ACCOUNTING FOR CORRELATION STRUCTURE IN MARGINAL SEMIPARAMETRIC KERNEL REGRESSION

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It has been shown that a new semiparametric profile-kernel smoothing method incorporating the true correlation structure is more efficient than the standard kernel method assuming working independence. In fact, the optimal efficiency is achieved when the true correlation is adopted. In practice the true correlation structure is nonetheless unknown. In this work, we borrow strength from model selection literature to identify a class of correlation structures which even may not be optimal but result in high efficiency in estimation.