



**The Hong Kong University of Science and Technology**

**Department of Mathematics**

**MPhil THESIS EXAMINATION**

***Linear and Logistic Regression with Measurement  
Error and Misclassification in Covariates***

***By***

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**ABSTRACT**

Measurement error and misclassification in covariates is always inevitable in data collection process. Treating variables measured with error as true value to build up regression models and perform statistical analysis can lead to misleading results. To get more accurate estimation results, the effect of measurement error and misclassification has to be considered. In this thesis, we mention some correction methods to estimate the parameters in linear and logistic regressions error-prone covariates and one categorical variable with two levels. Simulation studies are made to compare the performance of these estimators.

**Date : 07 Aug 2020, Friday**

**Time : 2:00 p.m.**

**ZOOM Meeting : <https://hkust.zoom.us/j/94641812740>**

**Thesis Prof. Shiqing LING (Chairman)**

**Examination Prof. Man Yu WONG (Supervisor)**

**Committee : Prof. Bingyi JING**

***(Open to all faculty and students)***

**The student's thesis is now being displayed on the reception counter in the General Administration Office (Room 3461).**