

Define  $[a\sigma_{i \rightarrow j} = \Lambda^2 \mathbb{E}_{\{i\} \rightarrow \{j\}} [a_j \alpha_i + x_j \xi_i]$ ,

$$b\sigma_{i \rightarrow j} = \Lambda^2 \mathbb{E}_{\{i\} \rightarrow \{j\}} [b_j \beta_i + y_j \eta_i]$$