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Visible Light Positioning and Communication Systems: From Theory to Practical Applications

Guest Editor:

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Message from the Guest Editor

Visible Light Communication (VLC) is an evolving field complementing traditional communication and positioning technologies. This Special Issue delves into VLC's multifaceted aspects, from theoretical foundations to practical applications in next-generation communication systems and precision indoor positioning.

Our aim is to enhance positioning and communication precision through algorithmic innovation and system design advancements. With developments in LEDs and photovoltaic devices, we foresee cost-effective, widespread communication systems for everyday applications. We address the challenges of integrating VLC with existing infrastructures and mitigating interference in complex settings.

We invite original research articles and reviews on the following topics:

- VLC channel modeling and estimation;
- Channel characterization and VLC-specific encoding;
- Efficient signal processing for high-precision visible light positioning;
- Security, standards, and normalization in VLC;
- Recent developments in VLC geolocation and communication.



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Special Issue