology node reticles. Currently, Arosha manages projects related to defect detection strategy development on Actinic patterned mask inspection system at Lasertec Inc.