

deg Viro: Twisted acyclicity of the circle and link signatures.

damutov: Polyak-Viro formulas for coefficients of the Conway polynomial.

$$\nabla(\nearrow) - \nabla(\searrow) = z(\uparrow) - z(\downarrow) \quad \nabla(\bigcirc) = 1$$

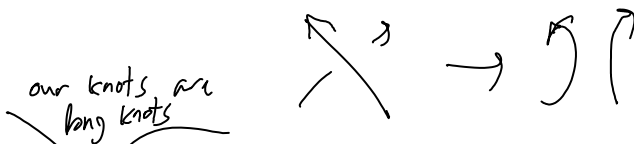
J. W. Mkhauri

A. Ross

$$\nabla(K) = \sum_{\substack{S \\ \text{one-component} \\ \text{jump down}}} (-1)^{n(S)} z^{|S|}$$

of crossings in S
Summed over
of (-) crossings in S
(This is the Tait formula)

one component: = Get exactly one component when smoothing the crossings in S



Jump Down: The first visit to the first-visited ring in S is on the upper strand.

Next comes a discussion of Gauss diagrams and arrow diagrams - - - -

Low Kauffman:

- In a virtual knot there are "odd rings" - in the Gauss diagram, there is an odd number of entries between their entries.

~ "odd L ... at ..."

2. "Flat virtuals"

Roger Fenn:

The Wada biquandle

$$S(g, h) = (hg, gh) = (hg^2, hg^{-1}h^{-1}) \quad g, h \in G$$

Question: what other biquandles can be defined within the free group?

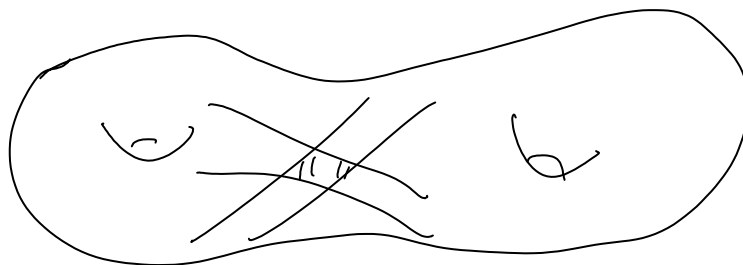
Morton's comment: The standard quandle -

$$S(g, h) = (g^{-1}hg, g) \text{ is an example.}$$

conjecture The general biquandle is a complete invariant of virtual knots.

Vassily Manturov:

Atom:

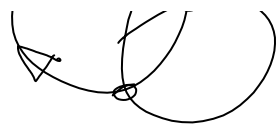


A surface with a quadrivalent graph on it, dividing it into cells, with a checkerboard colouring of those.

Heather Dye:

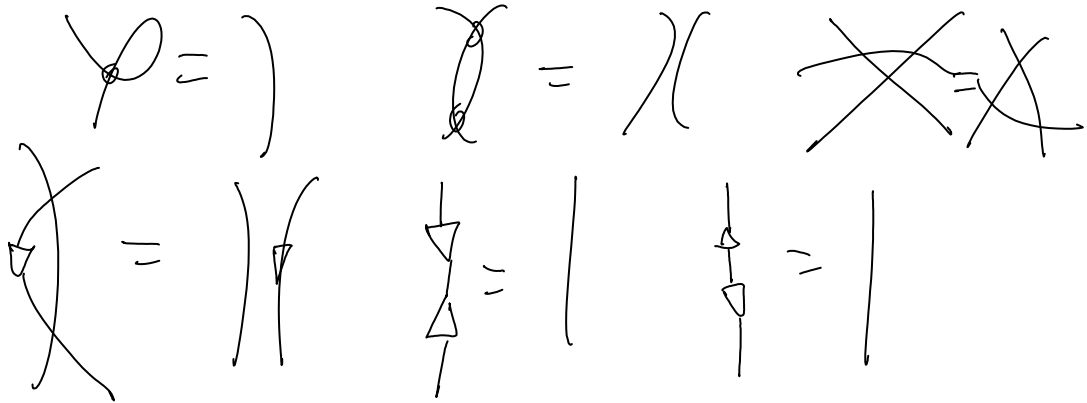


Decorated loops := collections of closed curves with nodes



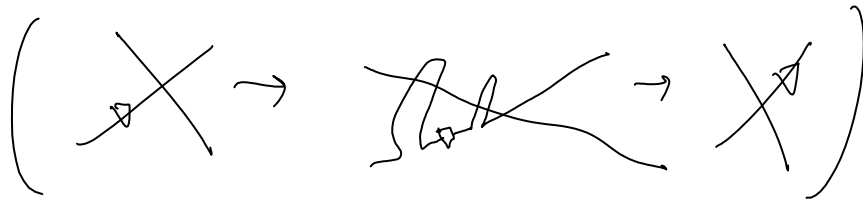
arrows & possibly virtual links

modulo



\Leftrightarrow Disjoint collections of loops, possibly with arrows.

\Leftrightarrow loops with an integral flow.



Alissa Crans:

A quick summary of categorification:

$$= \neq \cong$$

Slogan: Every equation is a lie!