

عنوان مقاله:

Performance Evaluation of Decision Fusion for Distributed Detection With Side Information

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خلاصه مقاله:

Efficient evaluation of decision fusion algorithms becomes particularly important when different fusion schemes have to be compared with respect to an underlying performance metric or when a large number of evaluations are required for optimization purposes. In this paper, we present explicit expressions for the global error probabilities of decision fusion for distributed detection with side information. In the considered distributed detection problem, the sensors compress their observations independently and transmit local decisions to a fusion center that combines the received decisions with respect to available side information and computes the final detection result. In the special case of identical sensors, computationally efficient expressions are obtained by using the multinomial distribution. Numerical results obtained by considering the Gaussian detection problem reveal the influence of different qualities of side information on the overall detection performance.

کلمات کلیدی:

electrical engineering, Decision fusion, en, Signal processing, Distributed detection, Performance Evaluation

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