

# Eine Woche, ein Beispiel

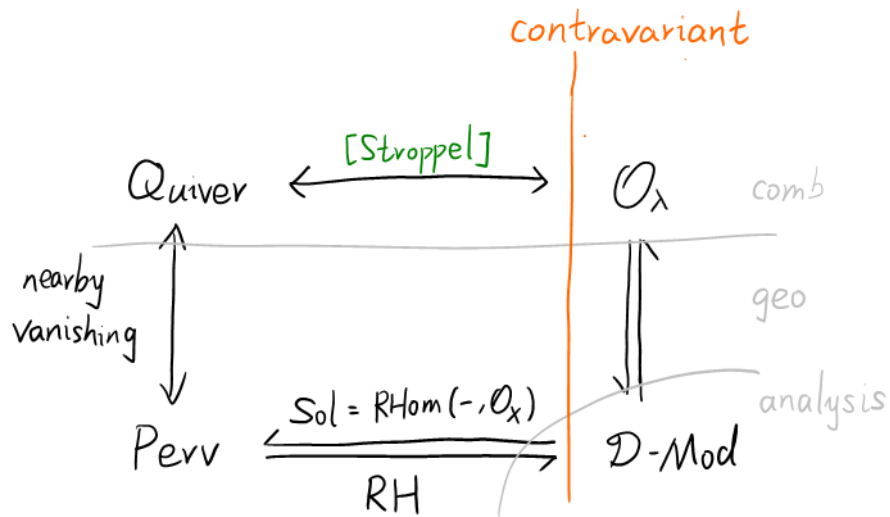
11.10 5 indecomposable representations

This document is the continuation of [2013.11.26]. After the discussion with Renzhi Liang and Aaron, the last piece of the puzzle has been put together.

extra ref:

[Stroppel]: Category  $\mathcal{O}$ : Quivers and endomorphism rings of projectives

<https://www.math.uni-bonn.de/ag/stroppel/Quivers.pdf>



$$\begin{array}{ccc} 0 & & -2\rho \\ \psi & \begin{array}{c} \xrightarrow{\text{can}} \\ \xleftarrow{\text{var}} \end{array} & \phi \end{array}$$

$$\text{var} \circ \text{can} = 0$$

Quiver	$0 \begin{array}{c} \xrightarrow{0} \\ \xleftarrow{0} \end{array} \mathbb{Q}$	$\mathbb{Q} \begin{array}{c} \xrightarrow{0} \\ \xleftarrow{0} \end{array} 0$	$\mathbb{Q} \begin{array}{c} \xrightarrow{0} \\ \xleftarrow{1} \end{array} \mathbb{Q}$	$\mathbb{Q} \begin{array}{c} \xrightarrow{1} \\ \xleftarrow{0} \end{array} \mathbb{Q}$	$\mathbb{Q} \begin{array}{c} \xrightarrow{\begin{pmatrix} 0 \\ 1 \end{pmatrix}} \\ \xleftarrow{(1, 0)} \end{array} \mathbb{Q}^2$
filtration	$\triangle$	$\square$	$\square$	$\square$	$\square$
Perv	$i_* \underline{\mathbb{Q}}_{\infty}$	$\underline{\mathbb{Q}}_{\text{dP}}, [1]$	$Rj_* \underline{\mathbb{Q}}_{\mathbb{C}}, [1]$	$j! \underline{\mathbb{Q}}_{\mathbb{C}}, [1]$	
alias	$\text{IC}_0$	$\text{IC}_{\infty}$	$\text{I}(\psi)$	$\text{P}(\psi)$	$\text{P}(\phi) = \text{I}(\phi)$
$\mathcal{D}\text{-mod}$	$A_1/A_1 x$ $k[\partial]$	$A_1/A_1 \partial$ $k[x]$	$A_1/A_1 x \partial$ $k[\partial, \partial^{-1}]$	$A_1/A_1 \partial x$ $k[x, x^{-1}]$	$A_1/A_1 x \partial x$
$\mathcal{O}_{\lambda}$	$L(-2\rho)$ $M(-2\rho)$ $M^*(-2\rho)$ _____	$L(0)$ _____	$M(0)$ $P(0)$ _____	$M(0)^*$ $I(0)$ dual _____	$P(-2\rho) = \text{I}(-2\rho)$ =====