# Statistical Inference for Dependent Truncation Data

Weijing Wang
*Institute of Statistics, National Chiao-Tung University Taiwan, R. O. C.*

Consider a situation that we observe bivariate failure times $(T_1, T_2)$ only if $T_1 \leq T_2$ . The two variables have a truncation relationship and it is usually assumed that they are independent at the observable region (i.e. quasi-independence). In this talk, the dependent relationship between $T_1$ and $T_2$ is of main interest. Under a semi-survival Archimedean copulas assumption, we propose a semi-parametric inference procedure to estimate the association parameter, the marginal distributions and the truncation proportion. A nonparametric test for assessing quasi-independence is also proposed. Our methods can handle truncation data in presence of right censoring.

[ Weijing Wang, Institute of Statistics, National Chiao-Tung University Taiwan, R. O. C. ; wjwang@stat.nctu.edu.tw]