Title: Monodromy of the Casimir connection and Coxeter categories

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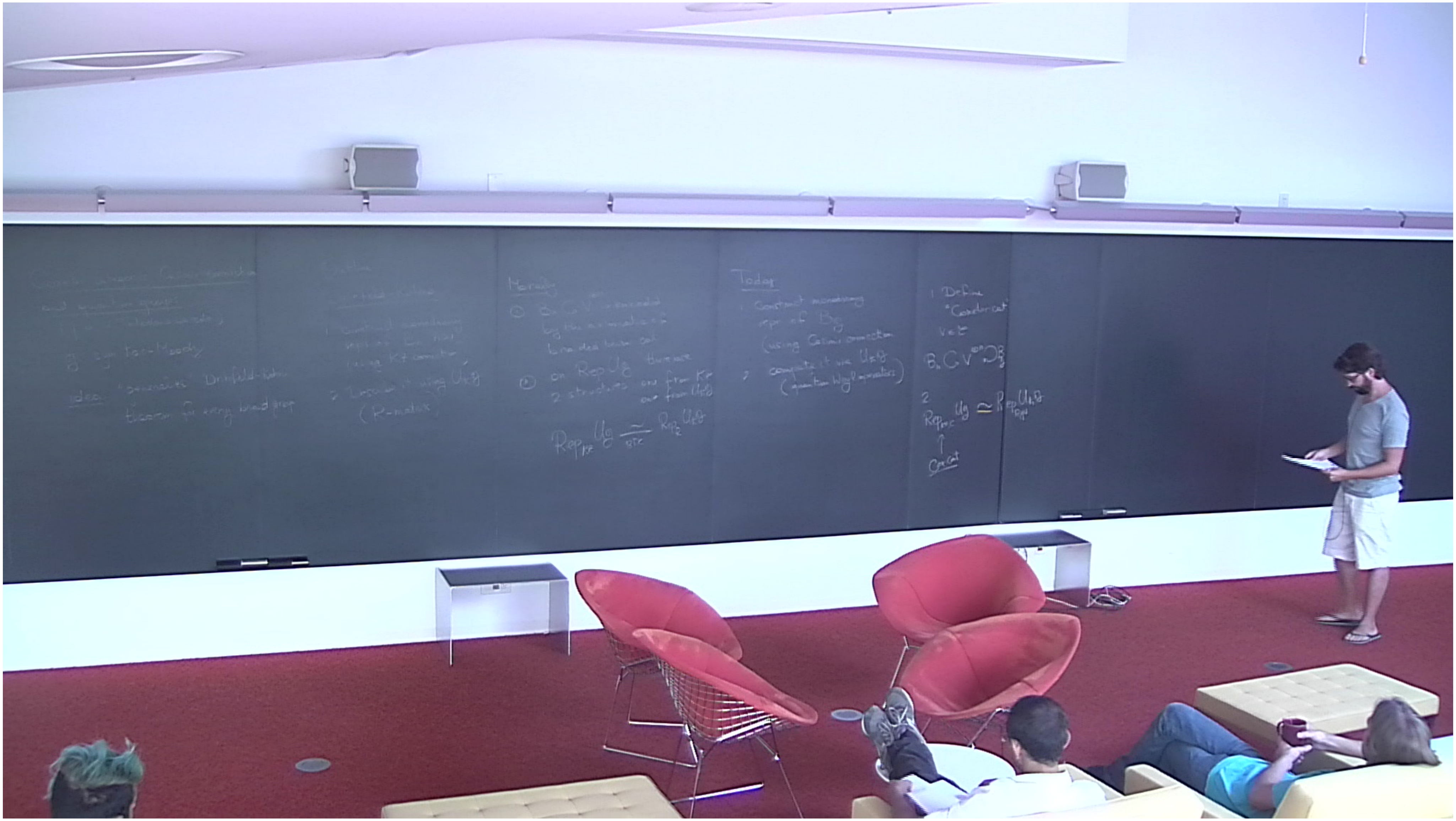
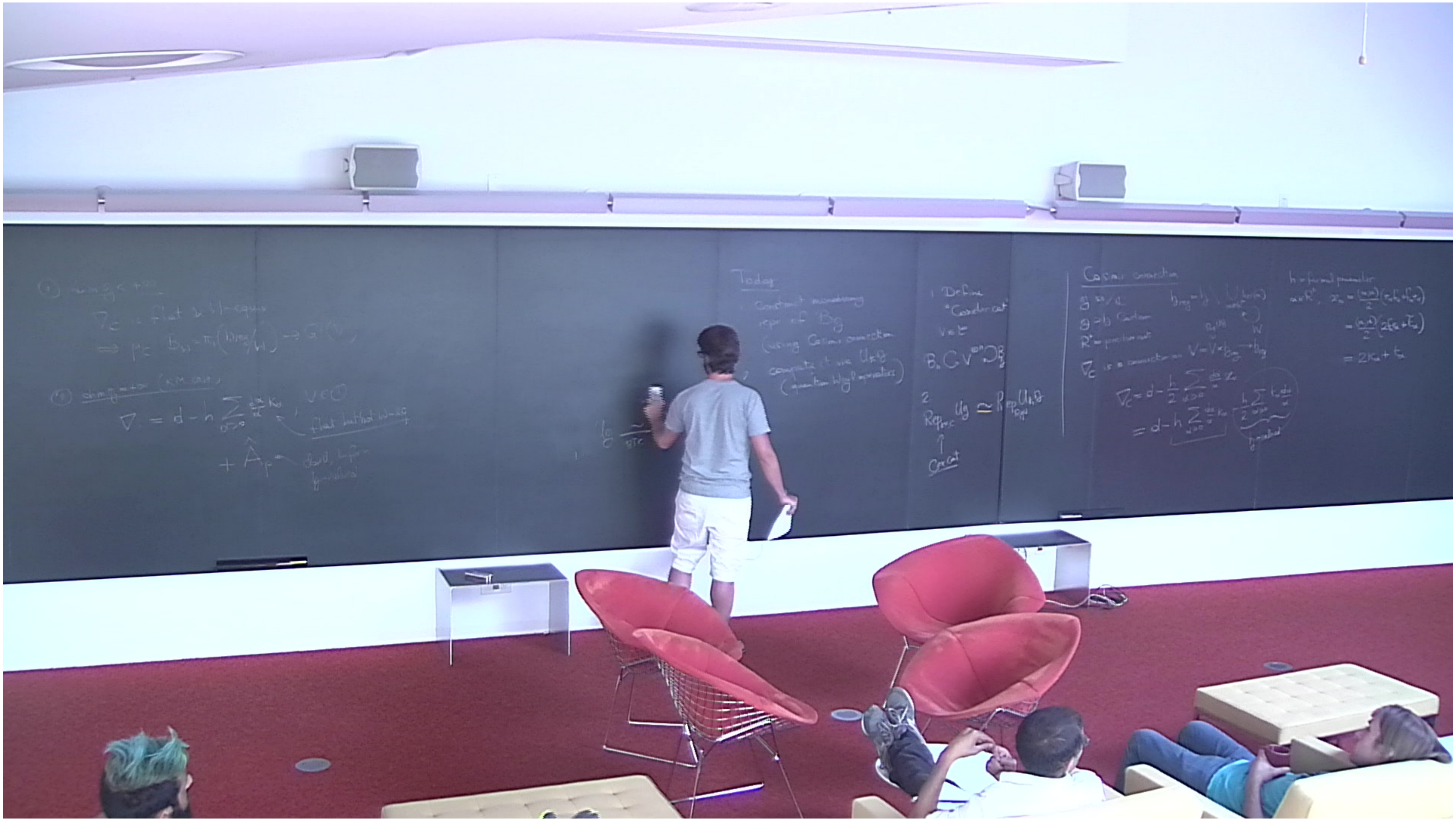
Abstract: <p>A Coxeter category is a braided tensor category which carries an action of a generalised braid group B_W on its objects. The axiomatics of a Coxeter category and the data defining the action of B_W are similar in flavor to the associativity and commutativity constraints in a monoidal category, but arerelated to the coherence of a family of fiber functors.

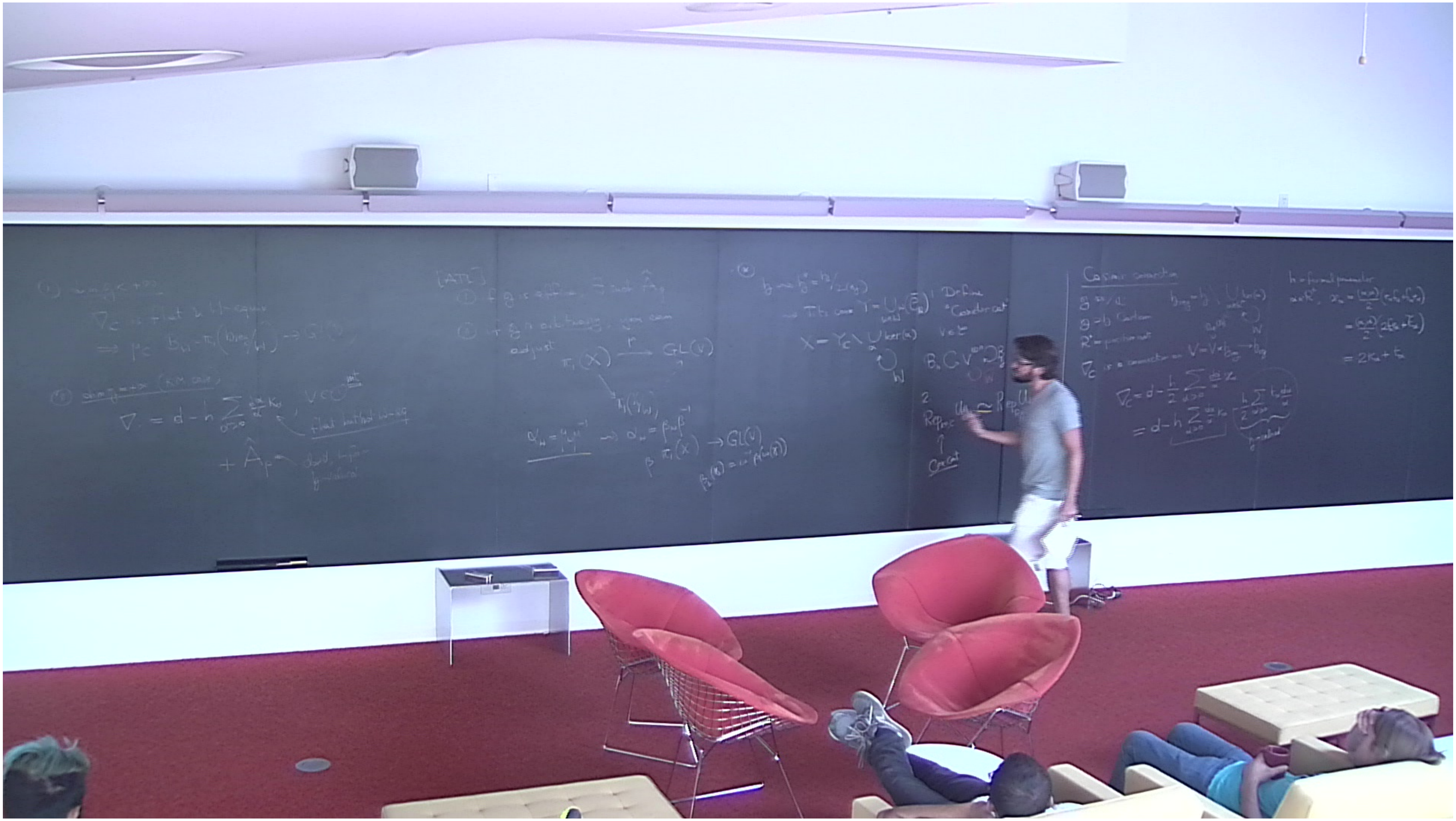
We will show how to construct two examples of such structure on the integrable category $\matcal{O}$ representations of a symmetrisable Kacâ€“Moody algebra $\mathfrak{g}$, the first one arising from the quantum group $U_\hbar(\mathfrak{g})$, and the second one encoding the monodromy of the KZ and Casimir connections of $\mathfrak{g}$.

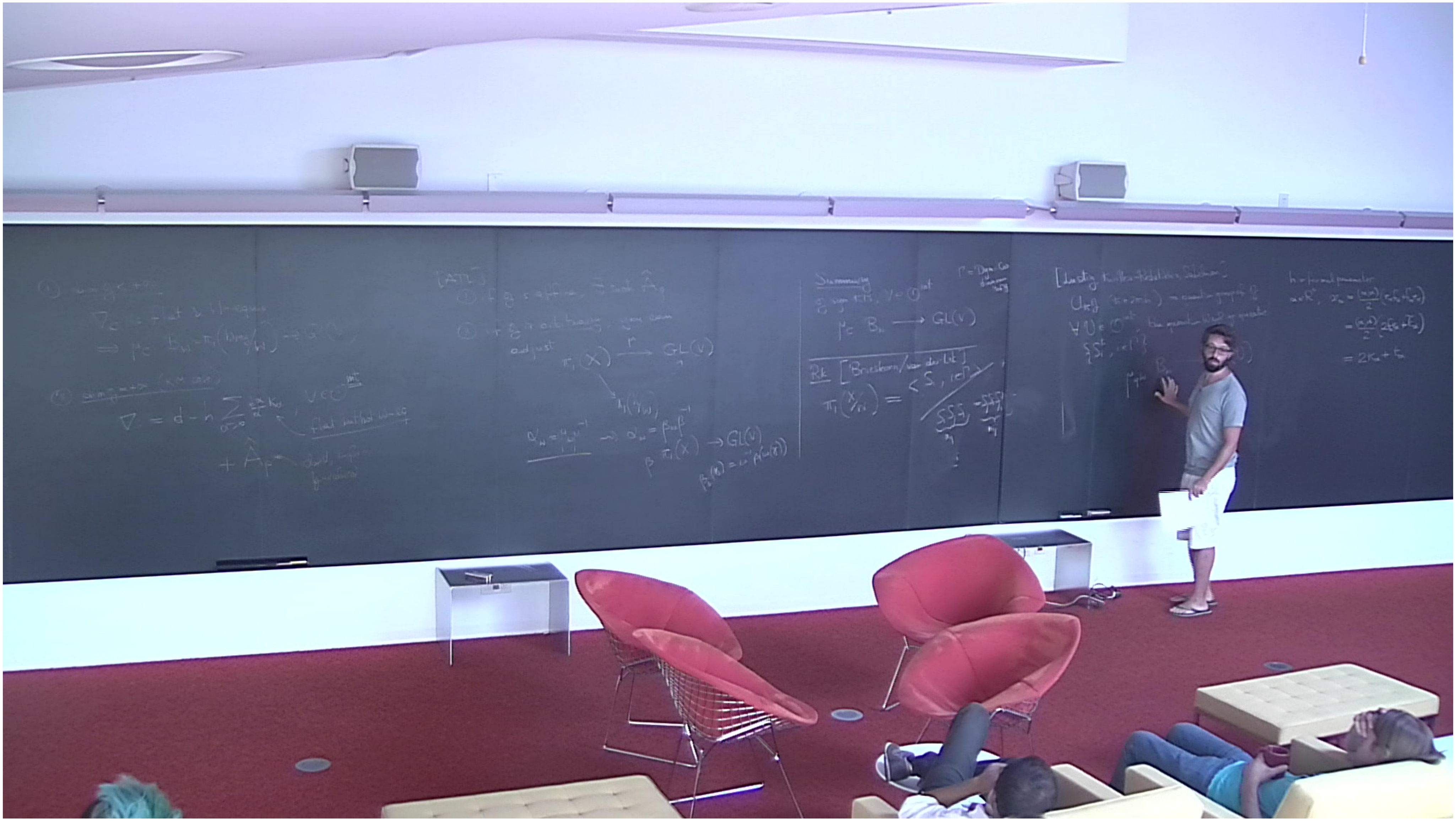
The rigidity of this structure, proved in the framework of PROP categories, implies in particular that the monodromy of the Casimir connection is given by the quantum Weyl group operators of $U_\hbar(\mathfrak{g})$.

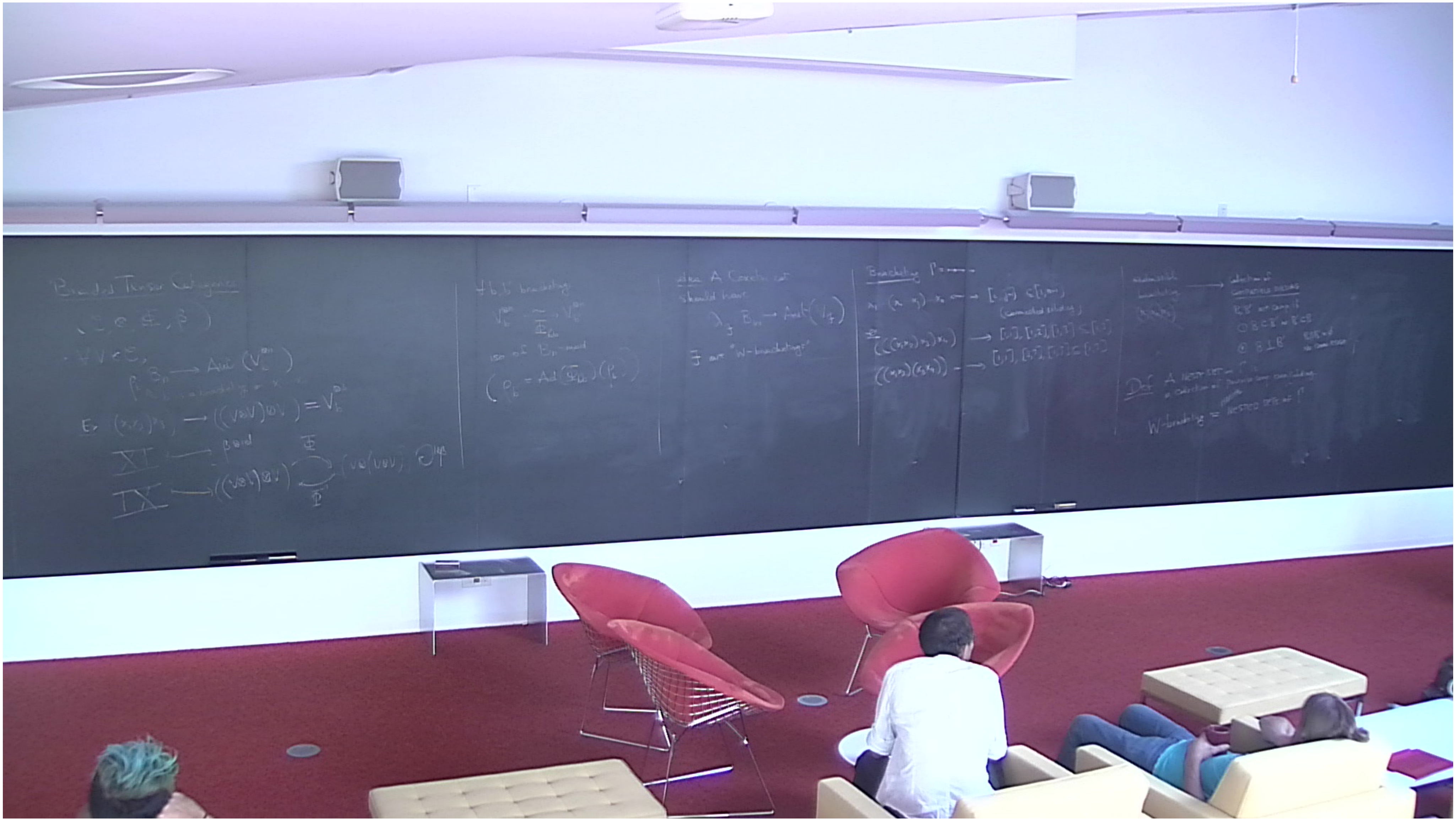
This is a joint work with Valerio Toledano Laredo.</p>

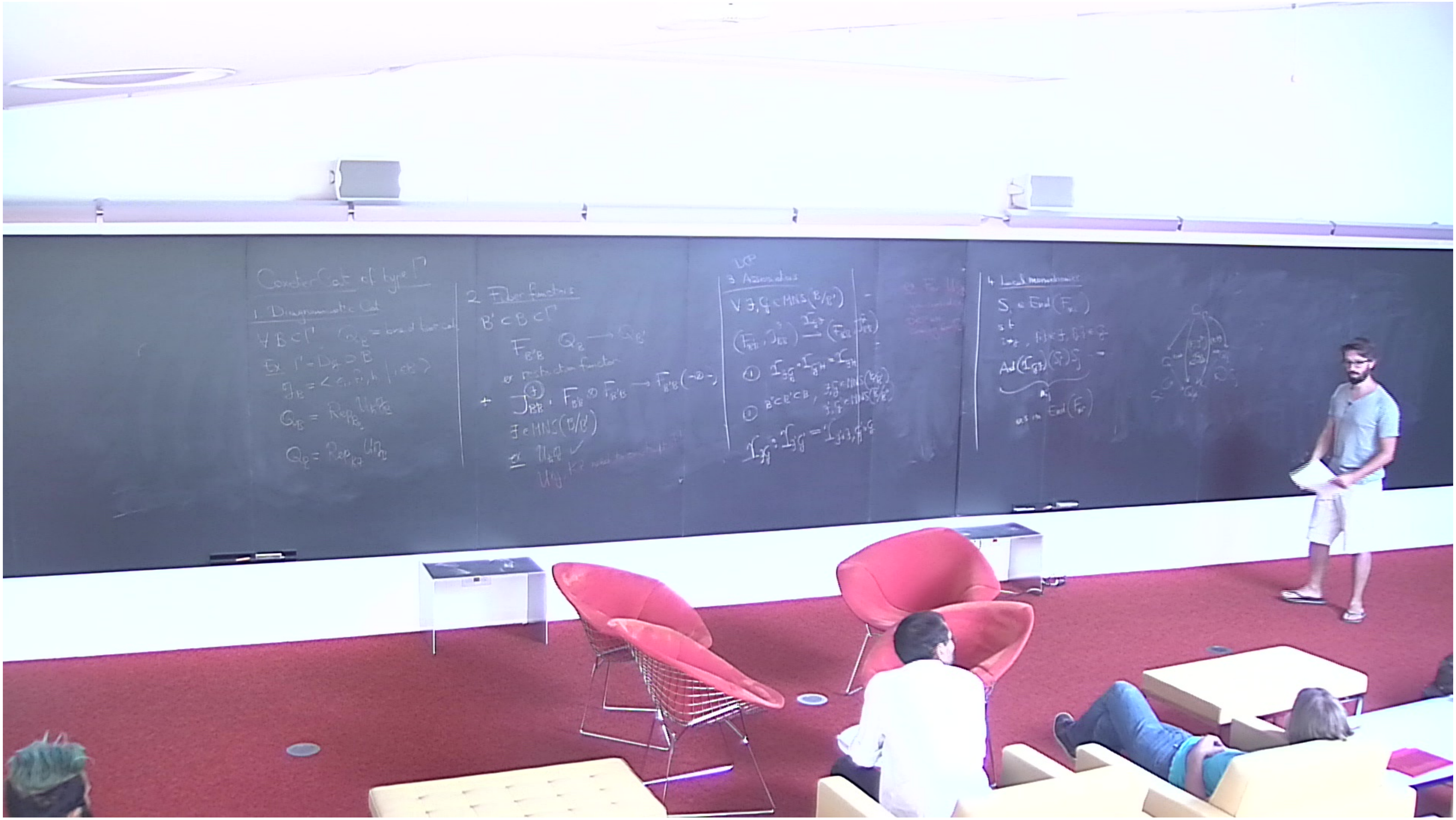



Today
Casimir connection




Summary
Rk [Brieskorn/van der Lek]





2 Fiber functors
B' ⊂ B ⊂ Γ
restriction functor
3 Associators
4 Local monodromies