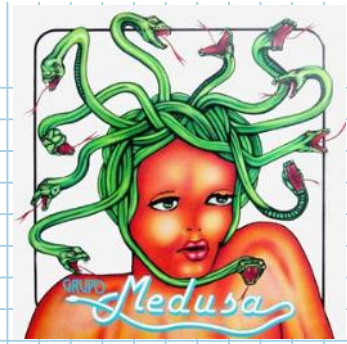


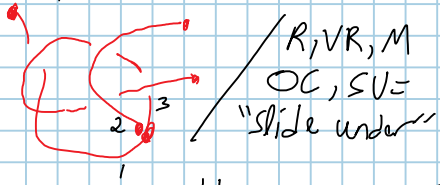
# Invariants of Ribbon Spheres

November-07-12  
9:24 AM



[http://www.ifmusic.co.uk/product.php?products\\_id=8652](http://www.ifmusic.co.uk/product.php?products_id=8652)

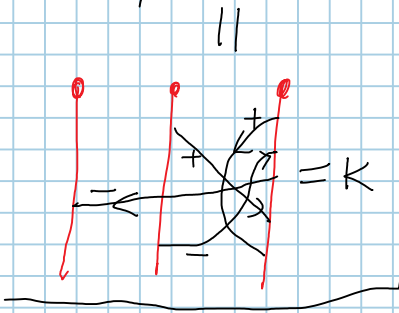
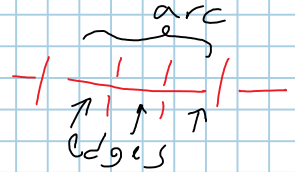
$M_{0,n}$  = "Medusa knots" (A snakes)



$\Pi_1 \rightarrow$

A "LoF" group.  
One generator  $g_i$  per arc,  
Wirtinger relations near  
crossings, list of "special  
generators" near base  
points.

$M(K) = \text{Left } \mathbb{Z}\langle \Pi_1 \rangle \text{ module w/ one generator } u_i \text{ per edge } k \text{ relations}$



LoF groups have homomorphic expansions!

Ribbon 2-link groups are homomorphically quadratic. Is it true for arbitrary 2-link groups?

I need help!