



Recent Advances in Visible Light Communication and Positioning Systems

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Message from the Guest Editors

As one of the technologies anticipated to be involved in 6G, visible light communication and positioning (VLCP) has attracted a tremendous amount of attention from both academia and industry due to its Gb/s data transmission rate and centimeter-level location accuracy.

Several key research challenges in the VLCP domain include integration with the existing network infrastructures, channel modeling, joint communication and positioning, and low-cost solutions. In terms of global development, VLC is standardized both in IEEE and ITU-T, and current efforts focus on its integration with WiFi and 3GPP architecture.

Compared to RF-based communication and positioning, VLCP has several unique advantages: i) large unlicensed bands, ii) no interference with existing RF devices, iii) high spatial multiplexing and inherently narrow interception range, iv) high energy efficiency due to its dual-use nature, and v) precise location indicator due to its dominant line-of-sight signals.

This Special Issue, therefore, aims to put together original research and review articles on recent advances, technologies, applications, and new challenges in the field of VLCP systems.





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Message from the Editor-in-Chief

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