

ICTP DIPLOMA PROGRAMME IN MATHEMATICS 2015-16

Dynamical Systems (MTH-DS) **(10 lectures : 15 hrs)**

- 1) Invariant measures. Poincaré Recurrence. Convergence of time averages.
- 2) Ergodic measures. Birkhoff's Ergodic Theorem.
- 3) Unique ergodicity. Circle rotations. Benford's distribution.
- 4) Full branch uniformly expanding maps. Invariance and ergodicity of Lebesgue measure.