DESCRIPTION

In the last fifty years, extensive studies have been carried out worldwide in the field of adaptive array systems. However, far from being a mature technology with little research left to tackle, there is seemingly unlimited scope to develop the fundamental characteristics and applications of adaptive antennas for future 3G and 4G mobile communications systems, ultra wideband wireless and satellite and navigation systems, and this informative text shows you how!

• Provides an accessible resource on adaptive array fundamentals as well as coverage of adaptive algorithms and advanced topics

• Analyses the performance of various wideband beamforming techniques in wideband array processing

• Comprehensively covers implementation issues related to such elements as circular arrays, channel modelling and transmit beam forming, highlighting the challenges facing a designer during the development phase

• Supports practical implementation considerations with detailed case studies on wideband arrays, radar, sonar and biomedical imaging, terrestrial wireless systems and satellite communication systems

• Includes examples and problems throughout to aid understanding

• Companion website features Solutions Manual, Matlab Programs and Electronic versions of some figures
Adaptive Array Systems is essential reading for senior undergraduate and postgraduate students and researchers in the field of adaptive array systems. It will also have instant appeal to engineers and designers in industry engaged in developing and deploying the technology. This volume will also be invaluable to those working in radar, sonar and bio-medical applications.

ABOUT THE AUTHOR

Ben Allen completed his MSc and PhD degrees at the University of Bristol, U.K., in 1997 and 2001 respectively. Having undertaken post-doctorial research in the areas of smart antennas and MIMO wireless systems, he then became a lecturer at the Centre for Telecommunications Research, King's College London where he co-founded the UWB research group. He is now with the Department of Engineering Science, University of Oxford. He has published numerous journal and conference papers in the above areas as well as a book on smart antennas. He has been in receipt of the IEE J Langham Thomson Premium and the ARMMS Best Paper Award, both for publications relating to UWB. He is a senior member of the IEEE, chartered engineer, member of the IEE, and a member of the IEE's Professional Network Executive Committee on Antennas and Propagation. He is a member of the IET, and serves on the UK Task Group on Mobile and Terrestrial Propagation.

Mohammad Ghavami is Reader at the Centre for Telecommunications Research, King's College London. From 1998 to 2000 he was a JSPS Postdoctoral fellow in Yokohama National University, Japan, and from 2000 to 2002 he was a researcher at the Sony Computer Science Laboratories, Inc. in Tokyo, Japan.

For additional product details, please visit https://www.wiley.com/en-us