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An F test for linear models with functional responses. (English) Zbl 1060.62075
Stat. Sin. 14, No. 4, 1239-1257 (2004).

Summary: Linear models where the response is a function, but the predictors are vectors are considered. A functional F test for choosing among two nested functional linear models is developed. Its null distribution is derived and a convenient approximation is presented. A simple way to test individual predictors is presented. The test is applied to some data from ergonomics and compared to some competing tests. The ability to detect certain types of differences between models is explored. A simulation study is conducted to assess the size and power of the tests.

MSC:

62J10 Analysis of variance and covariance (ANOVA)
62F03 Parametric hypothesis testing
62J05 Linear regression; mixed models
62E15 Exact distribution theory in statistics

Cited in **2** Reviews
Cited in **28** Documents

Keywords:

ANOVA model; functional data analysis; power; regression