



## ABSTRACT

### Mean Function Estimation for Panel Count Data Using Semiparametric Pseudolikelihood

by  
Wahyu Wibowo

under supervision  
Dr. Sri Haryatmi, M.Sc.

In this research, we will study mean function estimation for panel count data with covariates. Estimation method that used is semiparametric maximum pseudolikelihood. This method based on assumption, given vector covariates  $Z$ , the underlying counting process is a nonhomogeneous Poisson process with the conditional mean function  $E\{N(t)/Z\} = \Lambda_0(t)\exp(\beta_0'Z)$ . Computation of the method will be solved by numerical method that estimate  $(\beta_0, \Lambda_0)$  iterative. Some simulation studies is conducted to validate the method

**Key words :** *panel count data, mean function, semiparametrik maximum pseudolikelihood, profile likelihood, consistenc, nonhomogenous Poisson process*