Gerry Leisman, Int J Phys Med Rehabil 2014, 2:4
http://dx.doi.org/10.4172/2329-9096.S1.006

OMICS Group Conferences
Accelerating Scientific Discovery

2nd International Conference and Exhibition on
Physical Medicine & Rehabilitation
July 14-16, 2014 DoubleTree by Hilton Baltimore-BWI Airport, USA

Functional connectivities and re-connectivities reflect cognitive modifiability in neurorehabilitation

Gerry Leisman
The National Institute for Brain and Rehabilitation Sciences, Israel

Recent spectacular advances in neurosciences have stimulated the hope that the application of our understanding that it is no longer about cerebral asymmetries and simplistic left-right differences but more complex applications of networks, and communication system principles that have led to newly developed concepts and findings that have not, as yet, found their way into the schools and rehabilitation environments. We are at the cusp of developing breakthrough concepts in the understanding of how children learn in the formal setting of the classroom and adults recover in the context of brain function and how that function can be modified. There exists significant overlap between the problems of educational, sociological, and psychological processes and those of neurobiology, biochemistry and neurophysiology, and there is every possibility of reciprocal assistance. Researchers in these fields are willing to approach complex functions such as memory and learning on a physiological basis. It is thought that the techniques and knowledge of neuroscience as well as Human Factors and Industrial Engineering notions of efficiency and operations research can provide a service to the rehabilitation process at all stages throughout life. The presentation culls our recent work in coherence and connectography to illustrate applications for the rehabilitation process.

Biography

Gerry Leisman is an Israeli neuroscientist educated in Europe and the United States in Medicine, Neuroscience, and Biomedical Engineering at Manchester University. He received a PhD in Neuroscience and Biomedical Engineering from Union University, in 1979. Currently he is the Director of the National Institute for Brain and Rehabilitation Sciences in Nazareth, Israel, Professor of Biomedical Engineering at ORT-Braude College of Engineering in Karmiel, Israel and of Brain and Rehabilitation Sciences at the University of Medical Sciences in Havana, Cuba. He is Editor-in-Chief of the journal Functional Neurology, Rehabilitation, and Ergonomics. He is the co-author of a text with Dr. Robert Melillo on Neurobiology and Autistic Spectrum Disorders, has published hundreds of papers in the Neurosciences, Engineering and Systems Sciences literature and is the holder of patents.

gerry.leisman@staff.nazareth.ac.il