

# QCD corrections in Standard Model and beyond

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# About Me

- Born and brought up in Kolkata, West Bengal, India.
- Ph.D. - February-2017,  
Saha Institute of Nuclear Physics, Kolkata  
- Precision QCD study for Spin-2 production at  
at the LHC
- PDF - Feb - Oct, 2017  
The Institute of Mathematical Sciences, Chennai, India
- PDF - October-2017  
DESY Theory Group, Hamburg (1b/O3.204)

# Past Research

- QCD Corrections for spin-2 production.
  - Randall-Sundrum model
  - Multi-jet merging, NLO+PS matching <http://amcatnlo.web.cern.ch/amcatnlo>
  - Automation to MC tools - MadGraph5\_aMC@NLO
  - <http://feynrules.irmp.ucl.ac.be/wiki/Spin2>
- Multi-loop computation
  - Spin-2 Form Factor @ 3-loops
  - Spin-2 associated to a jet @ 2-loops
- Threshold Resummation
  - Rapidity distribution for Higgs at NNLO+NNLL accuracy

# Present Research

- Threshold Resummation,  $q_T$  Resummation
- Resummation in Soft-Collinear EFT
- Multi-loop computation for heavy quark production
- Development of automated tools for Resummed predictions.

# One Plot/Question

