

Roman Derco

ESR at University of Debrecen

Hungary

Supervisor: Prof. Zoltan Trocsanyi

Start date: 01 July, 2012

Home Country: Slovakia



LHCphenOnet



Education Background

- **Bachelor studies:** (October, 2006 - July, 2009). Charles University in Prague, Faculty of Mathematics and Physics, Czech Republic

supervisor: doc. Rupert Leitner

“Description of CP violation in decays of neutral K mesons”

- **Master studies:** (October, 2009 - January, 2012). Charles University in Prague, Faculty of Mathematics and Physics, Institute of Particle and Nuclear Physics

supervisor: doc. Alfredo Iorio

“Instantons and Unitarily Inequivalent Quantum Vacua”

- **Preparation for PhD entrance examination:** (January - June, 2012), supervisor: Prof. Zoltan Trocsanyi
- **PhD studies:** (from July, 2012), University of Debrecen,

Training/Project

- First period: Studying NLO and NNLO subtraction techniques, computational tools (C++, Mathematica).
- First training tasks :
 - Numerically checks of phase space factorization mapping.
 - Monte Carlo integration over the phase space of the finale state of $e^+e^- \rightarrow q \bar{q}$ at NLO accuracy (only real corrections).
- Now ready to start with the main project:

Numerical implementation of a subtraction scheme to compute QCD jet cross sections at NNLO accuracy.
- Research collaboration with: Prof. Zoltan Trocsanyi, Damiano Tommasini.

Conferences/Future plans

- Attending seminars and scientific activities in Debrecen
- Ravello, my first conference
- From next week: Wolfram Research (Champaign, USA),
studying computational methods, complete a project, delivering code, familiarity with the full development cycle..
- Improving CV, English, international experiences,...