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Kempf-Ness type theorems and Nahm's equations

From one point of view, Kempf-Ness type theorems give explicit complex-algebraic descriptions of some real symplectic quotients. This is particularly interesting and not obvious when the symplectic form is transcendental and the manifold is non-compact, as is often the case when studying certain gauge-theoretical moduli spaces. In this talk, I will present a general result in this context (for complex affine varieties with non-standard Kähler structures and shifted moment maps) and explain how Nahm's equations, a system of ODEs extracted from the self-dual Yang-Mills equations, provide non-trivial examples.