Record Nr. UNINA9910437922103321 Advanced technologies for intelligent systems of national border **Titolo** security / / Aleksander Nawrat, Krzysztof Simek, and Andrzei Swierniak (eds.) Berlin; Heidelberg, : Springer, c2013 Pubbl/distr/stampa **ISBN** 3-642-31665-4 [1st ed. 2013.] Edizione Descrizione fisica 1 online resource (XVIII, 282 p.) Studies in computational intelligence, . 1860-949X:: 440 Collana Altri autori (Persone) NawratAleksander SimekKrzysztof SwierniakAndrzej Disciplina 621.38928 Soggetti Border security - Technological innovations Information technology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Includes author index. Part I Design of Control Algorithms for UAV Objects -- Part II Design Nota di contenuto and Construction of Trajectory Planer for UAVs -- Part III Sensoric and Vision based Information for UAVs -- Part IV Construction and Implementation of the Base Station and Software. One of the world's leading problems in the field of national security is Sommario/riassunto protection of borders and borderlands. This book addresses multiple issues on advanced innovative methods of multi-level control of both ground (UGVs) and aerial drones (UAVs). Those objects combined with innovative algorithms become autonomous objects capable of patrolling chosen borderland areas by themselves and automatically inform the operator of the system about potential place of detection of a specific incident. This is achieved by using sophisticated methods of generation of non-collision trajectory for those types of objects and enabling automatic integration of both ground and aerial unmanned vehicles. The topics included in this book also cover presentation of complete information and communication technology (ICT) systems capable of control, observation and detection of various types of incidents and threats. This book is a valuable source of information for

constructors and developers of such solutions for uniformed services.

Scientists and researchers involved in computer vision, image processing, data fusion, control algorithms or IC can find many valuable suggestions and solutions. Multiple challenges for such systems are also presented.