## Some remarks on the switch

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We will follow the paper  $\cite{black}$  ].

## 1 Some notations

- The first order systems will be denoted by capital letters  $A, B, \ldots$
- More general objects by bold caps, like  $\mathbf{X}, \mathbf{Y}, \dots$
- The dual tensor product (par):

$$\mathbf{X} \ \mathfrak{P} \ \mathbf{Y} = (\mathbf{X}^* \otimes \mathbf{Y}^*)^*$$

• The internal hom:

$$\mathbf{X} \multimap \mathbf{Y} = \mathbf{X}^* \mathbin{{\mathfrak I}} \mathbf{Y} \simeq (\mathbf{X} \otimes \mathbf{Y}^*)^*$$

- The discarding map: for now, it will be denoted as  $\top$