Dynamical Systems Seminar

Date. January 11, 14h30

Place. Room M031

Speaker. Li Xin[1] (FCUP, CMUP)

Title. Gibbs-Markov-Young structures with (streched) exponential recurrence times for partially hyperbolic attractors

Abstract. We consider a partially hyperbolic set K on a Riemannian manifold M whose tangent space splits as $T_K M = E^{cu} \oplus E^s$, for which the center-unstable direction E^{cu} expands non-uniformly on some local unstable disk. We prove that the (stretched) exponential decay of recurrence time can be deduced in terms of the (stretched) exponential decay of the time that typical points need to achieve some uniform expanding behavior in the center-unstable direction. Here we give a local Gibbs-Markov-Young structure which plays a preponderant role. As an application of the main result we obtain (stretched) exponential decay of correlations and exponentially large deviation for the system.

Remark. Coffee with the speaker is served after the talk (15h30 - 16h00)

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[1]Li Xin is a Ph.D. student under the supervision of José Ferreira Alves.