



THE UNIVERSITY OF  
**CHICAGO**

Department of Statistics

MASTER'S THESIS PRESENTATION

---

MACIEJ GRABAREK

Department of Statistics  
The University of Chicago

Gaussian Time Delay Estimation

FRIDAY, February 13, 2015, at 9:30 AM  
Eckhart 117, 5734 S. University Avenue

#### ABSTRACT

The study of time delays caused by strong gravitational lensing can provide insight into cosmological parameters and the properties of the involved celestial bodies. However, the estimation of these delays is complicated by data sparsity, microlensing effects, and measurement errors. We propose a Gaussian process based method of time delay estimation and apply it to simulated and real data.

---

For information about building access for persons with disabilities, please contact Laura Rigazzi at 773.702-0541 or send an email to [lrigazzi@galton.uchicago.edu](mailto:lrigazzi@galton.uchicago.edu). If you wish to subscribe to our email list, please visit the following web site: <https://lists.uchicago.edu/web/arc/statseminars>.