

On extensions in the Jacobian algebra of a surface without punctures

Ilke Canakçi*

Given an unpunctured surface (S, M) , we study extensions in the Jacobian algebra $J(Q, W)$ and in the cluster category $\mathcal{C}_{(S, M)}$. We explicitly describe the middle terms of non-split short exact sequences in $J(Q, W)$ and give a formula for dimension of $\text{Ext}^1(M_1, M_2)$ in terms of the intersection number of the arcs associated to indecomposable string modules M_1 and M_2 .

Joint work with Sibylle Schroll.

*Department of Mathematics, University of Leicester, University Road, Leicester, LE1 7RH,
UNITED KINGDOM.