

**MA 751**  
**M. Kon**

**Problem Set 7**  
**Due Thurs. 3/31/22**

**Lectures 13, 14**

At this point we begin to look at nonlinear regression. We will cover ways of writing functions as sums of functions in a standard basis (for example Taylor series expansions of functions use monomials  $x^n$  as basis functions). We will consider expansions of functions as combinations of splines —these are functions which are piecewise polynomials joined at fixed or variable points.

We will begin to cover some programming assignments next week

Reading: 5.1, 5.2, 5.4, 5.5, 5.8

Problems:

1. Hastie, 5.4
2. Hastie, 5.7