Theory Activities in Zürich

University of Zürich

main activities:

- higher order corrections in QCD at NLO and NNLO, computer algebra
  (Prof. Thomas Gehrmann)

- flavour physics, rare decays
  (Prof. Daniel Wyler)

Postdocs:

Alejandro Daleo — NNLO subtraction for initial state radiation, numerical evaluation of loop integrals, jet and hadron production in DIS

Ayres Freitas — collider phenomenology SM/SUSY, higher order corrections

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Postdocs (continued):

Uli Haisch   flavour physics

Gudrun Heinrich   one-loop multi-leg amplitudes,
                    automatisation of NLO calculations,
                    NNLO corrections to $e^+e^- \rightarrow 3$ jets

Pierpaolo Mastrolia NNLO top production,
                    heavy quark form factors,
                    one-loop multi-leg amplitudes
                    by unitarity cuts

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Postdocs (continued):

Zoltan Nagy   new parton shower algorithm matching LO and NLO,

numerical calculation of one-loop multi-leg QCD matrix elements,

NLO jet production (NLOJET++)

Ph.D. students:

Christian Kurz   electroweak corrections to QCD observables

Daniel Maître   NNLO top production, computer algebra (HypExp, a Mathematica package for expanding hypergeometric functions)

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Ph.D. students (continued):

Beat Tödtli   3-loop form factors

Tobias Huber   B-decays, 3-loop form factors,
computer algebra (HypExp)

Diploma students:

Daniel Egli   one-loop multi-leg amplitudes

Eva Poulsen   isolated photon production in
deep inelastic scattering

ETH Zürich

Group leader:

Prof. Zoltan Kunszt: Collider Phenomenology,

NLO corrections to jet production and vector boson pair production,

one-loop multi-leg amplitudes

Postdocs:

Babis Anastasiou   NNLO corrections (Higgs production, Drell-Yan, jet production, …),

numerical evaluation of loop integrals,

computer algebra (AIR: Automatic Integral Reduction, based on Laporta algorithm)

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Postdocs (continued):

Aude Gehrmann-De Ridder   NNLO corrections to $e^+e^- \rightarrow 3$ jets by antenna subtraction,

isolated photon production in DIS

Ph.D. students:

Stefan Beerli, Stefan Bucherer   higher order corrections to SM/SUSY processes