

## Study on the Self-Location Estimate by the Evolutional Triangle Similarity Matching Using Artificial Bee Colony Algorithm

**Authors :** Yuji Kageyama, Shin Nagata, Tatsuya Takino, Izuru Nomura, Hiroyuki Kamata

**Abstract :** In previous study, technique to estimate a self-location by using a lunar image is proposed. We consider the improvement of the conventional method in consideration of FPGA implementation in this paper. Specifically, we introduce Artificial Bee Colony algorithm for reduction of search time. In addition, we use fixed point arithmetic to enable high-speed operation on FPGA.

**Keywords :** SLIM, Artificial Bee Colony Algorithm, location estimate, evolutional triangle similarity

**Conference Title :** ICAERST 2015 : International Conference on Aerospace Electronics and Remote Sensing Technology

**Conference Location :** Paris, France

**Conference Dates :** January 23-24, 2015