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Integration of hidden markov models in the automated speaker recognition system for critical use(Article)

[Integracja ukrytych modeli markowa w zautomatyzowanym systemie rozpoznawania głosu do zastosowań krytycznych]

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Просмотр дополнительных организаций

In this article, the author theoretically substantiated the possibility of integration of hidden Markov models (IHMM) in the structure of the automated speaker recognition system for critical use (ASRSCU) for analysis of speech information from a plurality of independent input channels, which allowed within the statistical conception of pattern recognition to combine the accuracy of the approximation of input signals inherent the apparatus of GMM models. The authors proposed a mathematical apparatus for the integration of hidden Markov models, which allows us to adequately describe the set of interacting processes in the Markov paradigm with the preservation of temporal, asymmetric conditional probabilities between the chains.