

5G Academy



NOKIA



Future Interactive immersive Efficient Green technologies Academy

Seminar

REWIRE THE BRAIN: THE POTENTIAL OF NEUROPLASTICITY

MAY 9, 11:00 AM

FIVEG Academy - Polo tecnologico
S.Giovanni a Teduccio Università Federico
II di Napoli

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In these last decades, one of the most important neuroscientific discoveries has been to demonstrate that our brain retains a plastic potential to reorganize in adult humans even in old and/or lesioned brains.

This discovery has significant repercussions not only on our lives, where we are constantly faced with the need to adapt to new situations, but it becomes even more important when we shift our attention to people with neurological damage. Individuals who, following acquired brain damage in adulthood, are no longer able to speak, communicate, and/or remember even simple information.

This talk will address how neuroplasticity can help us planning targeted rehabilitation interventions to recover damaged functions or to find compensation strategies in adults with brain injuries.

The most recent neuroscientific studies will be presented showing how different treatment techniques can improve the cognitive performance of people with neurological damage. Among the techniques, some brain neuromodulation techniques will be discussed which, by enhancing the neuronal responses, ensure intensive treatment regimens and, thus, increase our ability to receive and consolidate incoming information.

In this context, a future research direction is to consider the plasticity of the cognitive system after brain lesions on a larger network level, hypothesizing to stimulate on one hand, peripheral systems closely connected to the brain, such as the spinal cord, which might support cognitive recovery, and, on the other, phylogenetically older cortical systems, often spared by brain damage, which might facilitate the retrieval of our autobiographical memories.

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