

# **Classification of compact connected contact toric $G$ -manifolds**

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**March 30, 2022  
16:00-17:00h **on campus in M.G.005**  
Analysis & Geometry Seminar, Antwerpen**

In 1988, Delzant has classified compact connected symplectic toric manifolds ( $2n$ -dimensional symplectic manifolds equipped with an effective Hamiltonian  $n$ -torus action) by means of the image of the momentum map. Shortly after, Lerman gave a similar classification of so-called compact connected contact toric  $G$ -manifolds by means of the moment cone.

In this talk, we will discuss the above mentioned classification by Lerman. We first give an introduction into the general topic of contact actions and introduce a natural notion of a contact toric manifold. The momentum map of this action will give rise to a cone which satisfies some useful properties. The classification itself is divided in 4 different cases (based on the dimension of the manifold and whether the action is free). We will give a sketch of the construction behind these cases.