Title: Long range dependence in time series
Author: Alexander Till
Department: Department of Probability and Mathematical Statistics
Supervisor: RNDr. Michaela Prokešová, Ph.D.

Abstract: The diploma thesis demonstrates the necessity of a study of long range dependence, introduces fractional Gaussian noise and discusses possible definitions of long memory. It is done by notions of ergodic theory and by second moment characteristics and spectral density. These definitions are confronted with the model of fractional Gaussian noise and with intuitive understanding of long range memory. Relations and connections between these criteria are studied as well. The work is restricted to the study of discrete time processes.