

## GPU Based Real-Time Floating Object Detection System

**Authors :** Jie Yang, Jian-Min Meng

**Abstract :** A GPU-based floating object detection scheme is presented in this paper which is designed for floating mine detection tasks. This system uses contrast and motion information to eliminate as many false positives as possible while avoiding false negatives. The GPU computation platform is deployed to allow detecting objects in real-time. From the experimental results, it is shown that with certain configuration, the GPU-based scheme can speed up the computation up to one thousand times compared to the CPU-based scheme.

**Keywords :** object detection, GPU, motion estimation, parallel processing

**Conference Title :** ICICIP 2016 : International Conference on Intelligent Control and Information Processing

**Conference Location :** Kyoto, Japan

**Conference Dates :** November 10-11, 2016