
CV for Professor Peter Harald Lindenov Christiansen

- Work: Department of Physics, Div. of Particle Physics, Professorsgatan 1, 223 63 Lund. Phone: 046 2227709. Email: peter.christiansen@hep.lu.se.
- Employment (indefinite appointment):
 - November 2018-Now: Professor at Lund University. Research: 85% (VR grant), Teaching: 15%.
 - May 2011-November 2018: Universitetslektor (associate professor) at Lund University. Research: 75% (VR grant), Teaching: 25%.
- Postdoc stays and education:
 - Docent: December 2009.
 - Oct. 2006-Apr. 2011: Forskarassistent and then forskar at LU.
 - Feb. 2006-Sept. 2006: Postdoc at RISØ (Denmark).
 - Jan. 2004-Jan. 2006: Research fellow at CERN (Switzerland).
 - Ph.D. in Experimental Particle Physics, Niels Bohr Institute, 2003.
- Special assignments:
 - 2016-Now: Coordinator for the Master's programme in Particle Physics
 - 2019-2023: Head of Division (from 1/3-2019 to 31/12-2023).
 - 2016-2019: Deputy Head of Division.
 - 2016-2017: WG 2 member for the 2016/2017 NuPECC Long Range Plan
 - ALICE
 - * ALICE paper committees: 7 (2 as chair).
 - * ALICE internal review committees: 12.
 - * 2022-Now: co-coordinator of AIM session to promote new directions.
 - * 2019-2021: co-convenor of the Monte Carlo generators and Minimum Bias physics analyses.
 - * 2017-2020: co-coordinator of Underlying Event analyses
 - * 2017-2019: member of Conference Committee
 - * 2014-2018: co-coordinator of GEM TPC upgrade simulations.
 - * 2012-2014: co-coordinator of Light Flavor Spectra analyses
- Stays abroad for research and teaching:
 - 2012 (1 month): UNAM (Mexico) via EPLANET with ALICE group
 - 2010 (2 weeks): Invited to Wuhan (China) to work with ALICE group
- Commissions as editor, referee:
 - Expert evaluation of Associate Professors (hiring), 2 times.
 - Evaluation of Professor and Associate Professor applications for promotion, 3 times.

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- Expert reviewer for Research Council of Finland, 2024 and 2025.
 - Expert reviewer for the Polish National Science Centre (ST2 Expert Panel), 3 times.
 - 2012: co-editor of the proceedings from the ESS Workshop “Neutrino, Neutron, Nuclear, Medical and Muon Physics at ESS”.
 - Academic societies:
 - Since 2019 elected Fellow of the Royal Physiographic Society of Lund
 - Swedish Particle and Astroparticle Physical Society. Board: 2014-2015, Chair: 2016-2017.
 - Supervision of Ph.D. students and Postdocs (as main supervisor unless otherwise noted):
 - Kaare Iversen (ongoing).
 - Adrian Nassirpour (Ph.D. 2022). Now: Postdoc Sejong University.
 - Omar Vazquez Rueda (Ph.D. 2022). Now: Postdoc University of Houston.
 - Vytautas Vislavicius (Ph.D. 2018). Now: left academia.
 - Tuva Richert (Ph.D. 2016). Now: left academia.
 - Alexandru Dobrin (Ph.D. 2010). Now: Physicist at Institute of Space Science, Romania.
 - Co-supervisor: 3 ongoing Ph.D. students. 3 completed Ph.D.s, where one won the ALICE 2021 thesis award (best 2020 thesis of ≈ 50).
 - Postdoc Antonio Velasquez (2011–2013). Now: Professor UNAM, Mexico.
 - I have also supervised 2 Postdocs that left academia, and co-supervised 1 Postdoc who is still in academia.
 - Supervisor of 12 master students of which 10 did/are doing a Ph.D. afterwards.
 - Training in teaching and learning in higher education: Lund University courses: Den goda föreläsningen (2015), Docent course (2008), LATHE (2008).
 - Current external funding:
 - VR project grant 2021-05179 of 4.0 MSEK total, “CHARM²: Mätning av charm-(anti)charmkorrelationer i tungjonskollisioner”, 2022-2025.
 - Previous grants: 3 VR project grants (2010-2012: 1.4 MSEK, 2013-2016: 2.1 MSEK, 2017-2020: 2.8 MSEK). One of two PIs of 26.2 MSEK total KAW grant, “CLASH: Pinning down the origin of collective effects in small collision systems”, 2018-2024.
 - Other relevant information:
 - 2025: Convener for MC session for UPC 2025 in Finland.
 - 2023, 2024: IOC for QCD Challenges from pp to AA (Italy, Germany).

- 2022: Organized (chair) Fysikdagarna 2022 in Lund.
- 2021: Best paper at Offshell-2021 conference (speaker).
- 2019: Organized 3rd QCD Challenges from pp to AA in Lund. Organized proceeding.
- 2019: Organized COST Workshop in Lund.
- 2019: Convener for QCD session for LHCP 2019 in Mexico.
- 2016: LOC and PC member for LHCP in Lund.
- Invited plenary talks since 2012:
 - * 2023: Moriond QCD (Italy).
 - * 2022: LHC Days in Split (Croatia).
 - * 2021: ALICE-India collaboration meeting (Online).
 - * 2017: QCD Challenges from pp to AA (Mexico).
 - * 2017: Workshop on High p_T physics (Norway).
 - * 2017: QCD challenges in pp, pA and AA collisions (Italy).
 - * 2016: Hard Probes (China).
 - * 2016: QCD Challenges from pp to AA (Mexico).
 - * 2014: ALICE Status Report at 117th LHCC meeting.
 - * 2013: Initial Stages in High-Energy Nuclear Collisions (Spain).
 - * 2012: Hard Probes (Italy).
- 2015: UGL 1 week group and leader training.

Publication list for Peter Christiansen

The citations quoted have been obtained from the data base INSPIRE on the date October 29, 2024. For completeness, my ORCID ID is 0000-0001-7066-3473.

I am currently a member of the ALICE collaboration (≈ 1000 authors) and the ALICE TPC collaboration (≈ 75 people). I have previously been a member of the BRAHMS collaboration (≈ 40 people), the PHENIX Collaboration (≈ 400 members) and the NA44 collaboration (≈ 40 people).

	All time
Total number of papers analyzed:	621
Average citations per paper:	114
Renowned papers (500+):	17
Famous papers (250-499):	50
Very well-known papers (100-249):	127
Well-known papers (50-99):	133
Known papers (10-49):	213
Less known papers (1-9):	60
Unknown papers (0):	11
hHEP index:	114
i10 index (Npublications with 10+ cites):	540

6 selected articles

1. “Light-flavor particle production in high-multiplicity pp collisions at $\sqrt{s} = 13$ TeV as a function of transverse sphericity”, S. Acharya...

P. Christiansen... [ALICE Collaboration]

JHEP **05**, 184 (2024)

Number of citations: 8.

One of the main ALICE papers resulting from my CLASH project. A comprehensive study of how the event shape variable, sphericity, can be used to control strangeness modification and other QGP-like effects in pp collisions. Paper was lead by Lund and mainly the work of Lund analysers.

2. “Studying strangeness and baryon production mechanisms through angular correlations between charged Ξ baryons and identified hadrons in pp collisions at $\sqrt{s} = 13$ TeV”, S. Acharya... **P. Christiansen...** [ALICE Collaboration]

JHEP **09**, 102 (2024)

Number of citations: 2.

A Lund ALICE paper inspired by my CLASH project. A comprehensive study of how strangeness is balanced in the production of the Ξ baryon (ssd). Paper based on an updated version of the Lund analysis that won the 2021 ALICE thesis award.

3. “Enhanced production of multi-strange hadrons in high-multiplicity proton-proton collisions”, J. Adam... **P. Christiansen...** [ALICE Collaboration]

Nature Phys. **13**, 535 (2017)

Number of citations: 814.

This paper discovered the universality of strangeness production. My PhD student, V. Vislavicius, did part of the pion reference analysis under my supervision.

4. “Centrality dependence of the nuclear modification factor of charged pions, kaons, and protons in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV”, J. Adams...

P. Christiansen... [ALICE Collaboration]

Phys. Rev. C **93**, 034913 (2016)

Number of citations: .

*Using my TPC expertise I lead and developed (together with 2 PhD students and a Postdoc) the main analysis described in this paper. This was an uphill battle in the collaboration, as a similar analysis had turned out to have big issues in another experiment. This is now a standard analysis technique in ALICE and described in detail in this publication. The main results were also published as a letter: Phys. Lett. B **736**, 196 (2014)*

5. “Color Reconnection and Flowlike Patterns in *pp* Collisions”, A. O. Velasquez,

P. Christiansen, E. C. Flores, I. M. Cervantes, and G. Paic

Phys. Rev. Lett. **111**, 042001 (2013)

Number of citations: 246.

We point out the relation between color reconnection and flow for small collisional systems, which provides an important correspondence between microscopic (strings) and macroscopic (hydrodynamic) descriptions. This started a renewed interest in color reconnection on the phenomenology side, e.g., color ropes.

6. “The ALICE TPC, a large 3-dimensional tracking device with fast readout for ultra-high multiplicity events”, J. Alme... **P. Christiansen...** [ALICE TPC

Collaboration]

Nucl. Instrum. Meth. A **622**, 316 (2010)

Number of citations: 750.

This paper details the performance of the ALICE TPC after commissioning. The TPC was the main contribution of the Lund group and my main activity from 2004-2010 (I was co-editor of the “Commissioning and calibration” section. The TPC is the main detector for the 3 most cited ALICE physics papers.

Top 4 cited articles (excluding technical and simulation studies)

7. “Long-range angular correlations on the near and away side in p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV”, B. Abelev... **P. Christiansen...** [ALICE Collaboration].

Phys. Lett. **B719**, 29 (2013)

Number of citations: 954.

Results are mainly based on TPC track information.

8. “Centrality dependence of the charged-particle multiplicity density at mid-rapidity in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV”, K. Aamodt...

P. Christiansen... [ALICE Collaboration].

Phys. Rev. Lett. **106**, 032301 (2011)

Number of citations: 823.

Results are mainly based on ITS information (but cross-checked using the TPC track information).

9. “Elliptic flow of charged particles in Pb-Pb collisions at 2.76 TeV”,

K. Aamodt... **P. Christiansen**... [ALICE Collaboration].

Phys. Rev. Lett. **105**, 252302 (2010)

Number of citations: 1,142.

Results are mainly based on TPC track information.

10. “Quark gluon plasma and color glass condensate at RHIC? The perspective from the BRAHMS experiment”, I. Arsene... **P. Christiansen**... [BRAHMS Collaboration],

Nucl. Phys. A **757**, 1 (2005).

Number of citations: 2,766.

This white paper summarizes a lot of the work that I indirectly or directly contributed to during my 4 years with BRAHMS (2000-2003). All four RHIC white papers were published together and they discuss each experiment's evidence for the observation of a new phase of matter at RHIC.