# Curriculum vitae

## Personal information

**Complete name:** Zaccolo Valentina
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**Associate Professor - Professoressa Associata** Nuclear and subnuclear physics, since November 2024 - Physics Department, University of Trieste, Italy

## Academic activity and studies

- **Assissant Professor - Ricercatrice a tempo determinato di tipo b)** 2021 - 2024 - Physics Department, University of Trieste, Italy
- **Postdoc - Assegnista di Ricerca** 2018 - 2021 - University of Trieste and National Institute for Nuclear Physics (INFN), Trieste Unit, Italy
- **Postdoc - Assegnista di Ricerca** 2016 - 2018 - INFN, Turin Unit, Italy
- **Postdoc Research Associate** 2015 - 2016 - Niels Bohr Institute, Copenhagen University, Denmark.
- **PhD** 2015 - Niels Bohr Institute,Copenhagen University, Denmark.
  Thesis: "Charged-particle multiplicity distributions over wide pseudorapidity range in proton-proton and proton-lead collisions with ALICE".
  Supervisor: Prof. J.J. Gaardhøje, Niels Bohr Institute, Copenhagen University, Denmark.
- **Master degree** 2011 - Physics Department, University of Trieste.
  Thesis: "The relevance of a precise determination of $V_{tb}$ from single-top production at LHC".
  Supervisor: Prof. C. Verzegnassi, University of Trieste
  Co-supervisor: Prof M. Cobal, University of Udine

## Roles and responsibilities

- **National and international responsibilities**
  - *Postdoc supervisor* topic "Nuclear physics" since November 2024
    Dr. Abhi Modak - INFN, Trieste Unit.
  - *Postdoc supervisor* project "Chiral symmetry restoration in heavy-ion collisions", since January 2024
    Dr. Marta Urioni - University of Trieste.
  - *Researcher supervisor* International affairs fund INFN, September 2023
    Abhi Modak - INFN, Trieste Unit.
  - *Member of scientific committee University Collage Luciano Fonda* since April 2022.
  - *Departments delegate for incoming orientation* since December 2021.
  - *Italian representative and organiser of European Committee for Future Accelerators Early-Career Researcher Panel* 2020-2023.
  - *Researcher supervisor* International affairs fund INFN, July 2019
    Irais Bautista Guzman - INFN, Trieste Unit.

- **Public exam committees**
  - *Technical collaborator reserved for disabled categories* 2024, INFN, Trieste Unit.
  - *4 Postdoc selection committees - Experimental physics of fundamental interactions* 2022 - 2024, University of Trieste
- **Responsibilities connected to research activities in the ALICE Collaboration**
  - *Coordinator of Diversity Office* since March 2023.
  - *Conference Committee member* since December 2022.
  - *PHENOmenal: ALICE and MC meeting coordinator* since October 2020.
  - *Physics Board member* 2020 - 2022.
  - *Physics Working Group Monte Carlo generators and Minimum Bias physics Convener* 2020 - 2022.
  - *Physics Analysis Group Multiplicity coordinator* 2016 - 2020.

## Funding

- **Project relevant for National Interest (PRIN) - Ministry of University and Research** Scientific responsible - University of Trieste, project: "CHIral SYmmetry REstoration in heavy ion collisions - CHISYRE", 2023 - 2025.
- **Microgrant - Friuli Venezia Giulia region** Scientific responsible - University of Trieste, project:"Study of production of light nuclei and anti-nuclei in high energy collisions", 2023 - 2025.
- **Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP)** Supervisor Eliana Marroquin, project "Quantum entanglement in heavy ion collisions: charged-particle multiplicity distributions in proton-lead collisions with ALICE (CERN)" 2022.
- **Beneficientia Stiftung funding for Postdoc** Project "Management, usage and R&D of ALICE vertexing detector", 2020.
- **Phase 1 ERC-2020-STG** project n. 947996 in Horizon 2020.
- **Seal of Excellence** project 748614, Marie Sklodowska Curie Actions in Horizon 2020.

## Publications in peer review journals

Currently I have published 487 papers with ALICE from Scopus database, collecting 25,198 citations, with h-index 83: https://www.scopus.com/authid/detail.uri?authorId=55443627100origin=AuthorEval.

## Organisation of conferences

- **MPI@LHC 2023** Convener session "Collisions with nuclei" workshop Multiple Parton Interactions @ LHC at Manchester, UK, November 2024
  https://indico.cern.ch/event/1281679/program
- **LHCP 2023** Convener session "Heavy Ion Physics" conference Large Hadron Collider Physics in Belgrade, Serbia, May 2023
  https://indico.cern.ch/event/1198609/page/26673-parallel-session-conveners
- **QCD challenges from pp to AA collisions** International Advisory Committee member, Padua, Italy, February 2023
  https://indico.cern.ch/event/1135616/overview

- **PHENOmenal workshop** Organiser, CERN, Switzerland, November 2022
  https://indico.cern.ch/event/1206467/
- **Ioni pesanti 2021** Convener session "Global properties from pp to AA", Padua, Italy, November 2021
  https://agenda.infn.it/event/21267/program
- **Rivet workshop** Organiser Rivet workshop for ALICE. Online, November 2020
- **MPI@LHC 2019** Convener session "High multiplicity (small systems)" International Workshop on Multiple Partonic Interactions at the LHC in Prague, Czech Republic, November 2019
  https://indico.cern.ch/event/816226/page/16957-working-groups

## Presentations at workshops and conferences

I presented at around 20 conferences and workshops, national and international. In particular, 10 of them are invited. I am highlighting below the ones of experiment overview and the ones presented at prestigious conferences for nuclear and subnuclear physics (with more than 300 participants).

- *HSF Workshop:* Overview experiment "ALICE overview and ideas for event generators tuning" HSF Event Generator Tuning Workshop, Virtual, June 2023.
- *LHCC Meeting:* Overview experiment "ALICE Status Report" 147th LHCC Meeting - OPEN Session virtual, September 2021.
- *160°Congresso Nazionale SIF:* Overview experiment "Recent results and perspectives of the ALICE experiment" Congresso SIF virtual, September 2020.
- *LHCP2020:* Multiexperiment in plenary session "Soft QCD" for ALICE, ATLAS, CMS, LHCb e TOTEM, conference Large Hadron Collider Physics virtual, May 2020.
- *HESZ 2017:* Overview experiment "ALICE goes forward" Workshop on Forward Physics and High-Energy Scattering at Zero Degrees at Nagoya (Japan), September 2017.
- *SQM 2019:* Contribution in parallel session "Particle production as a function of UE activity measured with ALICE at the LHC", conference Strangeness in Quark Matter in Bari, Italy, June 2019.
- *LHCP 2017:* Contribution in parallel session "Soft-QCD results in pp and p-Pb with ALICE" conference Large Hadron Collider Physics conference in Shanghai (China), May 2017.
- *QM 2015:* Contribution in parallel session "Charged-particle multiplicity distributions over a wide pseudorapidity range in proton-proton collisions with ALICE" conference Quark Matter in Kobe (Japan), October 2015.

## Editorial committees

- **Reviewer** for Journal of High Energy Physics (ISSN 1029-8479) edited by Springer, Impact Factor (2022) 5.4 since May 2024.
- **Reviewer** for The European Physical Journal C (ISSN 1434-6052) edited by Springer, Impact Factor (2022) 4.4 since July 2023
- **Reviewer** for The European Physical Journal Plus (ISSN 2190-5444) edited by Springer, Impact Factor (2022) 3.4 since November 2022
- **Reviewer** for Physics Letters B (ISSN 1873-2445) edited by Elsevier, Impact Factor (2023) 4.3 since July 2019

## Teaching activities

- **Courses**
  - **Course responsible: 137SM - Introduction to Nuclear and Subnuclear Physics** (32 hours) a.y. 2021/2022, 2022/2023, 2023/2024, 2024/2025
    Bachelor in Physics - Third year
  - **Teacher: 052SM - Laboratory III** (26 hours)a.y. 2021/2022, 2022/2023, 2023/2024, 2024/2025
    Bachelor in Physics - Second year
  - **Teacher: 989SM - Nuclear Physics** (8 hours) a.y. 2021/2022, 2022/2023, 2023/2024, 2024/2025
    Master in Physics - First year
  - **Course responsible: 352SM - Advanced programming and simulation techniques for physics** (24 hours) a.y. 2022/2023, 2023/2024, 2024/2025
    Master in Physics - First and second year
  - **Teacher: SIMULATION OF PARTICLE INTERACTIONS** (8 hours)
    PhD in Physics University of Trieste XXXVII, XXXVIII, XXXIX and XXXV Cycle
  - **Laboratory II assistant** a.y. 2019/2020 e 2020/2021 (44 hours)
    Department of Physics, University of Trieste
  - **Electromagnetism I laboratory assistant** a.y. 2012/2013 e 2013/2014 (~120 hours)
    University of Copenhagen, Denmark.

- **Phd thesis**
  - PhD Supervisor: Cristian Moscatelli, since November 2025, University of Trieste
  - PhD Supervisor: Stefano Cannito, since November 2024, University of Trieste
  - PhD Supervisor: Lorenzo Bernardinis, since November 2024, University of Trieste
  - Examiner: "Measurements of forward charged-particle multiplicity and multiplicity dependence of forward $J/\Psi$ production in pp collisions with the ALICE experiment at LHC"
    Sarah Nina Edwige Herrmann, October 2024 - University Claude Bernard of Lyon.
  - Evaluator: "Measurement of phi-meson pair production in pp collisions at 5.02 TeV and 7 TeV with the ALICE experiment"
    Nicola Rubini, December 2023 - University of Bologna.
  - Co-supervisor: "Charged-particle multiplicity distributions in p-Pb collisions at 5.02 TeV with ALICE"
    Laís Ozelin, November 2018 - University of Copenhagen, Denmark.

- **Master thesis**
  - Supervisor: "Misura della produzione di Elio 3 con l'esperimento ALICE"
    Cristian Moscatelli, October 2025
  - Supervisor: "Utilizzo di tecniche di Machine Learning per Fast Simulations di calorimetri per l'esperimento ALICE"
    Davide Fuligno, October 2025
  - Supervisor: "Tuning of PYTHIA event generator with strange hadron measurements from ALICE and test on strange jet production"
    Lorenzo Bernardinis, October 2024
  - Supervisor: "Testing the presence of QGP in small systems using (multi-)strange hadron correlations with a $\phi$ meson with ALICE"
    Stefano Cannito, October 2024

  - Co-examiner: “Determination of the theory uncertainties on the measurement of the Zgamma production cross section in the Z to nu nu channel in proton-proton collisions at 13 TeV with the CMS experiment at the LHC”
    Raffaele Delli Gatti, July 2023

- **Bachelor thesis**
  - Supervisor: “Studio delle collisioni ossigeno-ossigeno con ALICE a LHC"
    Kevin Brugnera, September 2025
  - Supervisor: “Studio della produzione della risonanza $K^*(892)^0$ in collisioni Pb–Pb a 5.36 TeV con l’esperimento ALICE"
    Fausto Marchetto, July 2025
  - Supervisor: “Studio della produzione della risonanza $K^*(892)^0$ in collisioni pp a 13.6 TeV con l’esperimento ALICE"
    Axel Viel, July 2025
  - Supervisor: “Produzione di stranezza con esperimento ALICE"
    Giulia Savoia, March 2024
  - Supervisor: “Misura del fattore di modificazione nucleare dei pioni con l’esperimento ALICE"
    Alberto Gimona, December 2023
  - Supervisor: “Studio e implementazione del trigger per il mesone Phi con l’esperimento ALICE"
    Davide Fuligno, October 2023
  - Supervisor: “Misura dello spettro dei deutoni in collisioni Pb-Pb nel Run 3 a LHC con l’esperimento ALICE"
    Cristian Moscatelli, September 2023
  - Supervisor: “Studio della produzione del deutone nei getti energetici tramite il generatore di eventi PYTHIA"
    Mario Antoniazzi, September 2023
  - Supervisor: “Studio del ruolo del mesone phi nella produzione di particelle con stranezza tramite il generatore di eventi PYTHIA"
    Giulia Cossutti, July 2023
  - Supervisor: “Misure di molteplicità delle particelle cariche con il nuovo Inner Tracking System di ALICE"
    Daniele Riva, September 2022
  - Supervisor: “Misure di iperoni usando algoritmi innovativi di tracciamento con l’esperimento ALICE"
    Lorenzo Mattei, September 2022
  - Supervisor: “Sviluppo e ottimizzazione della ricostruzione delle particelle cariche con il nuovo Inner Tracking System di ALICE"
    Leonardo Musini, September 2022
  - Supervisor: “ Studio dell’adronizzazione degli iperoni dentro e fuori i getti energetici con il generatore di eventi PYTHIA"
    Stefano Cannito, July 2022
  - Supervisor: “Studio della fenomenologia della produzione di particelle in collisioni protone-protone ad alte energie tramite il generatore di eventi PYTHIA"
    Lorenzo Bernardinis, March 2022
  - Supervisor: “Studio della fenomenologia di collisioni protone-protone e ione-ione ad alte energie tramite il generatore di eventi PYTHIA"
    Francesco Rossi, December 2020
  - Co-supervisor: “Studio della molteplicita’ di particelle cariche nella regione dell’Underlying Event mediante tecniche di inversione di probabilita’"
    Veronica Rosso, September 2019

## Languages

- **Italian** mother tongue.
- **English** advanced and fluent level, both written and spoken.
- **Danish** advanced level written, average spoken.
- **French** basic level both written and spoken.

Signature