

New Features for Copy-Move Image Forgery Detection

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Abstract : A novel set of features for copy-move image forgery, CMIF, detection method is proposed. The proposed set presents a new approach which relies on electrostatic field theory, EFT. Solely for the purpose of reducing the dimension of a suspicious image, firstly performs discrete wavelet transform, DWT, of the suspicious image and extracts only the approximation subband. The extracted subband is then bijectively mapped onto a virtual electrostatic field where concepts of EFT are utilised to extract robust features. The extracted features are shown to be invariant to additive noise, JPEG compression, and affine transformation. The proposed features can also be used in general object matching.

Keywords : virtual electrostatic field, features, affine transformation, copy-move image forgery

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