Abstract

With the increase in industrial production and human activities, the concentration of atmospheric particulate matter (PM) is substantially increased, leading to fog and haze occurring more frequently. Limited visibility caused by suspended particles in the air, such as fog and haze, is a major problem for many applications of computer vision. The captured scenes by such computer vision systems suffer from poor visibility, low contrast, dimmed brightness, low luminance, and distorted color, which makes detection of objects within the scene more difficult. Therefore, visibility improvement, contrast, and features enhancement of images and videos captured in bad weather, also called as dehazing, and is an inevitable task. Furthermore, estimated actual weather conditions are valuable information to invoke corresponding approaches.

References

1. Zhengguo Li, and Jinghong Zheng, "Edge-Preserving Decomposition-Based Single Image

Index Terms

Computer Science

Image Processing

Keywords

Single image haze removal, edge-preserving smoothing, weighted guided image filtering, minimal color channel.