

Astrostatistics

Thursday, 25 January 2017

Recommended Reading:

Feigelson & Babu (F&B): Chapters 1-4

Ivezic: Chapters 1-5

Schafer article

Intro to Statistics in Astronomy

Review of Probability & Statistics Foundations

Classical & Bayesian Statistical Inference

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<https://github.com/CambridgeAstroStat/PartIII-Astrostatistics>

- Chapters 1 are fluffy intros, Ivezić Ch 2 on computation (can skip for now)
- Ivezić Ch. 3-5 and F&B 2-4 cover much of the same foundations material
- Last Time: Probability Foundations
 - Ivezić Ch 3: “Probability and Statistical Distributions”
 - F&B, Ch 2: “Probability” & Ch 4 “Probability Distribution Functions”
- Today / Next time: Statistics Foundations
 - Ivezić Ch 4 “Classical Statistical Inference” & Ch 5 “Bayesian Statistical Inference”
 - F&B Ch 3 “Statistical Inference”
- Soon: Fitting Statistical Models to Astronomical Data
 - Hogg, Bovy & Lang. “Data analysis recipes: Fitting a model to data”.
<https://arxiv.org/abs/1008.4686>

Other Stats Foundation resources

- Part Ib Maths - Statistics
 - <http://www.statslab.cam.ac.uk/~rrw1/stats/index.html>
- Part II Maths - Principles of Statistics (Michaelmas)
 - <http://www.statslab.cam.ac.uk/~qb204/princip.html>
- Part II Maths - Statistical Modelling (Lent)
 - Tue, Thu & Sat at 12 noon at MR9
 - http://www.statslab.cam.ac.uk/~sb2116/statistical_modelling/

Office Hours

Friday @ 1pm

Statistical Laboratory

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(CMS Pavilion D, Office 1.07)