

基于BBSRIA的测量系统动态精度损失分解与溯源

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关键词: 测量系统 单子带重构改进算法 动态精度损失分解与溯源

摘要: 利用单子带信号重构改进算法在信号分解中的优势, 实现了对测量系统动态精度损失信号的有效分解, 得到测量系统各主要结构单元的频率成分, 在此基础上利用神经网络所具有的输入到输出之间的非线性映射能力完成求解各频率成分所包含的未知参数。同时根据测量系统内部各结构单元的误差特性完成分解信号的溯源。实验结果表明利用单子带信号重构改进算法可以实现精度损失信号的可靠分解与溯源。 Based on whole system dynamic error modeling method and theory, the theory and method of dynamic accuracy loss decomposition and tracing were studied. Using bill belt signal reconstruction improvement arithmetic, the accuracy loss signal of emulation system was decomposed, its frequency components of the system's main insider structural units was obtained. Then by using non-linear mapping ability from input to output of BP NN, model parameters of the built accuracy loss function model of each insider cells were estimated, and the signals decomposing were achieved. Using the error characteristic of each insider structural units and the systemic whole error model, the signals tracing were achieved. Experimental result indicated that by using BBSRIA (bill belt signal reconstruction improvement arithmetic), reliably decompose and tracing of the accuracy loss signal could be achieved.

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