

Full-Duplex Wireless Communications Systems

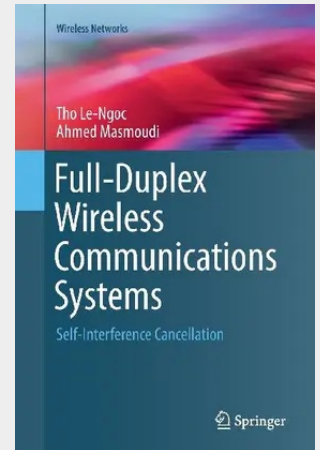
Self-Interference Cancellation

This book introduces the development of self-interference (SI)-cancellation techniques for full-duplex wireless communication systems. The authors rely on estimation theory and signal processing to develop SI-cancellation algorithms by generating an estimate of the received SI and subtracting it from the received signal.

The authors also cover two new SI-cancellation methods using the new concept of active signal injection (ASI) for full-duplex MIMO-OFDM systems. The ASI approach adds an appropriate cancelling signal to each transmitted signal such that the combined signals from transmit antennas attenuate the SI at the receive antennas. The authors illustrate that the SI-pre-cancelling signal does not affect the data-bearing signal.

This book is for researchers and professionals working in wireless communications and engineers willing to understand the challenges of deploying full-duplex and practical solutions to implement a full-duplex system. Advanced-level students in electrical engineering and computer science studying wireless communications will also find this book useful as a secondary textbook.

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128,39 €

119,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9783319862255

Medium: Buch

ISBN: 978-3-319-86225-5

Verlag: Birkhäuser

Erscheinungstermin: 12.05.2018

Sprache(n): Englisch

Auflage: Softcover Nachdruck of the original 1. Auflage 2017

Serie: Wireless Networks

Produktform: Kartoniert

Gewicht: 2759 g

Seiten: 164

Format (B x H): 155 x 235 mm

