The Colorado State University Computer Science Department presents:

A Look Behind our Adaptive Brain Interface's Veil

Dr. José Millán

Swiss Federal Institute of Technology

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Abstract

In my ISTeC lecture, I will give a a wide overview of our work on adaptive brain interfaces (ABI). Now it's time to take a deeper look at some of the critical components of our approach, from the statistical machine learning techniques to shared control for blending user's and robot's intelligence. I'll also give a more complete analysis of the wheelchair experiments and discuss alternative techniques for EEG analysis we are currently exploring.

Biography

José del R. Millán is a professor at the Swiss Federal Institute of Technology in Lausanne (EPFL) where he explores the use of brain signals for multimodal interaction and, in particular, the development of non-invasive brain-controlled robots and neuroprostheses. In this multidisciplinary research effort, Dr. Millán is bringing together his pioneering work on the two fields of brain-computer interfaces and adaptive intelligent robotics.

He received his Ph.D. in computer science from the Univ. Politécnica de Catalunya (Barcelona, Spain) in 1992, where he was an assistant professor for three years. He was also a research scientist at the Joint Research Centre of the European Commission in Ispra (Italy), a senior researcher at the Idiap Research Institute in Martigny (Switzerland), and a visiting scholar at the Universities of Stanford and Berkeley.

His research on brain-computer interfaces was nominated finalist of the European Descartes Prize 2001 and he has been named Research Leader 2004 by the journal Scientific American for his work on brain-controlled robots. The journal Science has reviewed his work as one of the worlds key researchers in the field of brain-computer interfaces. Dr. Millán is the coordinator of a number of European projects on brain-computer interfaces and also is a frequent keynote speaker at international events. His work on brain-computer interfaces has received wide media coverage around the world.