+ + + + +

_ _ _ _ _

+ points are hard-paired, combinatorially
- points are hard-paired, combinatorially.

Pairs are soft-paired, topologically.

A pairing of oriented intervals

David Cimasoni: Can smooth knots?
How does Alexander duality interact with products?
\[ \beta \bar{\alpha} = -\bar{\alpha}, \quad \bar{\alpha} = \beta \bar{\alpha}, \quad \bar{\alpha} \beta = -\beta \bar{\alpha} \]

\[ \alpha, \beta \]

\[ u = -\beta \bar{\alpha}, \quad \alpha \rightarrow \beta \]

\[ \beta \rightarrow -\beta \bar{\alpha} = -\alpha \]