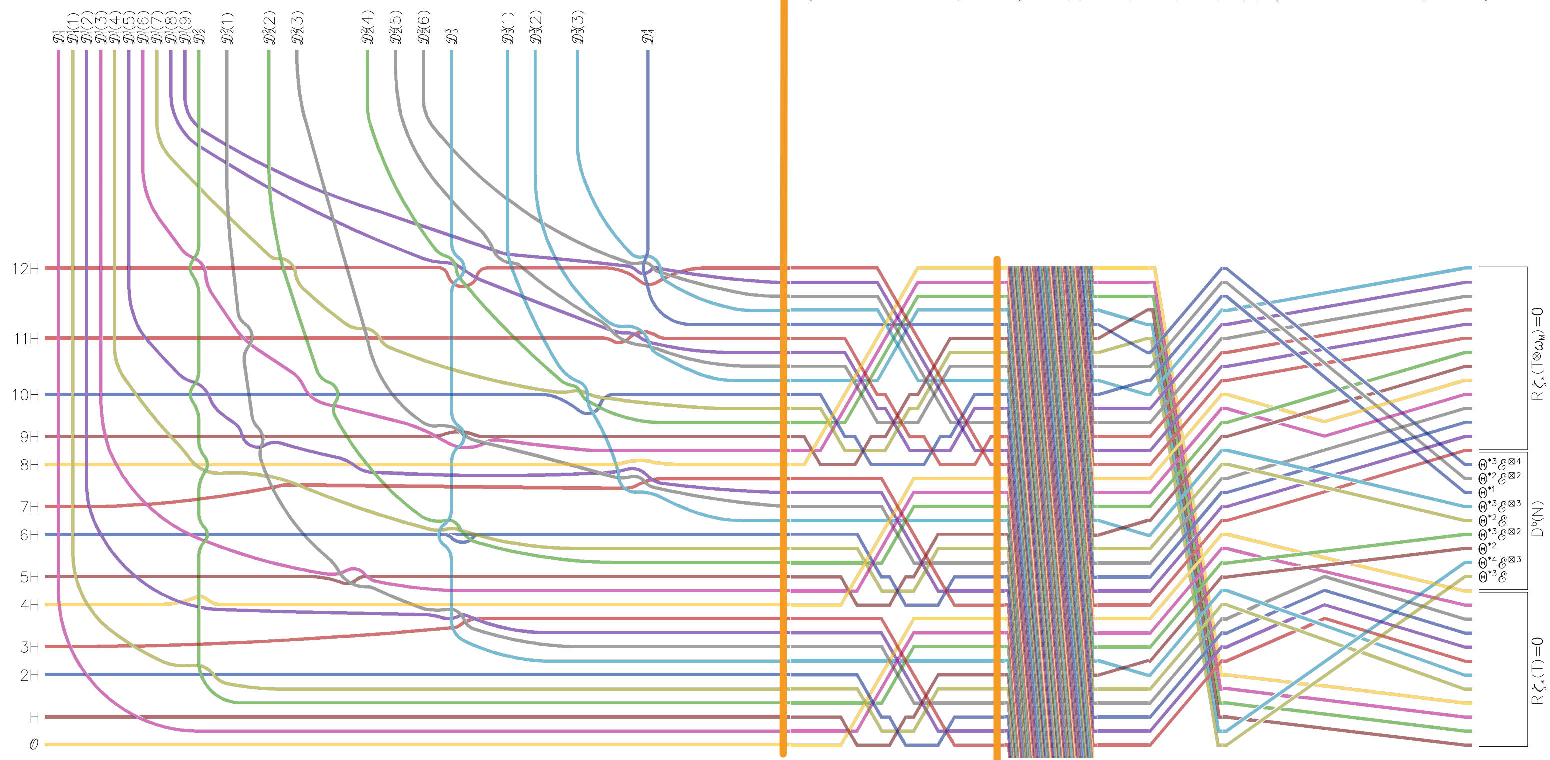
$$D^k = \{(D,F,s) : s|_D = 0\} \subset \mathrm{Sym}^k C \times M,$$

The Fourier–Mukai functor $\mathcal{P}_{\mathcal{D}^k} : D^b(\mathrm{Sym}^k C) \to D^b(M)$ *is fully faithful for* $k \le g-1$ *and* $D^b(M)$ *has a semi-orthogonal decomposition into admissible subcategories arranged into three mega-blocks, as follows:*

$$\Big\langle \big\langle \mathbf{\Lambda}^{*j} \otimes \mathcal{D}^k \big\rangle_{\substack{j+k \le g-2 \\ j,k \ge 0}},\ \big\langle (Z\,\mathbf{\Lambda})\mathbf{\Lambda}^{*j} \otimes \mathcal{D}^k \big\rangle_{\substack{j+k \le g-2 \\ j,k \ge 0}},\ \big\langle (\theta\,\mathbf{\Lambda})\mathbf{\Lambda}^{*j} \otimes \mathcal{D}^k \big\rangle_{\substack{j+k \le g-1 \\ j,k \ge 0}} \Big\rangle.$$

Within each of the three mega-blocks, the blocks are first arranged by $j+k$ *(in the increasing order) and, for a fixed* $j+k$*, by* j *(in the increasing order).*

Bondal-Orlov SOD (blow-up and standard flips)



Beilinson exceptional collection

$D^b(M)$ *has a semi-orthogonal decomposition into admissible subcategories arranged into three mega-blocks, as follows:*

$$\Big\langle \big\langle \mathbf{\Lambda}^{*k} \mathcal{F}^{*\boxtimes j} \big\rangle_{\substack{j+k \le g-2 \\ j,k \ge 0}},\ \big\langle (Z\,\mathbf{\Lambda})\,\mathbf{\Lambda}^{*k} \mathcal{F}^{*\boxtimes j} \big\rangle_{\substack{j+k \le g-2 \\ j,k \ge 0}},\ \big\langle (\theta\,\mathbf{\Lambda})\,\mathbf{\Lambda}^{*k} \mathcal{F}^{*\boxtimes j} \big\rangle_{\substack{j+k \le g-1 \\ j,k \ge 0}} \Big\rangle.$$

Within each of the three mega-blocks, the blocks are arranged first by k *(in the decreasing order) and then, for a fixed* k*, by* j *(in the decreasing order).*