Gorelik, S. I.; Kazarinov, L. S.
Forecast of random oscillation processes based on the method of exponential smoothing.
(English. Russian original) [Zbl 0857.93014]

A forecast problem for an unknown nonrandom function \( x(t) \) via oscillating type approximations \( \hat{x}(\phi - \theta) = \sum_{i=0}^{m} [a_{1i}(\phi) \cos(i\theta) + a_{2i}(\phi) \sin(i\theta)] \) is considered with the cost function \( \int_{0}^{\infty} |x(\phi - \theta) - \hat{x}(\phi - \theta)|^2 \exp(-b\theta) d\theta \). A heuristic algorithm is presented. Simulation results are given.

Reviewer: A.Yu.Veretennikov (Moskva)

MSC:
93A30 Mathematical modelling of systems (MSC2010)
93E14 Data smoothing in stochastic control theory
41A50 Best approximation, Chebyshev systems

Keywords:
oscillating process; forecast problem