



# NEUROSCIENCE mini-symposium From Perception to Decision **MARIANO SIGMAN** University of Buenos Aires

## Neuroscience and Education: Prime Time to Build the Bridge

**2:00PM, July 11**

Around the globe, over 2 billion children attend school daily, in what constitutes the largest learning experiment ever attempted. For this reason, and because rising education inequality is among the gravest of the world's problems, the time for evidence-based education has arrived, with ambitious goals for pedagogical experiments that may lead to breakthrough discoveries and translate to effective social improvement. Despite the obvious fact that education is constrained by the architecture and functioning of the human brain, neuroscience has remained distant from classrooms. However, this is beginning to change and in my talk I will discuss how our neuroscience methods, tools and theoretical frameworks have broadened our understanding of the mind in a way that might help improve educational practice.

### About the Speaker

Mariano Sigman was born in Argentina and grew up in Barcelona, Spain. He obtained a master degree in physics at the University of Buenos Aires and a PhD in neuroscience in New York. He moved to Paris to investigate decision making, cognitive architecture and consciousness. In 2006 he founded the Integrative Neuroscience Laboratory, at the University of Buenos Aires, an interdisciplinary group integrated by physicists, psychologists, biologists, engineers, educational scientists, linguists, mathematicians, artists and computer scientists.

His lab has developed an empirical and theoretical approach to decision making, with special focus on the assemblage of unitary decisions into mental programs and understanding the construction of confidence and subjective beliefs. Many aspects of his investigation rely on data mining and computational tools on massive corpus of human behavior (text, decision making...). Recently, he has progressively shifted his research to understand how current knowledge of the brain and the mind may serve to improve educational practice. Many of the projects conduct are developed at schools throughout the country and he is extending these investigations on cognitive development to hundreds of thousands of children through the One Laptop Per Child (OLPC) framework.

Throughout his career he developed numerous research interactions with representatives of different domains of human culture including, musicians, professional chess players, mathematicians, magicians, visual artists and chefs. Several of these interactions resulted in exhibits presented in museums and galleries in Argentina, Mexico, Brazil, US, Japan, Austria... He was awarded a Human Frontiers Career Development Award, the national prize of physics, the young investigator prize of "College de France", the IBM Scalable Data Analytics award and is a scholar of the James S. McDonnell Foundation.

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