**Abstract:** Asymptotically correct simultaneous confidence bands (SCBs) are proposed for the ratio of variance functions of two samples in the nonparametric regression model based on deterministic designs. The estimation of variance ratio function is as efficient, up to order $n^{-1/2}$, as an infeasible estimator if the two mean functions are prior.

Simulation experiments provide strong evidence that corroborates the asymptotic theory. The proposed SCBs are used to analyze strata pressure data from the Bullianta Coal Mine in Erdos City, Inner Mongolia, China.