

# Polynomial conserved quantities for isothermic surfaces and constrained Willmore surfaces

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## Resumo

In this seminar, I will focus on isothermic surfaces and constrained Willmore surfaces. For each context, we construct a hierarchy of natural classes filtered by an integer  $d$ , through the existence of a polynomial conserved quantity of type  $d$  (a notion to be defined). We show that these classes are of particular geometric significance. For instance, in codimension 1, the classical notion of special isothermic surfaces is associated with  $d=2$  in the isothermic surfaces context, and constant mean curvature surfaces are characterized in both contexts by  $d=1$ .

This is a joint work with F. Burstall (isothermic surfaces) and A. Quintino (constrained Willmore surfaces).

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