

EGU2020-21392

<https://doi.org/10.5194/egusphere-egu2020-21392>

EGU General Assembly 2020

© Author(s) 2021. This work is distributed under the Creative Commons Attribution 4.0 License.



Watermark-based Copyright Protection Using Invariant Features for Remote Sensing Images

Na Ren and Changqing Zhu

Key Laboratory of Virtual Geographic Environment, Ministry of Education, Nanjing Normal University, China
(renna1026@163.com)

With the development of remote sensing technology, the copyright protection of remote sensing images has become an urgent problem to be solved. In this paper, a blind watermarking scheme based on invariant features is applied. In the embedding process, the stable image features are firstly extracted from the original host using block DCT, and the embedding positions are constructed adaptively according to feature processing theory. Then, the watermark is embedded into the low-frequency coefficients by modifying the DC coefficients. For watermark extraction, according to the invariant image features in each region, the watermark location and the watermark information can be extracted without the original host. Experimental results show that the proposed watermarking is not only invisible and robust against common image processing, such as noise addition, image filtering, and JPEG compression, but also robust against cropping attack.