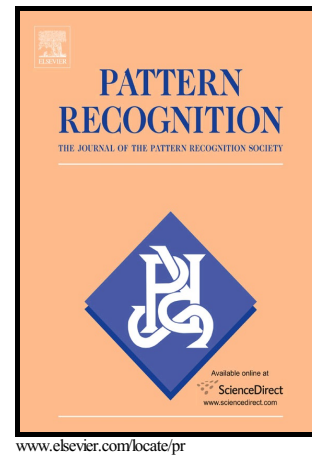


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Design of Alignment-Free Cancelable Fingerprint Templates with Zoned Minutia Pairs

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Abstract

Cancelable fingerprint templates effectively protect original fingerprint data by revoking a compromised template and reissuing a new one. Alignment-free cancelable templates require no image pre-alignment and therefore do not suffer from inaccurate singular point detection. In this paper we propose to construct local minutia structures through zoned minutia pairs in the design of alignment-free cancelable fingerprint templates. Because the structures formed by zoned minutia pairs are truly local, they are more discriminating, which benefits fingerprint matching, leading to good recognition performance. We also apply a simple yet effective measure to mitigating the risk of

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