## Physical-Layer Security

From Information Theory to Security Engineering

This complete guide to physical-layer security presents the theoretical foundations, practical implementation, challenges, and benefits of a groundbreaking new model for secure communication. Using a bottom-up approach from the link level all the way to end-to-end architectures, it provides essential practical tools that enable graduate students, industry professionals, and researchers to build more secure systems by exploiting the noise inherent to communication channels.

The book begins with a self-contained explanation of the information-theoretic limits of secure communications at the physical layer. It then goes on to develop practical coding schemes, building on the theoretical insights and enabling readers to understand the challenges and opportunities related to the design of physical-layer security schemes. Finally, applications to multi-user communications and network coding are also included.

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**To our families**