

Piotr Szulc

Institute of Mathematics and Computer Science

Wrocław University of Technology

E-mail: piotr.a.szulc@pwr.wroc.pl

The consistency of mBIC and mBIC2

Regions of the genome that influence quantitative traits (e.g. in animals or plants) are called quantitative trait loci (QTL) and can be located using a linear regression. To fit the regression model, we need to identify the nonzero coefficients. The problem is that in locating QTLs the number of available regressors is often bigger than the sample size and classical model selection criteria for the choice of predictors are inappropriate. Modification of these criteria were proposed and I have proved recently that two of them (mBIC and mBIC2) are consistent. I present these criteria and give the conditions for the consistency.