

## Lecture - Henrik J Jensen (Complexity and Self Organized Criticality)

*Tuesday, 5 December 2023 09:00 (2 hours)*

1st hour –Complexity

The systematic study of emergent phenomena.

What is emergence and how to study it. Micro to macro: Characterisation of interdependence and identification of robust macro-structures.

Vortices as an example of emergent macroscopic entities.

2nd hour –Self Organised Criticality (SOC)

Burst, or avalanche, activity.

SOC as stationary intermittency: the nature of the self-generated “critical” state.

Record dynamics: non-stationary intermittency.

Forecasting in high dimensional systems.