Neural network approach to reduce dynamic measurements error

Andrei S. Volosnikov1, Aleksandr L. Shestakov1

1 South Ural State University, Lenin prospekt 76, 454080 Chelyabinsk, Russian Federation

ABSTRACT

The neural network inverse model of a sensor with the filtration of the sequentially recovered signal is considered. This model effectively reduces the dynamic measurements error due to the deep mathematical processing of measurement data. The result of the experimental data processing of the dynamic temperature measurement validates the efficiency of the proposed neural network approach to the dynamic measurements error reduction.

Section: RESEARCH PAPER

**Keywords:** dynamic measurements error, neural network model, inverse sensor model, recovery of sensor input signal, dynamic measurements data processing

**Citation:** Andrei S. Volosnikov, Aleksandr L. Shestakov, Neural network approach to reduce dynamic measurements error, Acta IMEKO, vol. A, no. B, article N, month year, identifier: IMEKO-ACTA-0A (year)-0B-0N

**Section Editor:** name, affiliation

**Received** month day, year; **In final form** month day, year; **Published** month year

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**Corresponding author:** Andrei S. Volosnikov, e-mail: volosnikovas@susu.ru

Major points of the conference paper extension

1) Extended descriptions of the proposed inverse model of a sensor in the cascade and sequential representations were added in subsections 3.2 and 3.3.

2) In subsection 3.4 the noise cancellation approach on the basis of the model in the sequential representation is described.

3) The future work direction was added in the Conclusion.

4) The references list was extended.