

Contents

Recent Advances in Brain-Computer Interface Research - Projects Nominated for the BCI Award 2012	1
<i>Christoph Guger, Brendan Allison, E.C. Leuthardt</i>	
Brainatic: A System for Real-Time Epileptic Seizure Prediction	7
<i>César Teixeira, Gianpietro Favaro, Bruno Direito, Mojtaba Bandarabadi, Hinnerk Feldwisch-Drentrup, Matthias Ihle, Catalina Alvarado, Michel Le Van Quyen, Bjorn Schelker, Andreas Schulze-Bonhage, Francisco Sales, Vincent Navarro, António Dourado</i>	
Combining Brain-Computer Interfaces and Haptics: Detecting Mental Workload to Adapt Haptic Assistance	19
<i>Laurent George, Maud Marchal, Loeiz Glondu, Anatole Lécuyer</i>	
Reading Visual Braille with a Retinal Prosthesis	29
<i>Thomas Z. Lauritzen, Jordan Harris, Saddek Mohand-Said, Jose A. Sahel, Jessy D. Dorn, Kelly McClure, Robert J. Greenberg</i>	
Ear-EEG: User-Centered and Wearable BCI	41
<i>David Looney, Preben Kidmose, Danilo P. Mandic</i>	
A Novel Brain-Computer Interface for Chronic Stroke Patients	51
<i>N. Mrachacz-Kersting, N. Jiang, K. Dremstrup, D. Farina</i>	
Volitional Control of Neural Connectivity	63
<i>Sergio Ruiz, Niels Birbaumer, Ranganatha Sitaram</i>	
Improving the Efficacy of Ipsilesional Brain-Computer Interface Training in Neurorehabilitation of Chronic Stroke	75
<i>Surjo R. Soekadar, Niels Birbaumer</i>	

Event-Related Desynchronization by Hand Motor Imagery Is Associated with Corticospinal Excitability: Physiological Evidence for BCI Based Neurorehabilitation 85
Mitsuaki Takemi, Yoshihisa Masakado, Meigen Liu, Junichi Ushiba

Electrocorticographic Control of a Prosthetic Hand in Paralyzed Patients: ECoG Control of a Prosthetic Hand 95
Takufumi Yanagisawa, Masayuki Hirata, Youichi Saitoh, Haruhiko Kishima, Kojiro Matsushita, Tetsu Goto, Ryohei Fukuma, Hiroshi Yokoi, Yukiyasu Kamitani, Toshiki Yoshimine

Recent Advances in Brain-Computer Interface Research – A Summary of the BCI Award 2012 and BCI Research Trends 105
Christoph Guger, Brendan Allison, E.C. Leuthardt

Author Index 111