Record Nr. UNINA9910792082403321

Autore Schweickert Richard

Titolo Discovering cognitive architecture by selectively influencing mental

processes [[electronic resource] /] / by Richard Schweickert, Donald L.

Fisher & Kyongie Sung

New Jersey, : World Scientific, 2012 Pubbl/distr/stampa

ISBN 1-283-59358-0

> 9786613906038 981-4277-46-0

Descrizione fisica 1 online resource (431 p.)

Collana Advanced series on mathematical psychology;; v. 4

Altri autori (Persone) FisherDonald L

SungKyongje

Disciplina 150.1/5195

Soggetti Psychology - Mathematical models

Psychometrics

Lingua di pubblicazione Inglese

Formato Materiale a stampa

Livello bibliografico Monografia

Description based upon print version of record. Note generali

Nota di bibliografia Includes bibliographical references and index.

Nota di contenuto Preface; Contents; Chapter 1: Introduction to Techniques; Stretching

> Processes Rather Than Inserting Them; Chapter 2: Introduction to Process Schedules: Gantt Charts and Directed Acyclic Task Networks: Directed Acyclic Task Networks; Acyclic Task Networks in Human Factors: Systems Not Easily Represented in Acyclic Task Networks:

Processing Trees: Systems Not Easily Represented As Processing Trees: Analyzing both reaction time and accuracy; Chapter 3: Selectively Influencing Processes in Task Networks; Effects of Selectively Influencing Processes in Task Networks; Slack; Selective influence Monotonic Response Time MeansA note on SOA in dual tasks; A note on OR networks; Monotonic Interaction Contrasts; Calculations and simulations; Interaction Contrasts: Concurrent Processes; Example 1: Exponential distributions; Example 2: Truncated normal distributions;

OR networks; Statistical considerations; Interaction contrasts:

Sequential processes; Sequential processes case 1: Not in a Wheatstone

bridge; Example 3: Exponential distributions; Example 4: Truncated normal distributions; Sequential processes case 2: An incomplete

Wheatstone bridge; Example 5: Exponential distributions

Example 6: Truncated normal distributions Sequential processes case 3: A complete Wheatstone bridge; Distinguishing Concurrent and Sequential Processes; Limiting Values of Interaction Contrasts; Concurrent processes; Sequential processes; Building Blocks: Superprocesses and Stages in Task Networks; Superprocesses; Additive Factors and Stages; Appendix; Limits of Interaction Contrasts; Chapter 4: Theoretical Basis for Properties of Means and Interaction Contrasts; Notation and Definitions; Probability spaces; Ordering random variables: Conditional expectation

Effects of Experimental Factors on ProcessesFactors selectively influencing random variables; Factors ordering random vectors; Factors selectively influencing random vectors by increments; Monotonic reaction time means; Interaction contrasts; Concurrent processes; Sequential processes; OR networks; Chapter 5: Critical Path Models of Dual Tasks and Locus of Slack Analysis; Critical Path Network Models of Dual Tasks; Central limitations; Response limitations; Both central and response limitations; Selective Influence of Processes in Dual Tasks; Sensory and Central Processes

Central Processing in Task 1 and SOA (B1,SOA)Later work on B1 and SOA; SOA and Task 2 Sensory Processing (SOA, A2); Locus of Slack Analysis; SOA and Task 2 Central Processing, ; Number of Task 2 alternatives; Degree of mental rotation; Stimulus 2 discriminability; Number of Task 2 alternatives again, with response modality; Sensory and central Task 2 processing, ; Central processing of Task 1, central processing of Task 2, ; PRP: Number of alternatives; PRP: Discriminability; PRP: Central Process Order; Stroop tasks; Number of alternatives and Stroop conflict

Post-Central and Response Processes

Sommario/riassunto

One of the most successful methods for discovering the way mental processes are organized is to observe the effects in experiments of selectively influencing the processes. Selective influence is crucial in techniques such as Sternberg's additive factor method for reaction times and Jacoby's process dissociation procedure for accuracy. The successful uses of selective influence have encouraged application extensions to complex architectures, to dependent variables such as evoked potentials, and to complex interpretations. But the common themes have become lost in the details of separate uses a