

Polytope invariant for Hypersemitoric Systems and beyond

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Integrable systems are dynamical systems with symmetries and have been of interest to mathematicians and physicists for several decades. Despite the enormous interest on these systems a full (symplectic) classification has not yet been achieved. In order to tackle the classification problem, mathematicians have focused on simpler cases. For toric and semi-toric systems a full symplectic classification of these systems has been achieved and in particular one of the invariants needed to classify such systems is called the polytope invariant. In this talk we present a generalization of this invariant for more general classes of integrable systems, such as hypersemitoric ones.