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Special Issue Reprint

Semantic Information Theory

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This Reprint collects cutting-edge research from the highly regarded *Entropy* Special Issue "Semantic Information Theory." As modern communication systems evolve for applications like 6G, IoT, and autonomous driving, the focus shifts from merely transmitting bits to efficiently conveying task-specific meaning. The Special Issue bridges classical information theory with modern AI, exploring the foundations of semantic communication. It features two comprehensive reviews and ten original research articles, organized into two key themes: advancing semantic rate-distortion theory and designing efficient semantic communication systems. This Reprint serves as an important resource for researchers and practitioners navigating the complex transition toward truly intelligent, task-driven communication networks.



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