

**M4S3**  
**ENHANCED COURSEWORK**  
**Deadline: Friday 21st January, 2005.**

**M-ESTIMATION**

Write a summary paper on the theory and uses of M-estimation in statistical inference. Some areas to cover include

- the basic definitions
- history and development
- relevant asymptotic theory
- advantages and disadvantages
- special topics: influence, robustness, empirical processes
- practical considerations and applications

You could also include numerical examples and computation code.

**Reference:**

Stefanski, L A.; Boos, D. D. The Calculus of M-Estimation,. *The American Statistician*, Feb. 2002, Vol. 56 Issue 1, pp29-38;

(This reference cites several other papers and texts of interest; you should include material from sources other than this paper.)

**Format:** 10-15 pages of typeset (in Latex/Word) pages, structured with sections, abstract and references (as in the Stefanski and Boos (2002) paper).

**Handing In:** You need to email the final electronic copy to **d.stephens@imperial.ac.uk** before midnight 21/01/05 (GMT). You should also hand in a hard copy to Dr Berkshire for his records.