1. Record Nr.   UNINA9910627251703321

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   Titolo   Secure Automatic Dependent Surveillance-Broadcast Systems / / by
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   Pubbl/distr/stampa Cham : , : Springer International Publishing : , : Imprint : Springer, ,
                      2023

   ISBN   3-031-07021-6

   Edizione   [1st ed. 2023.]

   Descrizione fisica 1 online resource (166 pages)

   Collana   Wireless Networks, , 2366-1445

   Disciplina   629.135

   Soggetti   Telecommunication
                      Computer networks
                      Cooperating objects (Computer systems)
                      Computational intelligence
                      Communications Engineering, Networks
                      Computer Communication Networks
                      Cyber-Physical Systems
                      Computational Intelligence

   Lingua di pubblicazione   Inglese

   Formato   Materiale a stampa

   Livello bibliografico   Monografia

   Nota di bibliografia   Includes bibliographical references and index.

   Nota di contenuto Introduction -- An Overview of ADS-B -- Basic Techniques for Securing
                      ADS-B Systems -- Enabling Confidentiality for ADS-B Broadcast
                      Messages -- Efficient ADS-B Broadcast -- Authentication with Batch
                      Verification -- Efficient ADS-B Broadcast Authentication Using IBS-MR
                      -- Practical and Compatible Cryptographic Solution to ADS-B Security
                      -- Enable Aircraft Location Verification for Industrial ADS-B -- Future
                      Research Directions -- Conclusion.

   Sommario/riassunto This book proposes secure schemes to address security challenges in
                      secure automatic dependent surveillance-broadcast systems (ADS-B)
                      from five different angles. First, the authors examine encryption
                      schemes applied to the ADS-B environment for protecting messages
                      confidentiality. Second, they propose an ADS-B broadcast
                      authentication scheme with batch verification by employing an identity-
                      based signature. Third, they present ADS-B broadcast authentication
                      scheme based on a digital signature with message recovery, which

provides a feature that the message is recoverable from the signature. Fourth, they propose a new cryptographic solution to ADS-B security. Finally, they propose an accurate and efficient cognitive aircraft location verification scheme preserving aircraft location privacy by utilizing a grid-based k-nearest neighbor algorithm. In summary, the authors show how ADS-B data links can greatly enhance flight safety by these proposed schemes without sacrificing data security.