

國立中正大學數學系
暨應用數學碩士班、統計科學碩士班
學 術 演 講

Application of Data Science Analysis Method in Smart Manufacturing

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Abstract

The Industry 4.0 revolution has led to the rapid development of global manufacturing. As a result, manufacturing industries have begun improving product quality, production efficiency, flexibility, and shortening production cycles. In achieving smart manufacturing, predicting product quality is a crucial factor. For example, surface roughness is one of the critical characteristics of wire-cut electrical discharge machining quality. Accurately predicting surface roughness can significantly improve product quality and shorten production cycles. Therefore, we collected data on three types of discharge counts - Normal Spark count, Arc Spark count, and Short Spark count – upon completing wire-cut electrical discharge machining. We then studied the relationship between discharge counts and product surface roughness and used machine learning and deep learning methods to build machine learning models. Ultimately, we successfully predict product surface roughness using the three discharge counts during machining. This is joint work with professor HaiPing Tsui.

日 期：112 年 3 月 7 日(星期二) 11:00~12:00

地 點：本校數學館 527 教室（嘉義縣民雄鄉大學路 168 號）

茶 會：10:30~11:00 數學館三樓 409 室舉行

歡迎參加 敬請公佈

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