



The Science-Technology Future of Psychiatry

The wind of change blows straight into the face of time (the Scorpions)

Three exciting developments are transpiring in contemporary psychiatry;

- 1) Neuroscientific insights into the possible causes of mental disorders
- 2) Neural computation theory applications to psychiatry, also known as 'Computational Psychiatry'
- 3) Digital Mental Health; wearable sensors and internet technology is used in psychiatry

What is the future road to follow combining these developments in psychiatric practice?

Neuroscientific insights into the possible causes of mental disorders.

We know today that the neural network level of description ('The Connectom') of the brain dynamics can offer comprehensive insights into the causes of mental disorders. Disturbances to connectivity and plasticity are becoming accountable for brain disorders causing psychiatric illness. Disturbances to global networks dynamics ([Globalopathies](#)) are probably the rule in the emergence of mental disorders.

The million-dollar question is how to integrate and give meaningful clinical therapeutic power to all the insights gained in the above disciplines. The talk will describe the theoretical (Clinical Brain Profiling) and practical (Brain Profiler) steps needed to revolutionize psychiatry and cure patients.

Neural computation theory applications to psychiatry, also known as 'Computational Psychiatry'

The brain optimizes its functions using effective neural network organizations such as 'Small-World' where 'Clustering Coefficient' and 'Long pathways' are balanced in the healthy brain, altered Small-World organization can constitute the etiology of certain mental -disorders. This can be comparable to cardiac arrhythmia causing cardiac insufficiency . In our case ,brain small-world disturbance (arrhythmia) causing brain insufficiency (psychiatric Phenomenology).

Digital Mental Health; wearable sensors and internet technology is used in psychiatry

Everyday activity uses cyber and sensors activity mediated by the world-wide-web . Thus behavior and cognition can be monitored continually by observing cyber data flowing from personal cyber-activity. This can be activity on the web, on social networks and extracted from mobile phones. It can also come from modern activity-monitors such as 'Fit-Bit' movement sensors used to measure physical exercise. In all, such technology can extract important psychiatric phenomenology and diagnose psychiatric conditions remotely and continually.

The talk will take place at ### date ## time ###

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