



# Workshop program

## **Systems; basic concepts**

- Intro to Systems, definitions and basics.
- Intro to Complex Systems, non-linearity, hierarchy, fractals, stability and entropy in dynamic systems.
- Intro to Neural computation, Hebbian supervised-unsupervised learning, self organization and architectures.
- Intro to Network organization: multiple-constraints, architectures and small-world-network.
- Intro to Dynamic systems, optimization and state-space attractors.
- Emergent properties in hierarchical systems

## **Systems; Neuroscience**

- Basics of brain imaging
- Intro to Signal-processing for brain imaging
- Neural complexity and matching complexity
- Experience-dependent plasticity and state-space internal configurations
- Cognition and neural-network recruitments
- Global workspace and consciousness
- Default mode networks, Ego and basic internal configuration

## **Clinical phenomenology of mental disorders**

- Clinical phenomenology of mental disorders relevant historical perspective
- Clinical phenomenology of mental disorders relevant classifications
- Clinical phenomenology of mental disorders ethiopathology; relevant critical challenges.

## **Clinical Brain Profiling**

- Default mode networks & Personality disorders
- Optimization emergent properties & mood disorders
- Connectivity imbalances & psychotic spectrum disorders and schizoprenias
- Clinical Brain Profiling & other mental disorders

## **Clinical Brain Profiling**

- Practical practice, clinical cases