



**UNIVERSITÉ
DE GENÈVE**

FACULTÉ DES SCIENCES

Section de mathématiques

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Séminaire de «Théorie des Nœuds»

Conférencier : Sergei Chmutov (Ohio State University)

Sujet : « **Combinatorics of virtual links** »

Abstract :

Virtual links, introduced by L.Kauffman and independently by M.Polyak and O.Viro, are represented by diagrams similar to ordinary knot diagrams, except some crossings are designated as virtual. They are similar to extra crossings on planar pictures of non planar graphs.

Topologically they can be regarded as links in thickened surfaces when the equivalence involve not only usual isotopy but also a surgery of the surface. Comparably with ordinary links in 3-space they are more close to combinatorics. Recently it was observed by H.Dye and L.Kauffman, and by Y.Miyazawa that for virtual links the Jones polynomial can be split into several parts which are invariant individually. These additional parts do not arise in the case of classical links. The generating function of these parts was called arrow polynomial.

In the talk I briefly review virtual link theory, introduce the arrow polynomial, and explain an arrow generalization of the Thistlethwaite theorem expressing the Jones polynomial as a specialization of the Tutte polynomial.

Date et lieu : **Jeudi 19 mai 2011 à 14h15**
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