

# — How I Learned to Stop Worrying and Love Jets and Missing Energy at ATLAS —

Dr. Maximilian Swiatlowski  
TRIUMF  
[maximilian.j.swiatlowski@cern.ch](mailto:maximilian.j.swiatlowski@cern.ch)

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[Indico webpage](#)



Jets at hadron colliders can sometimes feel like they have a bad reputation: their enormous cross-sections lead to large backgrounds to many measurements and searches, and their comparatively poor energy resolution means they are much less precisely measured than photons and leptons. Despite these challenges, hadronic reconstruction is critical at the LHC, as the large branching ratio of electroweak bosons to jets and the unique utility of missing energy mean that these tools are indispensable for nearly all aspects of the ATLAS physics program. This talk will highlight both the difficulties and opportunities of jet and missing energy reconstruction in ATLAS (and why they are so closely related), and demonstrate the wealth of exciting new techniques being deployed by our collaborators to overcome the hadronic challenge. Ideas for further improvements, especially with cutting-edge machine learning techniques, will also be discussed.