

Statistics Seminar  
Department of Mathematical Sciences

|                  |  |
|------------------|--|
| <b>DATE:</b>     | Thursday, October 29, 2015                           |
| <b>TIME:</b>     | 1:15pm to 2:15pm                                     |
| <b>LOCATION:</b> | WH 100E  |
| <b>SPEAKER:</b>  | Ruiqi Liu, Binghamton University                     |
| <b>TITLE:</b>    | The transfer principle: a tool for complete analysis |

**Abstract**

This paper gives a general method for deriving limiting distributions of complete case statistics for missing data models from corresponding results for the model where all data are observed. This provides a convenient tool for obtaining the asymptotic behavior of complete case versions of established full data methods without lengthy proofs. The methodology is illustrated by analyzing three inference procedures for partially linear regression models with responses missing at random. We first show that complete case versions of asymptotically efficient estimators of the slope parameter for the full model are efficient, thereby solving the problem of constructing efficient estimators of the slope parameter for this model. Secondly, we derive an asymptotically distribution free test for fitting a normal distribution to the errors. Finally, we obtain an asymptotically distribution free test for linearity, i.e. for testing that the nonparametric component of these models is a constant. This test is new both when data are fully observed and when data are missing at random.

From:

<http://www2.math.binghamton.edu/> - **Department of Mathematics and Statistics, Binghamton University**

Permanent link:

<http://www2.math.binghamton.edu/p/seminars/stat/10292015>

Last update: **2015/10/23 18:13**

