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Safeguarding 6G: Security and Privacy for the Next Generation

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This book provides a comprehensive overview of security and privacy challenges in 6G networks, addressing the urgent need for advanced security frameworks as the next generation of wireless technology emerges. The rapid advancements in quantum computing, AI, and IoT are transforming the digital landscape, introducing both unprecedented opportunities and significant security threats. From AI-driven cyberattacks to the vulnerabilities of IoT devices, this book explores cutting-edge technologies such as quantum key distribution (QKD), post-quantum cryptography, and AI-enabled security systems.

Designed for professionals and researchers, this resource outlines real-world applications of 6G security techniques, offering practical insights into protecting critical infrastructures, autonomous vehicles, smart cities, and more. By emphasizing a proactive approach to cybersecurity and fostering collaboration across industries, academia, and policymakers, the book lays out a roadmap for ensuring the resilience and trustworthiness of 6G networks in the future.

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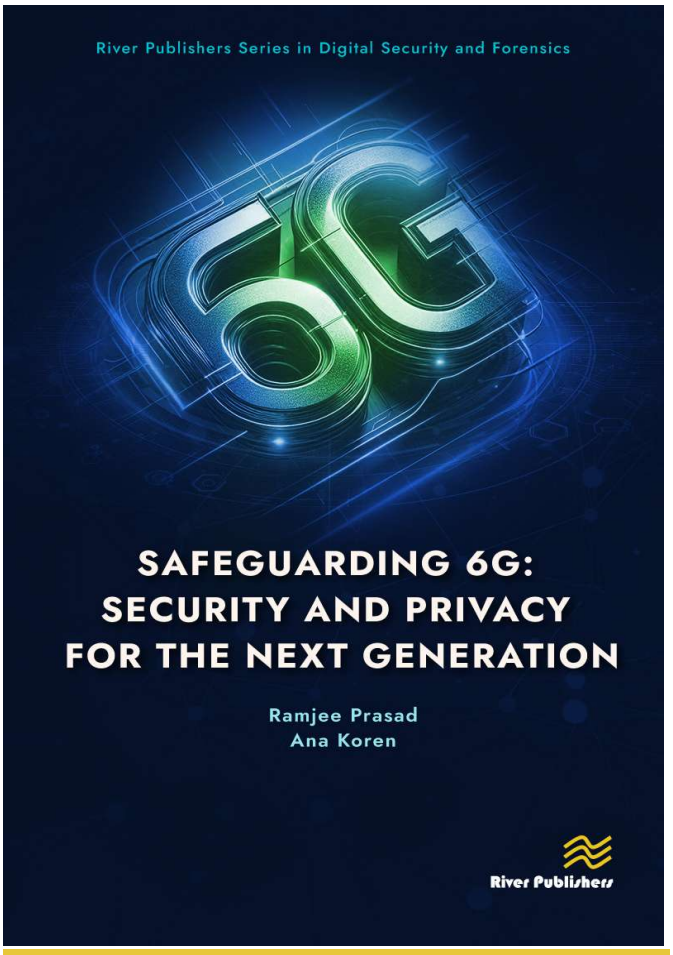

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6G security, quantum computing, AI-driven threats, post-quantum cryptography, QKD, AI-enabled threat detection, IoT security, blockchain, distributed ledger technology, privacy-preserving techniques, 6G standardization

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