

Robust Likelihood Inference for General Correlated Data

Tsung-Shan Tsou

Institute of Statistics

Institute of Systems Biology and Bioinformatics

Center for Biotechnology and Biomedical Engineering

National Central University, Jhongli, Taiwan

Cathay Medical Research Institute, Cathay General Hospital, Taipei,
Taiwan

Abstract

A parametric and, yet, robust approach for analyzing correlated data of mixing type is proposed. Asymptotically legitimate likelihood for the regression parameter of interest is derived without knowing the true underlying joint distributions. Simulations are provided to demonstrate the merit of the proposed parametric robust method.

Keywords: Correlated data; Multivariate negative binomial; Robust likelihood.