MSRI Conference

August-11-08
9:32 AM

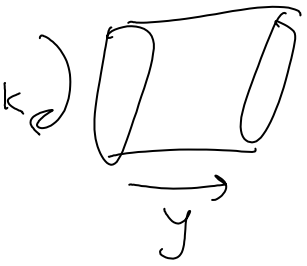
Mike Freidman on Quantum characteristic classes, really about "position, momentum, locality, stability.

$f : \mathbb{R} \longrightarrow \mathbb{C} \Rightarrow$

$$\check{f}(y,k) := \sum_{x \in \mathbb{Z}} e^{ikx} f(y+x) \qquad k \in [0, 2\pi)$$

$$\check{f}(1,k) = \ldots = e^{-ik} \check{f}(0,k)$$

$\Rightarrow \check{f}$ is a section of a line bundle on T^2, with $c_1 = 1$.



. . . .

The "flow" of a "controlled by $\mathbb{Z}$" infinite unitary matrix is conserved and is an integer.

. . . .

"controlled" means $u_{ij} = 0$ if $|i-j| > l$

There is a similar integer associated with $\mathbb{Z}^2$-controlled unitarys, though it looks more like a rotation number; there is a "boundary" of a $\mathbb{Z}^2$-controlled unitary which is a $\mathbb{Z}$-controlled unitary, an a Green's theorem holds for their flows.

Stefano Vidussi on twisted Alexander polynomials

and fibrations of 3-manifolds

My lesson: I have no idea why there should be a "twisted alexander polynomial", where is it coming from and what it may be good for.

Sergei Gukov

numbers → vector spaces → categories

$n! \longrightarrow H^*(Fl_n) \longrightarrow$ Category of objects on the flag variety Fl_n

Slava Krushkal: It is not known (?) if the whitehead double of the Borromean link is slice.

Constance Leidy: A definition of the Kochran-Orr-Teichner filtration of the concordance grap in 4D terms, with some nilpotent quotients of π_1 appearing.

Question: Does this have anything to do with algebraic knot theory?