

SenSIP Graduate Seminar Series

Stereo Vision Based Automated Solder Ball Height and Substrate Coplanarity Inspection

Presenter: Jinjin Li, PhD Candidate
November 20 (Friday), 2015, 12:15 PM
Room: GWC 487

Abstract

Solder ball height and substrate coplanarity inspection is essential to the detection of potential connectivity issues in semi-conductor units. Current ball height and substrate coplanarity inspection tools require complicated setup and are slow, which makes them difficult to use in a real-time manufacturing setting. In this talk, an automatic, stereo vision based, in-line ball height and coplanarity inspection method is presented. The proposed method includes a stereo imaging setup together with a computer vision algorithm for reliable, in-line ball height and coplanarity measurement. The proposed in-line ball height and substrate coplanarity inspection method has been tested on 3 products through a measurement capability analysis (MCA) procedure and exhibits high accuracy, repeatability and reproducibility compared to the laser-scanning and confocal inspection tool results.



Biography:

Jinjin Li received the M.S. in electrical engineering from Arizona State University, and she is currently working towards the Ph.D. degree at Arizona State University under advisor Dr. Lina Karam. Her primary research interest areas include automatic semiconductor detection, 3D machine vision and 3D depth estimation and reconstruction in image processing. She has joined two research projects both sponsored by Intel Corporation on 3D inspection of semiconductor units and advanced driver assist system depth estimation respectively.

Refreshments

Upcoming Student Seminars:

Ahmad Salim, Dec. 4, 2015

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