

Accurate Dual-foot Micro-inertial Navigation System with Inter-agent Ranging

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Abstract

To address the problem of accurate navigation without relying on additional infrastructures, this work proposes an accurate dual-foot micro-inertial autonomous navigation system. By fusing the ranging measurements between two feet, the proposed system can significantly reduce the accumulated error of inertial measurement units (IMUs) and the initial estimated error in navigation frame which improve the tracking accuracy and robustness.