

Oleksandr Gituliar, PhD

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Profession: physicist
Date of birth: 07.04.1987
Place of birth: Dnipro (Ukraine)
Nationality: Ukrainian
Current city: Hamburg (Germany)
Languages: English and Polish (fluent), Russian and Ukrainian (native)
Hobby: sport climbing (RP – 7a+, 7A; OS – 6c)

Academic Positions

2016.10 – present **postdoc**, *University of Hamburg (UHH)*, Hamburg (Germany).
2015.01 – 2016.09 **postdoc**, *The PAS Institute of Nuclear Physics (IFJ PAN)*, Cracow (Poland).
2014.04 – 2014.12 **postdoc**, *German Electron Synchrotron (DESY)*, Zeuthen (Germany).

Other Positions

2009.01 – 2009.05 **Teaching**, *Lyceum of Information Technologies*, Dnipro (Ukraine).
Class: Introduction to Python.

Education

2009.10 – 2014.06 **PhD in Theoretical Physics**, *The PAS Institute of Nuclear Physics*, Cracow (Poland).
Thesis: *Higher-order corrections in QCD evolution equations and tools for their calculation*.
Supervisors: **prof. dr hab. M. Skrzypek** and **dr A. Kusina**.
2004.09 – 2009.06 **MSc in Theoretical Physics**, *Dnipropetrovsk National University*, Dnipro (Ukraine).
Thesis: *Heavy neutral vector boson search in the LHC experiment*.
Supervisor: **dr O.V. Gulov**.

Professional Skills

Physics: **Quantum Chromodynamics and Feynman Integrals Calculus**.
Mathematics: **Linear Algebra, Integral and Differential Calculus, Statistics and Probability, Symbolic and Numerical Computation, Monte-Carlo Simulation**.
Computer: **C/C++, FORM, Git, L^AT_EX, Linux, Mathematica, Python**.
Personal: **Sanguine, commitment, openness, willing to learn, social skills**.

Publications

[arXiv:1512.02045](https://arxiv.org/abs/1512.02045) **O. Gituliar**,
Master integrals for splitting functions from differential equations in QCD,
JHEP 1602 (2016) 017.
[arXiv:1511.08439](https://arxiv.org/abs/1511.08439) **O. Gituliar, M. Hentschinski, K. Kutak**,
Transverse-momentum-dependent quark splitting functions in k_T -factorization: real contributions,
JHEP 1601 (2016) 181.

Publications (continue)

- [arXiv:1403.6897](#) **O. Gituliar**,
Higher-Order Corrections in QCD Evolution Equations and Tools for Their Calculation,
PhD thesis.
- [arXiv:1401.5087](#) **O. Gituliar, S. Jadach, A. Kusina, M. Skrzypek**,
On regularizing the infrared singularities in QCD NLO splitting functions with the new Principal Value prescription,
Phys. Lett. B 732, 218 (2014).

Conference Talks

- 2016-09-28 **Progress in constructing epsilon form of differential equations for master integrals with Fuchsia**, *Rethinking Quantum Field Theory (DESY Theory Workshop)*, Hamburg (Germany).
- 2016-04-26 **Fuchsia and master integrals for splitting functions from differential equations in QCD**, *Loops and Legs in Quantum Field Theory*, Leipzig (Germany),
PoS LL2016 [[arXiv:1607.00759](#)].
- 2016-01-07 **Splitting functions for high-energy factorization at leading order**,
Cracow Epiphany Conference, Cracow (Poland),
Acta Phys. Polon. B47, 1667 (2016).
- 2015-06-15 **Higher-order corrections to the splitting functions from differential equations in QCD**,
Radcor-Loopfest Symposium, Los Angeles (USA),
PoS RADCOR2015 [[arXiv:1601.03657](#)].
- 2015-01-10 **Towards three-loop QCD corrections to the time-like splitting functions**,
Cracow Epiphany Conference, Cracow (Poland),
Acta Phys. Polon. B46, 1279 (2015) [[arXiv:1505.02901](#)].
- 2014-11-26 **Higher-order corrections in QCD evolution equations and tools for their calculation**,
LHCPhenoNet Meeting, Berlin (Germany).
- 2014-06-05 **Higher-order corrections in QCD evolution equations and tools for their calculation**,
LHCPhenoNet Workshop on Particle Physics, Paris (France).
- 2014-01-09 **Calculation of QCD NLO splitting functions in the light-cone gauge**,
Cracow Epiphany Conference, Cracow (Poland),
Acta Phys. Polon. B45, 1361 (2014) [[arXiv:1406.4283](#)].
- 2013-09-06 **Virtual corrections to the NLO splitting functions for Monte Carlo: non-singlet case**,
Matter to the Deepest Conference, Ustron (Poland),
Acta Phys. Polon. B44, 2197 (2013) [[arXiv:1310.7537](#)].
- 2013-01-09 **Automatic calculation of NLO kernels with loops for exclusive Monte-Carlo**,
Cracow Epiphany Conference, Cracow (Poland),
Acta Phys. Polon. B44, 1496 (2013).
- 2012-09-05 **Axiloop: a tool for the symbolic calculation of splitting kernels at higher orders**,
High Precision for Hard Processes Workshop, Munich (Germany).
- 2009-07-01 **Cross-section of processes which involve Z' boson**,
Trans-European School of High-Energy Physics, Zakopane (Poland).