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Altri autori (Persone)	KusterbeckAnne HiltzJohn A
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	A view on bio-inspiration -- Investment approaches -- Conceptual approach -- Structure -- Collection and sampling -- Receptors and surfaces -- Sensing and transduction -- Energy and power -- Processing and communications -- The SASS approach.
Sommario/riassunto	Can scientists and engineers replicate Nature and develop systems that operate in extreme environments? Bio-inspiration is an established concept which is developing to meet the needs of the many challenges we face particularly in defence and security. This book explores the potential of bio-inspired materials and sensing systems together with examples of how they are being implemented. It is not an exhaustive study of the subject but provides an overview of how bio-inspired or -derived approaches can be used to enhance components, systems and systems of systems for defence and security applications. Readers will gain an awareness of the complexity and versatility of bio-inspired components as well as an understanding of how these technologies can be applied in a variety of operational scenarios. Consideration is given to using a conceptual model that can be deployed in distributed or autonomous operations. Using this model, bio-inspiration with behavioural science plays a major role in identification, movement, searching strategies and pattern recognition for chemical and biological

detection. Examples focus on both learning new things from nature that have application to the defence and security areas and adapting known discoveries for practical use by these communities. This graduate level monograph provides an increased awareness of the need for more sophisticated, networked sensors and systems in the defence and security communities and will be of interest to both specialists in this area and science and technology generalists -- Back cover.

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