

**Miniworkshop**  
**“Semitoric systems and beyond”**  
**Antwerp/Belgium, September 10-11, 2019**

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**Semitoric systems**  
**with multi-pinched fibers**

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A semitoric integrable system is a certain type of four dimensional integrable system in which one of the components of the momentum map generates an  $S^1$ -action. About 10 years ago such systems were classified by Pelayo & Vu Ngoc under the additional assumption of *simplicity*, which means that each fiber of the momentum map of the  $S^1$ -action contains at most one singular point of focus-focus type.

We will discuss some recent work exploring the behavior of semitoric systems which do not satisfy this condition. The non-simple case includes, in particular, systems whose fibers are multi-pinched tori.

This talk is based on joint work with A. Pelayo and X. Tang.