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**Block-sparsity regularized maximum correntropy criterion for structured-sparse system identification.** (English) [Zbl 1454.93055](#)

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Summary: This work deals with the block-sparse system identification problem on the basis of the maximum correntropy criterion (MCC). The MCC is known for its robustness against non-Gaussian noise and interference in many signal processing applications. With the aim of exploiting the block-sparse property of the system, we introduce a regularization function into the standard cost function of MCC. Based on the modified cost function, an online kernel adapting strategy is developed to further improve the estimation accuracy. Steady-state performance analysis is conducted to explore the behavior of the proposed method. The simulation results illuminate the validity of the theoretical analysis and confirm the superiority of the proposed method in block-sparse system identification through comparisons with state-of-the-art MCC techniques.

**MSC:**

93B30 System identification

**Keywords:**

sparse system identification; maximum correntropy criterion

**Full Text:** [DOI](#)

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