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# Géométrie et dynamique dans les espaces de modules

(Carlos Matheus et Anton Zorich)

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Un **mercredi** par mois de **14h à 15h** à l'**Institut Henri Poincaré**.

Séminaire au mois de Janvier:

- **05/01/2022 - Maxim Kontsevich (IHES)**

**Titre:** *Higher-dimensional generalisation of theory of flat surfaces*

**Résumé:** Let  $X$  be a smooth compact manifold of an arbitrary dimension, endowed with a closed complex-valued 1-form  $\alpha$  which is “almost-holomorphic” in the following sense: at each point  $x$  of  $X$  either  $\alpha$  vanishes at  $x$ , or the real and the imaginary parts of  $\alpha$  at  $x$  are linearly independent. Using ideas from Morse-Novikov theory and from the wall-crossing formalism, I’ll define a topological invariant which is roughly the number of saddle connections in a given homology class. There is an  $SL(2, \mathbb{R})$  action on the moduli space pairs  $(X, \alpha)$  (generalising the moduli space of abelian differentials on complex curves). Despite the absence of finite invariant measure, one can still ask questions about generic Lyapunov exponents etc.

**Salle 421**

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