Record Nr. UNINA9910828215903321 Decision making: a psychophysics application of network science, **Titolo** Center for Nonlinear Science, University of North Texas, USA, 10-13 January 2010 / / editors, Paolo Grigolini, Bruce J. West Singapore; ; Hackensack, N.J., : World Scientific, 2011 Pubbl/distr/stampa **ISBN** 1-283-43402-4 9786613434029 981-4365-82-3 Edizione [1st ed.] 1 online resource (207 p.) Descrizione fisica Collana Studies of nonlinear phenomena in life science;; v. 15 Altri autori (Persone) GrigoliniPaolo WestBruce J Disciplina 612.8 Soggetti Neural networks (Neurobiology) Chaotic behavior in systems Complexity (Philosophy) Decision making - Physiological aspects Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references. Nota di bibliografia Preface; CONTENTS; 1. Overview of ARO program on network science Nota di contenuto for human decision making B.J. West; 1. Introduction; 2. Background; 2.1. What we know about networks; 2.2. What we do not know about the linking of physical and human networks: 3. What We Have Been Doing; 3.1. Complexity theory and modeling without scales; 3.2. Information propagation in complex adaptive networks; 4. Preliminary Conclusions; References; 2. Viewing the extended mind hypothesis (Clark & Chambers) in terms of complex systems dynamics G. Werner; 1. Background; 2. On the Extended Mind Hypothesis 3. Brain and World as ONE Complex Dynamical System4. Praxis Ahead of Theory; 5. Conclusion; References; 3. Uncertainty in psychophysics: Deriving a network of psychophysical equations K.H. Norwich; 1. Introduction; 2. Philosophical Underpinnings; 3. Mathematical Representation of the Psychophysical Law (Weber-Fechner and Stevens); 4. A Network of Equations Issuing from the Entropic Form of the Psychophysical Law; 4.1. The differential threshold (DH from

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## Sommario/riassunto

This invaluable book captures the proceedings of a workshop that brought together a group of distinguished scientists from a variety of disciplines to discuss how networking influences decision making. The individual lectures interconnect psychological testing, the modeling of neuron networks and brain dynamics to the transport of information within and between complex networks. Of particular importance was the introduction of a new principle that governs how complex networks talk to one another - the Principle of Complexity Management (PCM). PCM establishes that the transfer of information fr