### THE UNIVERSITY



#### OF HONG KONG

# Institute of Mathematical Research Department of Mathematics

## COLLOQUIUM

### Generically τ-reduced irreducible components for Jacobian algebras coming from surfaces with non-empty boundary

### Professor Chris Geiss UNAM

### **Abstract**

This is a report on joint work in progress with D. Labardini-Fragoso and J. Wilson. For each tagged triangulation T of a punctured surface with non-empty boundary the associated quiver Q(T) the Labardini potential W(T) is up to (weak) right equivalence the unique non-degenerate potential. The corresponding Jacobian algebra  $\Lambda_T := P(Q(T), W(T))$  is finite dimensional and tame. By work of Penner and Plamondon there is canonical bijection  $\pi$  between the generically  $\tau$ -reduced irreducible components of the representation varieties for  $\Lambda_T$  and the laminations of the surface, which intertwines generic g-vectors with shear coordinates. We show that this bijection  $\pi$  is compatible with the canonical decomposition on the one side and connected components on the other side. A key step in our proof is to show our result first for triangulations of signature 0, since in that case the corresponding Jacobian algebras are skewed gentle.

Date: November 15, 2022 (Tuesday)

Time: 10:00 – 11:00am

Venue: ZOOM: https://hku.zoom.us/j/

Meeting ID: 923 7075 8338

Password: 646722

All are welcome