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臺灣大學應用力學研究所
演 講 公 告
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主 講 人：藍俊宏助理教授

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講　　　題：半導體製程資料分析

主 持 人： 李尉彰助理教授

時　　　間： 109年10月5日（星期一）下午2時20分開始

地　　　點： 臺灣大學應用力學研究所國際會議廳

☆☆ 歡迎聽講，敬請張貼 ☆☆

Data Analytics for Advanced Process Control in Semiconductor Manufacturing

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Abstract

Advanced Process Control (APC) has become an essential framework in the semiconductor fabrication process, with aggressive competition for achieving better product quality and process efficiency. The motivation for implementing APC is to improve the device yield by controlling processes and equipment to collect information, reduce process variability, and increase equipment efficiency. With this aim, a wide variety of mathematical, statistical, and physical techniques have been developed and used. Standards and communication interfaces between the equipment and IT systems are defined and applied. APC is the current practice to ensure a continuous process improvement in semiconductor manufacturing. The controlling algorithms, system interfaces, and infrastructure are broadly investigated and discussed in the literature over the last two/three decades. It is regarded as a general heading for all kinds of equipment and process engineering systems in semiconductor manufacturing. It usually consists of several functional systems, for example, Run-to-Run (R2R) control, Fault Detection and Classification (FDC), Overall Equipment Efficiency (OEE), and e-Diagnostic. The fundamental aspects of APC are data collection and interface design, which enable the aforementioned intelligent systems to function. To define the exact scope of APC is not an easy task because the new tech-nodes are continuously developed, and standards are evolving accordingly. This talk will cover my researches in the past under the APC framework to show you some quick ideas for APC data analytics.