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Autore	Sanei Saeid
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Classificazione	SCI067000
Disciplina	573.8/5
Soggetti	Brain - Physiology Neural networks (Neurobiology) Signal processing - Digital techniques
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Title Page; Copyright; Preface; Chapter 1 Brain Signals, Their Generation, Acquisition and Properties; 1.1 Introduction; 1.2 Historical Review of the Brain; 1.3 Neural Activities; 1.4 Action Potentials; 1.5 EEG Generation; 1.6 Brain Rhythms; 1.7 EEG Recording and Measurement; 1.8 Abnormal EEG Patterns; 1.9 Aging; 1.10 Mental Disorders; 1.11 Memory and Content Retrieval; 1.12 MEG Signals and Their Generation; 1.13 Conclusions; References; Chapter 2 Fundamentals of EEG Signal Processing; 2.1 Introduction; 2.2 Nonlinearity of the Medium; 2.3 Nonstationarity; 2.4 Signal Segmentation 2.5 Other Properties of Brain Signals 2.6 Conclusions; References; Chapter 3 EEG Signal Modelling; 3.1 Physiological Modelling of EEG Generation; 3.2 Mathematical Models; 3.3 Generating EEG Signals Based on Modelling the Neuronal Activities; 3.4 Electronic Models; 3.5 Dynamic Modelling of the Neuron Action Potential Threshold; 3.6 Conclusions; References; Chapter 4 Signal Transforms and Joint Time-Frequency Analysis; 4.1 Introduction; 4.2 Parametric Spectrum Estimation and Z-Transform; 4.3 Time-Frequency Domain Transforms; 4.4 Ambiguity Function and the Wigner-Ville Distribution 4.5 Hermite Transform 4.6 Conclusions; References; Chapter 5 Chaos

and Dynamical Analysis; 5.1 Entropy; 5.2 Kolmogorov Entropy; 5.3 Lyapunov Exponents; 5.4 Plotting the Attractor Dimensions from Time Series; 5.5 Estimation of Lyapunov Exponents from Time Series; 5.6 Approximate Entropy; 5.7 Using Prediction Order; 5.8 Conclusions; References; Chapter 6 Classification and Clustering of Brain Signals; 6.1 Introduction; 6.2 Linear Discriminant Analysis; 6.3 Support Vector Machines; 6.4 k-Means Algorithm; 6.5 Common Spatial Patterns; 6.6 Conclusions; References
Chapter 7 Blind and Semi-Blind Source Separation 7.1 Introduction; 7.2 Singular Spectrum Analysis; 7.3 Independent Component Analysis; 7.4 Instantaneous BSS; 7.5 Convolutional BSS; 7.6 Sparse Component Analysis; 7.7 Nonlinear BSS; 7.8 Constrained BSS; 7.9 Application of Constrained BSS; Example; 7.10 Nonstationary BSS; 7.11 Tensor Factorization for Underdetermined Source Separation; 7.12 Tensor Factorization for Separation of Convolutional Mixtures in the Time Domain; 7.13 Separation of Correlated Sources via Tensor Factorization; 7.14 Conclusions; References
Chapter 8 Connectivity of Brain Regions 8.1 Introduction; 8.2 Connectivity Through Coherency; 8.3 Phase-Slope Index; 8.4 Multivariate Directionality Estimation; 8.5 Modelling the Connectivity by Structural Equation Modelling; 8.6 EEG Hyper-Scanning and Inter-Subject Connectivity; 8.7 State-Space Model for Estimation of Cortical Interactions; 8.8 Application of Adaptive Filters; 8.9 Tensor Factorization Approach; 8.10 Conclusions; References; Chapter 9 Detection and Tracking of Event-Related Potentials; 9.1 ERP Generation and Types; 9.2 Detection, Separation, and Classification of P300 Signals 9.3 Brain Activity Assessment Using ERP

Sommario/riassunto

"Brain signal processing spans a broad range of knowledge across engineering, science and medicine, and this book brings together the disparate theory and application to create a comprehensive resource on this growing topic. It will provide advanced tools for the detection, monitoring, separation, localizing and understanding of brain functional, anatomical, and physiological abnormalities. The focus will be on advanced and adaptive signal processing techniques for the processing of electroencephalography and magneto-encephalography signals, and their correlation to the corresponding functional magnetic resonance imaging (fMRI). Multimodal processing of brain signals, the new focus for brain signal research, will also be explored. The book covers the broad remit of neuro-imaging, ensuring comprehensive coverage of all issues related to brain signal processing. Topics such as mental fatigue, brain connectivity and new recording techniques will also be covered. This book will be a progression/follow on from Dr Sanei's first book with Wiley, EEG Signal Processing"--
"Covers the fundamentals of brain signal processing, before developing the subject at advanced level"--

2. Record Nr.	UNINA9910962715303321
Titolo	Appetite and nutritional assessment // Shane J. Ellsworth and Reece C. Schuster, editors
Pubbl/distr/stampa	New York., : Nova Science Publishers, 2009
ISBN	1-61728-138-7
Edizione	[1st ed.]
Descrizione fisica	1 online resource (431 p.)
Collana	Nutrition and diet research progress
Altri autori (Persone)	EllsworthShane J SchusterReece C
Disciplina	612.3
Soggetti	Appetite Nutrition - Evaluation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Ghrelin : a peptide involved in the control of appetite / Carine De Vriese, Jason Perret and Christine Delpoite -- Appetite control : the role of central and gut neuropeptides / Sarika Arora -- Central inhibitory mechanism controlling water and sodium intake / Jose Vanderlei Menani ... [et al.] -- Cachexia : disruption in appetite regulation in need of a successful intervention / Mark D. DeBoer -- Clinical holistic medicine : a sexological approach to eating disorders / Søren Ventegodt ... [et al.] -- Making sense of what is healthy for you : children's and adults' evaluative categories of food / Simone P. Nguyen and Mary Beth McCullough -- The validity of nutritional assessment : current status / Christopher N. Ochner, Eva M. Conceicao, & Olga Gorlova -- Methodological research concerning the accuracy of children's dietary recalls / Suzanne Domel Baxter ... [et al.] -- Contemporary assessment of child dietary intake in the context of the obesity epidemic / Anthea M. Magarey, Annabelle M. Wilson, Emma Goodwin -- The use of composite scores to assess adherence to dietary patterns : the Mediterranean diet case / Angeliki Papadaki and Manolis Linardakis -- Estimation of dietary intakes by digital images : potential and limitation / Da-Hong Wang, Michiko Kogashiwa, Keiki Ogino -- Nutrition and diabetes mellitus type 1 : a brief overview / Abdullah Al-Abdulhadi & Rossana Salerno-Kennedy -- Diabetes mellitus type 1 and eating disorders : a brief overview / Steven Laragh & Rossana Salerno-

Kennedy -- Use of mid-upper arm circumference as a measure of nutritional status and its relationship with self reported morbidity among adult Bengalee male slum dwellers of Kolkata, India / Raja Chakraborty, Kaushik Bose, and Samiran Bisai.

Sommario/riassunto

Appetite is the desire to eat food and it exists in all higher lifeforms, and serves to regulate adequate energy intake to maintain metabolic needs. A person's nutritional assessment is an in-depth evaluation of both objective and subjective data related to the individual's food and nutrient intake, lifestyle, and medical history. The association of appetite, diet and nutrition with chronic disease such as diabetes has been well documented. This book presents a variety of topics on appetite and health. It highlights the complexity of accurately assessing dietary patterns and dietary needs. Also included is new research on the role of peptides in appetite control as well as a new approach in the thinking on why eating disorders occur.
