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International Conference on

Health Care and Neuroscience

April 08-09, 2019 | Zurich, Switzerland

Coordination Dynamics Therapy to repair the human CNS and measure repair progress

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Coordination dynamics therapy (CDT) is a movement-based learning therapy with which it is possible to partly repair the human CNS. Following CNS injury, the phase and frequency coordination of CNS self-organization becomes impaired and has to be repaired. This can be achieved by exercising coordinated arm and leg movements on a special CDT device. Further, creeping, crawling, walking, running, jumping and other movements have to be trained so that other parts of the brain can take function over by plasticity. Most CNS injuries, malformations and degeneration can be treated, including spinal cord injury, brain injury, cerebral palsy and Parkinson's disease. By learning transfer from movements, vegetative and higher mental functions can be repaired including impaired urinary bladder functions (continence). The repair progress can be measured objectively by movement pattern change when exercising on a special CDT device. When performing the different coordinated arm and leg movement patterns, imposed by the device, the computer quantifies the arrhythmicity of exercising of the patient by a single value. Plotting these values over months and years during treatment, repair progress can be made visible objectively.

Speaker Biography

Schalow G studied electronics (Dipl Ing, 1963) and worked 2 years as a technical engineer at Bosch Electronics. Afterwards he studied theoretical physics at the Free University of Berlin (1970) and worked at the Hahn-Meitner-Institute for Nuclear Physics and promoted in 1973 (PhD). From 1975 to 1977, he was post doc with Katz, Huxley and R Miledi at the Institute of Biophysics, University College London. At the Saarland University from 1977 to 1983, he was assistant at the physiological institute and studied medicine (MD). From 1985 to 1992, he was research assistant at the Ernst-Moritz-Arndt-University of Greifswald (neurosurgery, pathology, neuro-traumatology). From 1992 to 1998, he was leading doctor for clinical research at the Swiss Paraplegic Center Nottwil. From 1998 to 2003, he was working in the field of neuro-traumatology at Tampere and Turku University, Finland. From 2003, he was guest professor at Tartu University (Estonia) and afterwards private researcher because human neurophysiology and clinical research in not organized. He has 100 publications in the fields of human neurophysiology and clinical research and can partly repair the human brain.

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