A Delft PhD at Nikhef

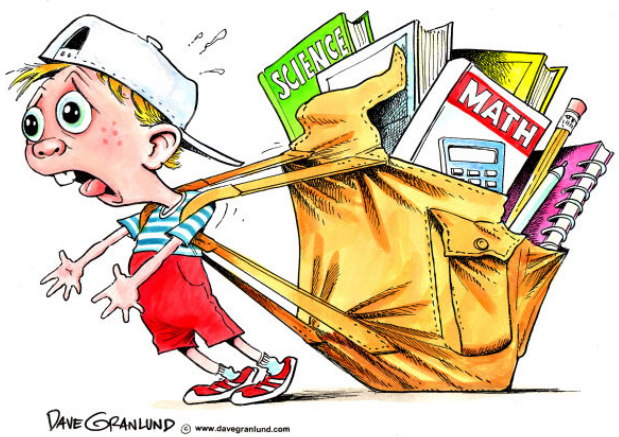
11 June 2019

Welcome to Nikhef

- 1 institute "subatomic physics"
- multiple universities
- multiple experiments
  - Gravitational waves
  - KM3Net
  - CERN
- multiple disciplines
  - workshop
  - theory group
  - R&D
- informal setting

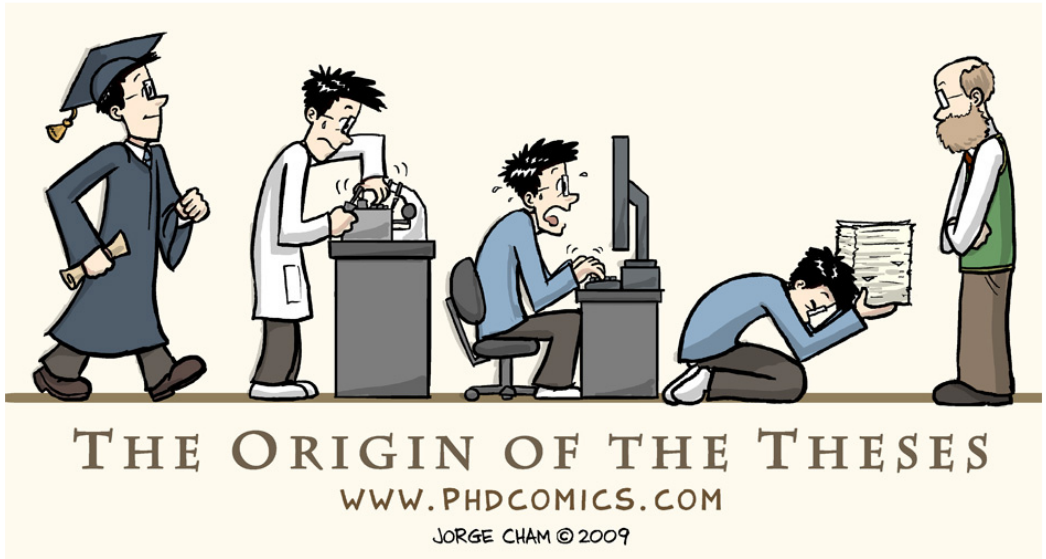
Little bit about me

- Bachelor and Master at Delft: AP
- Bachelor project: Detector R&D
  - Measuring electron yield in Transmission dynode
- Internship: Amsterdam Scientific Instruments
  - Commercializing pixelized detectors
- Master project: Data analysis CERN
  - Searching for Lepton Flavour Violation



Structure of Dutch Physics PhD

- 4 years
- Mandatory thesis
- Mandatory teaching time: 10%
- Mandatory education: (schools + lectures)
- Opportunity to spend time abroad
- No required number of publications in general
- We earn around 2200-2800 euro gross

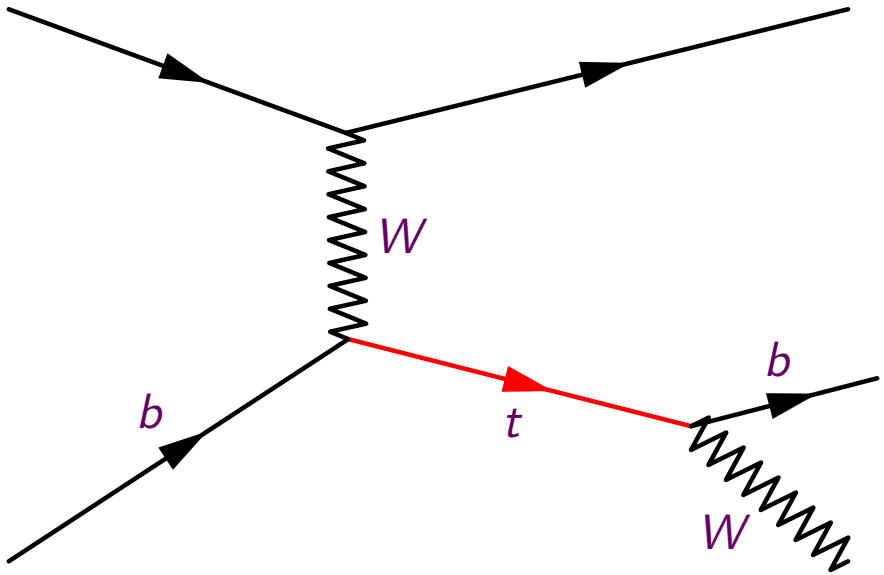


What I like about Nikhef

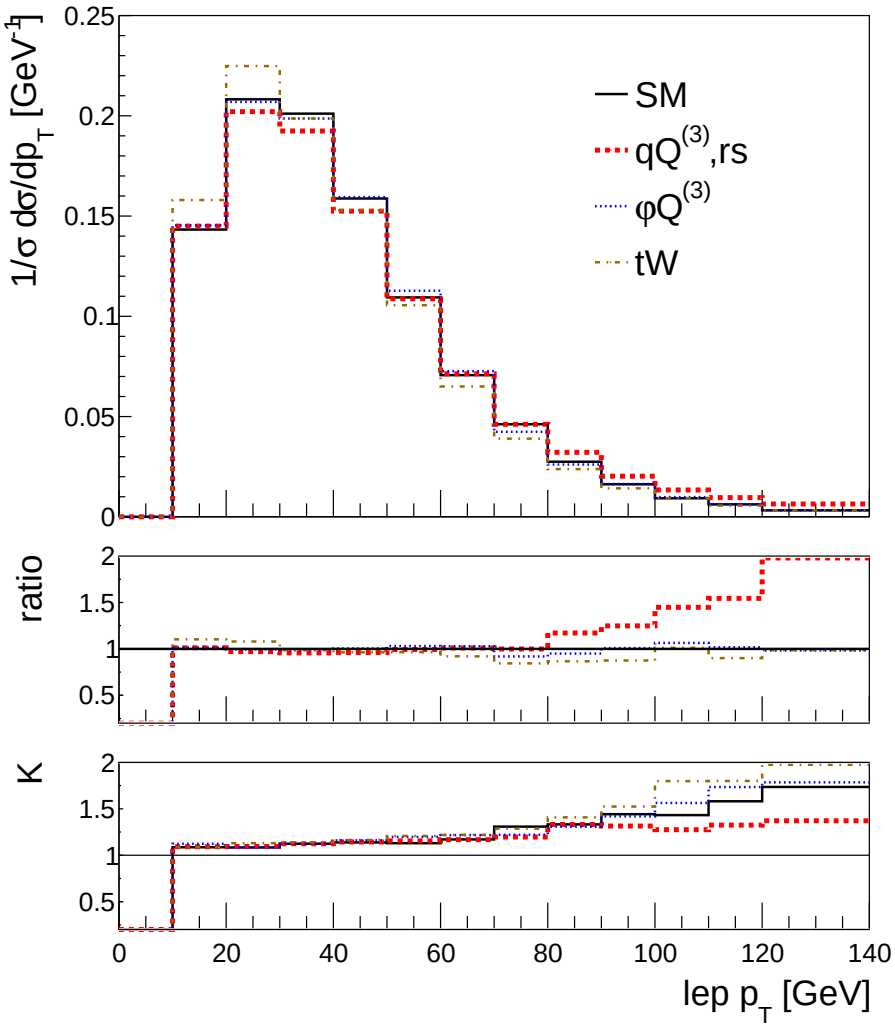
- Informal and open atmosphere
- Strong social activities
- Close contact with other disciplines
- Collaboration with large experiments
- Success of the institute

My research

- Top quark is heaviest particle
- Decays before it hadronises
- Accessible spin information
- Sensitive to BSM?



Sensitive to BSM?



- Simulation of the process
- Measurable difference!?
- Next step → Measurement!