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## From Constellation Dithering to NOMA Multiple Access: Security in Wireless Systems

### Tytuł

From Constellation Dithering to NOMA Multiple Access: Security  
in Wireless Systems

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Abstract: In recent years, there has been a noticeable increase in interest in the possibilities of embedding additional data in the constellation of an already existing information signal in radio technology. This solution more precisely is based on adding a low power signal (or signals) to a stronger signal (cover). As will be described in the article, this technique is used in numerous radio communication areas, such as watermarking, covert channel creation, and multiple access techniques. Typically, those areas are considered as independent research topics. Our comparison suggests that these areas are closely related. In this article, a comprehensive survey of the implementation of signal superposition is conducted with an emphasis on the similarities and differences between individual solutions. Since the nature of the signal model entails certain problems in the security area, we provide the reader with a review of the state-of-the-art research on this topic, including the PLS (physical layer security) and LPD (low probability of detection) issues.

Keywords: [steganography](#), [covert channel](#), [physical layer security](#), [low probability of detection](#)

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