



Friday
March 24, 2023
12h, Module 0
Conference Room

Coffee served
at 11:30h



Exciton Condensates Through the Years

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Excitons are composite bosons formed by pairing electrons and holes in a crystal. The idea that excitons might Bose condense and that condensed excitons might have spectacular electrical properties dates back to the 1960's but has often been surrounded by controversy. My talk will focus on the important lessons learned about exciton condensates from work on two-dimensional electron systems in the quantum Hall regime, starting around twenty years ago, and on new opportunities to create exciton condensates and engineer their properties created by advances in stacking individual layers of van der Waals materials. I will also discuss the recent observation of dipolar condensates in double bilayer graphene in the absence of a magnetic field, highlighting the unusual connection between electron-hole pairing channels and Dirac point Berry phases in the isolated bilayers.