1. Record Nr.   UNINA9910298993703321

   Titolo   Brain-Computer Interface Research : A State-of-the-Art Summary 3 / /
                       edited by Christoph Guger, Theresa Vaughan, Brendan Allison

   Pubbl/distr/stampa Cham : , : Springer International Publishing : , : Imprint : Springer, ,
                       2014

   ISBN   3-319-09979-5

   Edizione   [1st ed. 2014.]

   Descrizione fisica 1 online resource (137 p.)

   Collana   SpringerBriefs in Electrical and Computer Engineering, , 2191-8112

   Disciplina   004
                       005.437
                       006.3
                       4019
                       610.153
                       610.28
                       612.8

   Soggetti   User interfaces (Computer systems)
                       Neurosciences
                       Medical physics
                       Radiation
                       Computational intelligence
                       Biomedical engineering
                       User Interfaces and Human Computer Interaction
                       Medical and Radiation Physics
                       Computational Intelligence
                       Biomedical Engineering and Bioengineering

   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.

   Nota di contenuto   Contents; Recent Advances in Brain-Computer Interface Research-The
                       BCI Award 2013 ; 1 Introduction; 2 The BCI Award; 3 The 2013
                       Nominees; Give Me a Sign: Studies on the Decodability of Hand
                       Gestures Using Activity of the Sensorimotor Cortex as a Potential
                       Control Signal for Implanted Brain Computer Interfaces ; 1 fMRI; 2
                       ECoG; 3 Discussion; 4 Conclusion; References; An Ipsilateral,

Sommario/riassunto	This book provides a cutting-edge overview of the latest developments in Brain-Computer-Interfaces (BCIs), reported by leading research groups. As the reader will discover, BCI research is moving ahead rapidly, with many new ideas, research initiatives, and improved technologies, e.g. BCIs that enable people to communicate just by thinking – without any movement at all. Several different groups are helping severely disabled users communicate using BCIs, and BCI technology is also being extended to facilitate recovery from stroke, epilepsy, and other conditions. Each year, hundreds of the top BCI scientists, engineers, doctors, and other visionaries compete for the most prestigious honor in the BCI research community: the annual BCI Award. The 2013 BCI Award competition was by far the most competitive, with over 160 research groups vying for a nomination. The chapters of this book summarize the ten projects that were nominated, in particular the winning project, and analyses how these reflect general trends in BCI development. Each project summary includes an introduction, description of methods, results, and also includes newer

work completed after the project was entered for the competition. The texts are presented in accessible style with numerous supporting pictures, graphs, and figures.