Reparametrization of COM-Poisson Regression Models with Applications in the Analysis of Experimental Count Data

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The COM-Poisson model generalized the Poisson model for handling over and underdispersed counts. This article proposes a mean-parameterization of COM-Poisson model. The results shows that the new parameterization is appropriate and offers better results than conventional approaches. The empirical orthogonality between precision and regression parameters, consequently less time to computing, and the interpretation are the main advantagens of mean-parameterization COM-Poisson model.

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