

**Miniworkshop**  
**“Semitoric systems and beyond”**  
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**Rotation Forms and Non-compact  
Standard and Fractional Monodromy**

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The monodromy of torus bundles associated with completely integrable Hamiltonian systems can be computed using geometric techniques (parallel transport of homology cycles) or analytic arguments (computing discontinuities of abelian integrals).

In this talk, I give a general approach to the computation of monodromy that resembles the analytical one. This involves the definition of *rotation 1-forms* and the computation of their residues. Applying this approach to the case of non-degenerate focus-focus singularities, one re-obtains the classical results. An advantage is that the residue-like formula can be shown to be local in a neighborhood of a singularity, hence allowing the definition of monodromy also in the case of non-compact fibers and highlighting the connection with *scattering monodromy*. Finally, I discuss how to define fractional non-compact monodromy.