CURRICULUM VITAE

Family name, First name: Fabbietti, Laura
Researcher unique identifier(s): Inspire ID: INSPIRE-00164656
Date of birth: June 7, 1974
Nationality: Italian
ORCID: 0000-0002-2325-8368
URL for webpage: http://denseandstrange.ph.tum.de

EDUCATION

1998 Master: Universita' degli Studi, Milano, Milan, Italy
2003 PhD: Physics Department of the Technische Universität München, Munich, Germany (TUM)

PREVIOUS POSITIONS

2004-2006: Postdoctoral research associate under the supervision of Prof. Dr. Krücken, TUM
2007-2013*:* Leader of a Helmholtz Young-Investigator University group
GSI Laboratory, Darmstadt, Germany and TUM
2008-2010: W1 Junior Professor at Excellence Cluster 'Origin and Structure of the Universe', TUM
2014 – 2015: Guest Professor at the Physics Department of the Utrecht University
2021-2022: Scientific Associate Scientist at CERN, Geneva.

CURRENT POSITION

2011-2023: W2 Professor at TUM
Since 2023: W3 Professor at TUM

FELLOWSHIPS AND AWARDS

1998 Award for the best experimental thesis at the Universita' degli Studi di Milano
2007 Helmholtz Young Investigator Group
2008 Excellence Cluster Universe Young Investigator Group
2009 Award as one of the first appointed female Prof. in Physics by the Bavarian Academy of Science
2014 Award for the most valued reviewer Phys. Lett. B

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2007 – 2021 25 Postdocs (of which 2 ERC Starting Grant holders and 1Young Research Group leader within the Cluster of Excellence "Universe", 1 DFG Sachmittel grant) / 27 PhD / 32 Master / 60 Bachelor students

ORGANISATION OF SCIENTIFIC MEETINGS

since 2010 (yearly) Chair of the XLVIII International Winter Meeting on Nuclear Physics, Bormio (Italy)
2010 Workshop on strangeness production in hadron collisions, Excellence Cluster, TUM
2010 FOPI Collaboration Meeting, Munich (Germany)
2011 Hadron2011, XIV International Conference on Hadron Spectroscopy, Munich (Germany)
2012 Resonance Workshop at UT Austin, Austin (Texas)

2012-14-16	Quark Confinement and the Hadron Spectrum Conference Munich (Germany)
2012	Workshop: New trends in the low energy QCD in the strangeness sector: experimental and theoretical aspects ECT*, Trento (Italy)
2013	Topical Lectures on Flow by Prof. R. Snelling and Prof. H. Wolter, TUM (Germany)
2014	HADES Collaboration Meeting, Munich (Germany)
2014	Strangeness in Theory and Experiment, Heidelberg (Germany)
2014	Achievements and Perspectives in Low-energy QCD with Strangeness, ECT*, Trento (Italy)
2014-17	Resonance Workshop at Catania and Bergamo, Italy
2018	RD51 Collaboration Meeting, Munich (Germany)
2019	First femTUM2019 Workshop, Munich (Germany)
2019	DPG spring meeting, Munich (Germany)
2021	ICRC21, International Cosmic Ray Conference, Berlin (Germany)
2022	MIAPP program 'Antinuclei in Cosmos?'
Since 2020	International advisory committee Strange Quark Matter
Since 2022	International advisory committee INPC
2024	International advisory committee Quark Matter 2025
2024	CERN Workshop on 'JEENA Workshop on Nuclear Physics at the LHC (and SPS) and connections to Astrophysics'
2025	MIAPP program 'Event generators'

INSTITUTIONAL RESPONSIBILITIES

2012-20	Coordinator of the research area "D" at the Excellence Cluster Universe
Since 2012	Member of the Excellence Cluster Universe and ORIGINS Research Board
Since 2013	Mentor of 2 tenure-track W2 professors at the Physics Department, TUM
2013-2017	Women Representative of the Physics Department, TUM
2016-2020	Coordinator of central technology laboratory (ZTL) at the TUM Physics department
Since 2019	Coordinator of the Mossbauer Technology Center (MTC) facility at the TUM Physics department
2017-2021	Representative of the Nuclear-Particle and Astro-particle division at TUM
2018-2020	Coordinator of the physics analysis group 'femtoscopy' within the ALICE collaboration
2020-2022	Convener of the physics working groups 'correlations and fluctuations' within ALICE Principal investigator of the 'Universe' and 'ORIGINS' cluster and SFB1258
2021-2024	Deputy representative of the ALICE FSP in Germany
Since 2024	Representative of the ALICE FSP in germany
2022-2024	Member of the TUM steering Committee for the Excellence Cluster ORIGINS II proposal
since 2024	Project coordinator for the ALICE3 Outer Tracker
since 2024	Co-spokeperson of the Collaborative Research Center CRC1258 'Neutrinos and Dark Matter' at TUM
since 2025	German representative at the IUPAP Commission C.12 (Nuclear Physics)

REVIEWING ACTIVITIES

since 2010	Referee for the following Journals: European Physics Journal A, Physical Review C, Physics Letter B, Nuclear Physics A
since 2011	Scientific Advisory Board of the "Confinement and Hadron Spectrum" Conference
2011-20	Convener of the "Strangeness" Working group within the HADES collaboration

2012-14	Coordinator of the Pion-beam facility for the HADES Experiment
2013	Referee FIRB (Futuro in Ricerca) 2013, for MIUR (Italian Ministry for Education)
2014	Referee, SIR (Scientific Independence of young Researcher) 2014, MIUR
2014	Referee for the SASPRO Programm 2014, Slovak Academy of Science (SAS)
2015	Referee for the Concorso Primo Tecnologo 2015, INFN
since 2015	Member of the national scientific committee of the INFN (CTS)
since 2016	Referee for the DFG (Sachbeihilfe Proposals)
since 2016	Referee for the Humboldt foundation
since 2018	Member of the International Advisory Board for the SQM and Meson Conferences
since 2019	Referee for the Studienstiftung des Deutschen Volkes
2020	Referee for the Canada Foundation for Innovation Expert Committee
since 2022	Member of the Starting Grant panel of the European Research Council (ERC) PE2 'Fundamental Constituents of Matter'
since 2022	member of the MIT Laboratory for Nuclear Science review committee
since 2024	member of the JPARC PAC
since 2025	member of the CERN SPSC committee

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

Since 2010	Member, Research Network "*Leannis*" (FP7 and FP8) and THEIA (Horizon2020)
since 2000	Member of the German Physics Society (DPG), Germany

MAJOR COLLABORATIONS

- **HADES** hadron physics and heavy ion collisions at intermediate energies, GSI
- **ALICE** ultrarelativistic heavy ion collisions, CERN
- **FOPI** search for kaonic bound states, GSI, Germanry
- **GEM-TPC** development of GEM-based detectors, European collaborators
- **AMADEUS** study low energy antikaons absorption with the KLOE Detector, LNF, Frascati Italy
- **SIDDHARTA2** study of the kaonic deuterium, LNF, Frascati, Italy

Main scientific contributions in a nutshell

- Commissioning, absolute calibration and software development for the fastest RICH detector in the 90'ies used within the HADES collaboration for dilepton physics.
- Development of the first dilepton analysis framework in HADES
- First promotor of Partial Wave Analysis in proton-proton and pion-proton collisions at GSI
- First developer, builder and commissioner of a self-triggering silicon device in vacuum for the online-tracking of secondary pions at GSI
- Leadership in the upgrade of the GEM-TPC ALICE detector
- Inventor of the femtoscopy-for-interactions technique application to the study of strong interaction at the LHC and study of the equation of state of neutron stars
- Proposer of new antimatter studies at the LHC with practical connection to the physics of antimatter propagation in our Galaxy and impact for indirect dark matter searches
- Leadership in the design of CMOS-based detectors for ALICE3

Extended description of the contributions

The peculiarity of my scientific contribution is the **wide range of topics** I investigate in the **field of hadron physics** in the last 10 years including several hardware developments. My publications list counts **694 works**, cited in total **30129 times**. The works include three review papers [Bra14, Tol20, Fab21], and three recent articles on the CERN Courier [Cour1, Cour2, Cour3]. This translates into an **H-index of 92**. I have summarized my scientific contributions **of the last 10 years** in three main research lines accompanied by the relevant publications.

<u>Hadron Physics at intermediate energies:</u>
During my Helmholtz Young Investigator grant (2007-2013) I focused of my research on strangeness production in hadron collisions at energies of few GeV motivated by the **search of a clear signature of the in-medium modification of strange hadrons** within dense nuclear matter. Partial restoration of Chiral Symmetry is expected to occur at baryonic densities larger than normal saturation density and QCD sum rules connect this effect to the in-medium properties of hadrons. The interaction of kaons and hyperons with nucleons in vacuum and within a dense system determine the equation of state (EoS) of nuclear matter.
Since the final aim is to unravel hadron properties and interactions within a dense environment, it was natural to begin by studying the properties of kaons produced in heavy ion collisions at energies of few GeV as measured by HADES at GSI and my group published the first results about this topic [Phi09, K010, Hyp11]. Although we could **pin down the presence of a repulsive strong interaction** for K_S^0, K^+ in p + A and A+A collisions [KRe14, KpM14], these studies showed us the complexity of the behaviour of strange hadrons within nuclear matter and the necessity to measure production cross-section and absorption cross-section in elementary collisions to have a solid references for the interpretation of the heavy ion data. I have hence started a measurement program in p+p and p+A collisions conducted with the FOPI and HADES spectrometers at GSI to pin down: i) the role played by

baryonic resonances to the production of hadrons [K*15, Lpp17, Sig018, S1385], ii) the properties of the molecular state **Λ(1405)** [SpiK, Epp12, L1405, Sie13], iii) the search of new molecular states such as the **kaonic bound state ppK^-**[Fab13, Epp15]. In this context, we have have carried out the first Partial Wave Analysis in p+p reactions for the final state p+p -> p$K^+\Lambda$ determining both the first solid upper limit for the non-observed ppK^-state and also the quantitative contribution of the N* resonances coupling to the $K^+\Lambda$ final state [PWA15, PWA18].

The need for solid references in the field of in-medium interactions motivated me to join the KLOE-AMADEUS collaboration at DaϕNE, Frascati. There we could study the interaction of low energy antikaon with light nuclei **determine for the first time the cross-sections of K- absorption processes** on two or more nucleons [Vas16, Gra19, Pis18]. These studies showed that antikaons experience an attractive interaction with nuclei and could be even present within neutron stars.

In the same spirit, I carried out the development of a dedicated tracking system for **secondary pion beams** that enabled to measure pion-induced interactions (π^-+ C, π^- + W at kinetic energies of 1.7 GeV and $\pi^- + p$ at 0.8-1.3 GeV) with HADES in 2014. The more controlled environment created in pion-induced reactions allowed us to demonstrate for the **first time in a model independent way that the ϕ meson –nucleon inelastic cross-section** is much higher than normally assumed [Adaphi] and study the propagation of antikaons and hyperons (paper in preparation).

<u>Hadron Physics at the LHC:</u>

The experience collected in heavy ion, Kaon-, proton- and pion-induced fixed target experiments at energies around 1 GeV motivated me to search for an alternative and **less model-dependent method** to pin down the **interactions** and also to start from two- and three-body interactions **in the vacuum** before investigating the dense nuclear medium. For this reason, I have started to study **femtoscopy correlations** for particle stemming from **small colliding systems** as pp and p-Pb measured at the **LHC by ALICE**. The main idea was to revert the standard paradigm of femtoscopy in heavy ion collisions, where the evolution of the emitting source is investigated, into fixing the source parameter and extract the final state interaction parameters from the correlation in the momentum space. This effort, which also includes the development of a phenomelogical framework to directly test theoretical prediction for the interactions [Mih18], has been one of the main focus of my research in the last four years.

Recently we have extended the methodology to the investigation of three body interactions [Del22].

This approach has been first tested with the HADES data for p+Nb collisions at 3.5 GeV [40] then a new method has been developed for the LHC collisions where the following interactions have been measured by my group in the last 5 years: π–π [Sou24], $p - p$ [Ach19,Ada1], $\Lambda - p$ [Ada2], $\Lambda - \Lambda$ [Ada3], $\Xi^- - p$ [Ada4], $K^- - p$ [Ada5, Acha38], $\Sigma^0 - p$ [Ada6], $\Omega^- - p$ [Ada7], $\phi - p$ [Ada8], $\bar{\Lambda} - \Lambda$, $\bar{\Lambda} - p$ [Ada9], Λ–K [Acha36], Λ–Ξ [Ada11], D^--p [Ada10], D^-K/π [Ada10b].

The studies of the interactions including charm quarks have also been extended to DD* and DbarD* correlation projections for the future experiment ALICE3. I have proposed these new measurements which have been included in the ALICE3 letter of intent [Acha33].

In parallel to these experimental studies, my group also carried out phenomenological investigation linked to the interactions that lead to the following publications: $\phi - p$ [Chiz23], K-d [Doc24], ρ-p [Fej24] authored by me, Λp [Mih24], ΛK [Sar24b], ΞK [Sar24], CECA model [CECA] authored by my group members independently.

Since 2022, the technique has been extended to three body systems, with the aim of extracting the contribution of genuine three body interactions. This research is particularly important for baryon triplets containing nucleons and hyperons which can not be measured with any other experimental technique. The knowledge of two- and three-body interactions for the nucleon-hyperon and nucleon-nucleon-hyperon case is key to study the equation of state of dense baryonic matter, but also neutron stars, the densest objects we know in our Universe.

Several publications on the measurements of three body correlations [Ada12, Acha34, Acha37] and phenomenological modelling of them [Viv23, Kie24, Gar24] have been meanwhile published.

Recently, we have begun collaborating with theoreticians to assess the impact of funding on the interactions within the equation of state of neutron stars, specifically to determine whether hyperons should be included [Vid24].

Parallel to the activities I have also developed a new line of research within ALICE focused on measuring the **formation mechanism and annihilation cross-section of light antinuclei** within the ALICE detector. The formation mechanism of nuclei has been directly linked to the interactions and measurement of the particle

emitting source exploiting the Wigner formalism and excellent results have been achieved for the description of deuterons [Mahl23, Mahl24].

The main scientific motivation for the absorption studies is linked to the **indirect detection of dark matter candidates** via satellite and balloon experiments exploiting the decay/annihilation of dark matter into pairs of nuclei and antinuclei. Solid references are currently missing for both the formation and absorption probability of antideuteron and antihelium nuclei stemming from dark matter annihilation of cosmic rays interaction with the interstellar medium (IM). The annihilation cross section of antideutrons, antitriton and antihelium3 have been measured by my group recently for the first time [Ada71, Acha35] and for antihelium3 we have implemented the results in an available transport code (GALPROP) for the propagation of particles through the interstellar medium and evaluated the transparency of our galaxy to the passage of antihelium3 coming from different source. This work was accepted by Nature Physics [Ada13]. In order exploit the LHC results in the best possible way, we are also studying the propagation of the nuclei within the IM [Doe20, Ser22].

Related Hardware Developments:

The physics program described above has been possible thanks to continuous improvements of the detector technology that were partially carried out within my group. We started to work with **GEM-based detectors** in 2008, with the aim to build a free running TPC for the PANDA experiment, planned at the FAIR facility [Fab11, Boe14, Ber17]. In 2011 we completed the construction of, at that time, the **largest TPC with GEM-readout** and tested it at GSI within the FOPI spectrometer. This technology was not chosen for the PANDA project but the expertise gained during those years allowed us to join the **R&D program for the TPC upgrade of the ALICE** collaboration in 2011. My group at the TUM built and tested **all the prototypes** of the read-out chambers for the ALICE upgrade, coordinated the prototyping effort and strongly contributed to the review procedures demanded by the LHC committee. These activities resulted in several R&D publications [ATP18, Gas14, Gas17, Mat18, Lau19, Ulu21]. Parallel to these activities it was also possible to develop a **silicon-based online tracking system with self-triggering capabilities** to measure the momentum of secondary pion beams at GSI with a precision of few per mille. My group built **CERBEROS** in 2012-2013 [Wir16, Pio17] and in 2014 we measured for the first time ever reactions of secondary pion beams with different nuclear targets at HADES.

Invited presentations to international conferences:

In total I gave **150 oral** presentations since 2010, **100 were invited presentation**. Most importantly I took care that the members of my group could get visibility for their work and this translates to additional **300 presentations since 2010** given at difference conference and workshop for the entire group (https://www.denseandstrange.ph.tum.de). Here a list of my most important plenary talks: QNP24, INPC2022, ICHEP 2022, DPG2021, Exa2021, Hadron2020, Quark Matter 2019, Wuhan China, November 2019; Strange Quark Matter 2019, SQM19, Bari, Italy, June 2019; Summary talk at the 16th International Workshop on Meson Production, Properties and Interaction, Meson2018, Crakow, Poland, June 2018; The 13th International Conference on Hypernuclear and Strange Particle Physics, Hyp2018, Portsmouth, Virginia, June 2018; SQM2015, Dubna (Russia), 2015; International Conference on Exotic Atoms and Related Topics -EXA2014, Vienna, Austria, 2014; International conference on Nuclear and Particle Phyiscs, INPC 2013, Florence, Italy; HYP2012, Barcelona, Spain 2012; Meson2012, Krakow, Poland, 2012; EXA2011, Vienna, Austria, 2011; Deutsche Physikerinnen Tagung, Munich, Germany, 2010.

Major contributions to the early career of excellent researcher:

I have so far supervised 60 Bachelor (30 % female), 32 Diploma/Master (22 % female), 27 PhD students (20 % female) and 25 postdocs (25% female). I have successfully managed to build an international and diverse research team at all levels thanks to the variety of the topics we study within my group, the many lectures at bachelor and master level that I have offered in the last 10 years and a continuous attention to the career path of each student. I have also been/still am the host of three different young investigator groups within my chair: Dr. Torsten Dahms ("*Studying the quark-gluon plasma via low-mass dilepton with ALICE*" Junior Research Group financed by the Excellence Cluster 'Universe', 2014-2019), Dr. Ante Bilandzic ("*Demystifying the Quark Gluon Plasma*", ERC Starting Grant, 2018-2022) and Dr. Francesca Bellini ("*Cosmic Anti Nuclei*", ERC Starting Grant, 2021-2026).
10 of my previous PhD and PD got a permanent job in research.

Selected list of publications:
All the papers contained in the following list have been written either partially or entirely by me.

[Bra14] N. Brambilla, L. **Fabbietti** et al., "*QCD and Strongly Coupled Gauge Theories: Challenges and Perspectives*", Eur. Phys. J. C 74 (2014) 10, 2981.
[Tol20] L. Tolos and L. **Fabbietti**, "*Strangeness in Nuclei and Neutron Stars*", Prog. Part. Nucl. Phys. 112 103770 (2020).
[Fab21] L. **Fabbietti**, V. Mantovani Sarti and O. Vazquez Doce, *"Study of the strong interaction among hadrons with correlations at the LHC*", Ann.Rev.Nucl.Part.Sci. 71 (2021) 377-402.
[Cour1] ALICE Collaboration (**Fabbietti**) CERN Courier, 10 july 2019, https://cerncourier.com/a/studying-neutron-stars-in-the-laboratory/.
[Cour2] ALICE Collaboration (**Fabbietti**) CERN Courier, 7 july 2020, https://cerncourier.com/a/common-baryon-source-found-in-proton-collisions/.
[Cour3] ALICE Collaboration (**Fabbietti**) CERN News, 28 may 2020, https://home.cern/news/news/physics/fresh-antimatter-study-alice-collaboration-will-help-search-dark-matter
[Mih18] Mihaylov D.L., Mantovani Sarti V., Arnold O.W., **Fabbietti** L., Hohlweger B., Mathis A.M., "*A femtoscopic correlation analysis tool using the Schrödinger equation (CATS)*", Eur. Phys. J., C78 (2018) 394.
[Del22] R. Del Grande, **Fabbietti** et al., *„A method to remove lower order contributions in multi-particle femtoscopic correlation functions",* Eur. Phys. J. C 82 (2022) 3, 244.
[Ada16] J. Adamczewski-Musch, et al., (**Fabbietti**, HADES Collaboration), "*The Λ-p interaction studied via femtoscopy in p+Nb reactions at $\sqrt{s}NN= 3.18$ GeV"*, Phys. Rev. C94 (2) 025201 (2016).
[Ach19] Acharya S., *et al*., (**Fabbietti**, ALICE Collaboration), "*$p-p$, $p-\Lambda$, and $\Lambda-\Lambda$ correlations studied via femtoscopy in pp reactions at $\sqrt{s}= 7$ TeV* ", Phys. Rev. C99 (2) (2019) 024001.
[Ada1] S. Acharya *et al*. (**Fabbietti**, ALICE Collaboration), "*Search for a common baryon source in high-multiplicity pp collisions at the LHC*", submitted to Phys. Lett. B 811 (2020) 135849.
[Sou24] S. Acharya *et al*. (**Fabbietti**, ALICE Collaboration), "*Common femtoscopic hadron-emission source in pp collisions at the LHC*", arXiv:2311.14527.
[Ada2] S. Acharya *et al*. (**Fabbietti**, ALICE Collaboration), *"Exploring the $N\Lambda$-$N\Sigma$ coupled system with high precision correlation techniques at the LHC",* Phys. Lett. B 833, 137272 (2022).
[Ada3] S. Acharya *et al*. (**Fabbietti**, ALICE Collaboration), "*Study of theΛ–Λ interaction with femtoscopy correlations in pp and p–Pb collisions at the LHC*", Phys. Lett. B 797, 134822 (2019).
[Ada4] S. Acharya *et al*. (**Fabbietti**, ALICE Collaboration), "*First Observation of an Attractive Interaction between a Proton and a Cascade Baryon"*, Phys. Rev. Lett. 123 11, 112002 (2019).
[Ada5] S. Acharya *et al*. (**Fabbietti**, ALICE Collaboration), *"Scattering studies with low-energy kaon-proton femtoscopy in proton-proton collisions at the LHC",* Phys. Rev. Lett. 124 9, 092301 (2020).
[Acha38] S. Acharya *et al*. (**Fabbietti**, ALICE Collaboration), *"Constraining the KN coupled channel dynamics using femtoscopic correlations at the LHC*", Eur. Phys. J. C 83 (2023) 4, 340.
[Ada6] S. Acharya *et al*. (**Fabbietti**, ALICE Collaboration), *"Investigation of the p-Σ^0 interaction via femtoscopy in pp collisions"*, Phys. Lett. B 805 135419 (2020).
[Ada7] J. Adam *et al*. (**Fabbietti**, ALICE Collaboration), "*A new laboratory to study hadron-hadron interactions*", Nature 588 (2020) 232-238, Nature 590 (2021).
[Ada8] J. Adam *et al*. (**Fabbietti**, ALICE Collaboration), *"Experimental Evidence for an Attractive p-ϕ Interaction",* Phys. Rev. Lett. 127 (2021) 17, 172301.
[Ada9] S. Acharya *et al*. (**Fabbietti**, ALICE Collaboration), "*Investigating the role of strangeness in baryon–antibaryon annihilation at the LHC*", Phys. Lett. B 829 (2022) 137060.
[Ada10] S. Acharya *et al*. (**Fabbietti**, ALICE Collaboration), "*First study of the two-body scattering involving charm hadrons*', Phys. Rev. D 106 (2022) 5, 052010.
[Ada10b] S. Acharya *et al*. (**Fabbietti**, ALICE Collaboration), "*Studying the interaction between charm and light-flavor mesons*", Phys. Rev. D 110 (2024) 3, 032004.
[Ada11] S. Acharya *et al*. (**Fabbietti**, ALICE Collaboration), "*Towards the understanding of the genuine three-body interaction for $p-p-p$ and $p-p-\Lambda$",* Eur. Phys. J. A 59 (2023) 7, 145.

[Acha36] S. Acharya *et al*. (**Fabbietti**, ALICE Collaboration), "*Accessing the strong interaction between Λ baryons and charged kaons with the femtoscopy technique at the LHC*", Phys. Lett. B 845 (2023) 138145.
[Ada12] S. Acharya *et al*. (**Fabbietti**, ALICE Collaboration), "*First measurement of the Λ–Ξ interaction in proton–proton collisions at the LHC",* Phys. Lett. B (2022) 137223.
[Doc24] O. Vazquez Doce**, L. Fabbietti**, D Mihaylov, "*Study of the deuterons emission time in pp collisions at the LHC via kaon-deuteron correlations*", arXiv:24.12.04562.
[Chiz23] E. Chizzali, **L. Fabbietti** et al., "*Indication of a p-ϕ bound state from a correlation function analysis*", Phys. Lett. B 848 (2024) 138358.
[Mih24] **D. L. Mihaylov** et al., "*Constraining the pΛ interaction from a combined analysis of scattering data and correlation functions*", Phys. Lett. B 850 (2024) 138550.
[CECA] **D. L. Mihaylov**, J. Gonzalez Gonzalez, "*Novel model for particle emission in small collision systems*", Eur. Phys. J. C 83 (2023) 7, 590.
[Sar24] A. Feijoo, **V. Mantovani Sarti** et al.,"*Bridging correlation and spectroscopy measurements to access the hadron interaction behing molecular states: the case of the Ξ(1620) and Ξ(1690) in the KΛ system*", arXiv:2411.10245.
[Sar24b] P. Encarnacion, **V. Mantovani Sarti** et al.,"*Femtoscopy study of the S=-1 meson-baryon interaction: Kp, pΛ and KΞ correlations*", arXiv:2412.20880.
[Viv23] M. Viviani, **B. Singh** et al., "*Role of three-body dynamics in nucleon-deuteron correlation functions*", Phys. Rev. C 108 (2023) 6, 064002.
[Kie24] A. Kievsky, **R. Del Grande** et al., „*nnn and ppp correlation functions*", Phys. Rev. C 109 (2024) 3, 034006.
[Gar24] E. Garrido, **L. Fabbietti** et al., "*pΛ and ppΛ correlation functions*", Phys. Rev. C 110 (2024) 5, 054004.
[Fej24] A. Feijoo, M. Korwieser, L.Fabbietti, „*Relevance of the coupled channels in the ϕp and ρp correlation functions*", arXiv:2407.01128.
[Acha33] S. Acharya *et al*. (**Fabbietti**, ALICE Collaboration), *"Letter of intent for ALICE 3: A next generation heavy-ion experiment at the LHC"*, https://cds.cern.ch/record/2803563?ln=it
[Acha34] S. Acharya *et al*. (**Fabbietti**, ALICE Collaboration), "*Explorigin the Strong Interaction of Three-body systems at the LHC*", Phys. Rev. X 14 (2024) 3, 031051.
[Acha37] S. Acharya *et al*. (**Fabbietti**, ALICE Collaboration), "*Study of the ppK+ and ppK- dynamics using the femtoscopy technique*", Eur. Phys. J. A 59 (2023) 12, 298.
[Vid24] I. Vidana, L. Fabbietti et al., " *Neutron Star Properties and Femtoscopic Constraints*", arXiv: 2412.12729
[Ada71] J. Adam *et al*. (**Fabbietti**, ALICE Collaboration), "*Measurement of the low-energy antideuteron inelastic cross section*", Phys. Rev. Lett. 125 (2020) 16, 162001.
[Acha35] S. Acharya et al. (**Fabbietti**, ALICE Collaboration), "Measurement of the low-energy antitriton inelastic cross section", Phys. Lett. B 848 (2024) 138337.
[Ada13] S. Acharya et al. (**Fabbietti**, ALICE Collaboration), "*First measurement of the absorption of anti-3He nuclei in matter and impact on their propagation in the galaxy", Nature Phys*. 19 (2023) 1, 61-71.
[Mahl23] M. Mahlein, **L Fabbietti** et al., „*A realistic coalescence model for deuteron production*", Eur. Phys. J. C 83 (2023) 9, 804.
[Mahl24] M. Mahlein, C. Pinto, **L. Fabbietti** et al., „*ToMCCA: a Toy Monte Calro Coalescence Afterburner*", Eur. Phys. J.C 84 (2024) 11, 1136.
[Phi09] G. Agakishiev et al. (**Fabbietti**, HADES Collaboration), "*Phi decay: A Relevant source for K-production at SIS energies*?", Phys. Rev. C80 (2009) 025209.
[K010] G. Agakishiev et al. (**Fabbietti**, HADES Collaboration), "*In-Medium Effects on K^0Mesons in Relativistic Heavy-Ion Collisions*", Phys. Rev. C82 (2010) 044907.
[Hyp11] G. Agakishiev et al. (**Fabbietti**, HADES Collaboration), "*Hyperon production in Ar+KCl collisions at 1.76 AGeV*", HADES Coll., Eur. Phys. J. A47 (2011) 21.
[KRe14] G. Agakishiev et al. (**Fabbietti**, HADES Collaboration), "*Associate K^0 production in p+p collisions at 3.5 GeV: The role of $\Delta^{++}(1232)$*" HADES Coll., Phys. Rev. C90 (2014) 015202.

[KpM14] G. Agakishiev et al. (**Fabbietti**, HADES Collaboration), "*Medium effects in proton-induced K^0 production at 3.5 GeV*", Phys. Rev. C90 (2014) 054906.
[K*15] G. Agakishiev et al. (**Fabbietti**, HADES Collaboration), "*$K^{*+}(892)$ production in proton-proton collisions at E_{beam}=3.5 GeV*", Phys. Rev. C92 (2015) 2, 024903.
[Lpp17] J. Adamczewski-Musch et al. (**Fabbietti**, HADES Collaboration), "Inclusive Λ production in proton-proton collisions at 3.5 GeV", Phys. Rev. C95 (2017) 015207.
[Sig018] J. Adamczewski-Musch et al. (**Fabbietti**, HADES Collaboration), "*Σ^0 production in proton nucleus collisions near threshold*", Phys. Lett. B781 (2018) 735-740.
[S1385] G. Agakishiev et al. (**Fabbietti**, HADES Collaboration), "*Baryonic resonances close to the $\bar{K}N$ threshold: The Case of $\Sigma^+(1385)$ in pp collisions*", Phys. Rev. C85 (2012) 035203.
[SpiK] G. Agakishiev et al. (**Fabbietti**, HADES Collaboration), "*Production of $\Sigma^{\pm}\,\pi pK^+$ in p+p reactions at 3.5 GeV beam energy*", Nucl. Phys. A881 (2012) 178-186.
[Epp12] E. Epple, **L. Fabbietti**, "*Determination of the $\Sigma(1385)^0/\Lambda(1405)$ ratio in p+p collisions at 3.5 GeV*", Hyperfine Interact. 210 (2012) 45-51.
[L1405] G. Agakishiev et al. (**Fabbietti**, HADES Collaboration), "*Baryonic resonances close to the $\bar{K}N$threshold: the $\Lambda(1405)$ case in pp collisions*", Phys. Rev. C87 (2013) 025201.
[Sie13] J. Siebenson and **L. Fabbietti**., "*Investigation of the Λ(1405) line shape observed in pp collisions*", Phys. Rev. C88 (2013) 055201.
[Fab13] **L. Fabbietti** , "*$pK^+\Lambda$ final state: Towards the extraction of the ppK^- contribution*", Nucl. Phys. A914 (2013) 60-68.
[Epp15] E. Epple, **L. Fabbietti**, "*Reanalysis of p+p reaction data: Probable absence of a ppK^- state*", Phys. Rev. C92 (2015) no.4, 044002.
[PWA15] G. Agakishiev et al. (**Fabbietti**, HADES Collaboration), "*Partial Wave Analysis of the Reaction p(3.5 GeV)+p->$pK^+\Lambda$ to Search for the ppK^- Bound State*", Phys. Lett. B742 (2015) 242-248.
[PWA18] R. Münzer, **L. Fabbietti** et al., "*Determination of N* amplitudes from associated strangeness production in p+p collisions*", Phys. Lett. B785 (2018) 574-580.
[Vas16] O. Vazquez Doce, **L. Fabbietti** et al. "*K- absorption on two nucleons and ppK^-bound state search in the Σ^0p final state"*, Phys. Lett. B 758, 134-139, (2016).
[Gra19] R. Del Grande, **L. Fabbietti** et al. *"K− multi-nucleon absorption cross sections and branching ratios in Λp and $\Sigma^0 p$ final states",* Eur. Phys. J. C 79, 3, 190, (2019).
[Pis18] K. Piscicchia, **L. Fabbietti** et al.,"*First measurement of the $K^-n\rightarrow\Lambda\pi$ − non-resonant transition amplitude below threshold"*, Phys. Lett. B 782, 339-345, (2018).
[Adaphi] J. Adamczewski-Musch et al., (**Fabbietti**, HADES Collaboration), "*Strong absorption of hadrons with hidden and open strangeness in nuclear matter*", Phys. Rev. Lett. 123 (2019) 2, 022002.
[Doe20] P. von Doetinchem, **L. Fabbietti** et al., "*Cosmic-ray Antinuclei as Messengers of New Physics: Status and Outlook for the New Decade",* J. C. A. P. 08(2020)035.
[Ser22] L. Serksnyte, **L. Fabbietti** et al., "*Reevaluation of the cosmic antideuteron flux from cosmic-ray interactions and from exotic sources*" Phys. Rev. D 105 (2022) 8, 083021.
[Fab11] **L. Fabbietti** *et al* ,"*The PANDA GEM-based TPC prototype*", NIM **A** 628, 204, 2011.
[Boe14] F. Böhmer, L. **Fabbietti** et al., "*First measurement of dE/dx with a GEM-based TPC*", *NIM A 737*, p. 214, 2014.
[Ber17] M. Berger, L. **Fabbietti** et al, "*A Large Ungated TPC with GEM Amplification*", NIM A 869 (2017) 180-204.
[ATP18] ALICE TPC Coll., **Fabbietti**, "*Particle identification studies with a full-size 4-GEM prototype for the ALICE TPC upgrade*", NIM. A903 (2018) 215-223.
[Gas14] P. Gasik, **L. Fabbietti** et al., **"***Development of GEM-based Read-Out Chambers for the upgrade of the ALICE TPC*", JINST 9, C04035, 2014.
[Gas17] P. Gasik, A. Mathis, **L. Fabbietti**, J. Margutti, "*Charge density as a driving factor of discharge formation in GEM-based detectors*," NIM A870 (2017) 116-122.
[Mat18] A. Mathis, **L. Fabbietti** et al., "*Study of the dE/dx resolution of a GEM Readout Chamber prototype for the upgrade of the ALICE TPC*", EPJ Web Conf. 174 (2018) 01002.

[Lau19] L. Lautner, **L. Fabbietti**, P. Gasik, T. Klemenz "High voltage scheme optimization for secondary discharge mitigation in GEM-based detectors", JINST 14 (2019) no.08, P08024.
[Ulu21] B. Ulukutlu, P. Gasik, T. Waldmann, L. Fabbietti and T. Klemenz, "*New (TH)GEM coating materials characterized using spectroscopy methods*", Nucl. Instrum. Meth. A 1019 (2021) 165829.
[Gas22] P. Gasik, L. Lautner, **L. Fabbietti**, T. Klemenz und A. Mathis, "*Systematic investigation of critical charge limits in Thich GEMs*", Nl. *A*1047 (2023) 167730.
[Wir16] J. Wirth, **L. Fabbietti**, R. Lalik, L. Maier, A. Scordo, "*CERBEROS: A tracking system for secondary pion beams at the HADES spectrometer*",NIM A824 (2016) 243-244.
[Pio17] (**Fabbietti**, HADES Collaboration), "*A Facility for Pion Induced Nuclear Reaction Studies With HADES*", Eur. Phys. J A53(2017) 9, 188.

On-going Grants (Please indicate "No funding" when applicable):

Since 2007 I have received a total amount of third-party funding (excluding the faculty positions) of about **16.7 millions euro**. My yearly budget for **2024** was **1.6 million euros**.

Project Title	*Funding source*	*Amount (Euros)*	*Period*	*Role of the PI*
Projects M07 and D07 in SFB1258:	DFG	734.000	2021-2024	PI
Excellence Cluster ORIGINS: From the Origin of the Universe to the First Building Blocks of like (EXC-2094 – 390783311)	DFG	850.000	2019-2025	PI
A comprehensive study of the discharge formation mechanisms in Micro-Pattern Gaseous Detectors (FA 898/5-1)	DFG	387.000	2019-2024	PI
Horizon2020-INFRAIA Developments for GEM detectors (STRONG 824093)	European Council	31.000	2019-2024	PI
C^3ATS: Coupled-Channel effects in the Correlation Analysis Tool using Schrödinger equation	DFG (Sachmittel)	236.400	2021-2024	Co-PI. PI: Dr. V. Mantovani- Sarti (TUM)
Run 3 von ALICE am LHC	BmBf	1.061.571	2021-2024	PI
ISOLDE: Reaktionsspektroskopie exotischer Kerne bei niedrigem Energie- und Impulsübertrag	BmBf	235.777	2021-2024	Co-PI, Dr. Roman Gernhäuser

Aufbau NUSTAR bei FAIR	BmBf	342.731	2021-2024	Co-PI, Dr. Roman Gernhäuser
Cosmic Antinuclei	ERC	215.000	2021-2025	Beneficiary institute ERC Starting Grant
Gentner Fellowship CERN	CERN	200.000	2020-2024	PI
Run 3 von ALICE am LHC (Aufstockung)	BmBf	110.000	2020-2024	PI
IMPRS Fellowship (PhD)	Max Planck for Particle Physics	120.000	2022-2025	PI
ALICE BMBF	BMBF	1.000.000	2024-2027	PI
R3B BMBF	BMBF	500.000	2024-2027	PI
SFB1258	DFG	700.000	2025-2029	PI
F&E kleine Freunde GSI	Helmholtz Society	80.000/Year	2010-2027	PI
TUM Negotiation package for W3 upgrade	TUM	700.000	2024-2029	PI

Completed grants

Project Title	*Funding source*	*Amount (Euros)*	*Period*	*Role of the PI*	*Comments*
TARI grant for collaboration with the LNF (Frascati Lab)	INFN	20.000	2011-2015	PI	Past
Leannis FP7 Network	European Council	72.000	2011-2014	Co-PI	past
Structure and dynamics of hadronic and nuclear matter under extreme conditions	BmBf	85.000	2009-2012	PI	past
Helmholtz Young Investigator Group (TUM-GSI) "Search for K-nuclear clusters and rare resonances in nuclear collisions at SIS18	Helmholtz Society	1.500.000	2007-2013	PI	past
Excellence Cluster "Universe" (Round I)	DFG	800.000	2009-2012	PI	past

Excellence Cluster "Universe" (Round II)	DFG	550.000	2013-2018	PI	past
GSI-HADES: Study of hadronic matter at large baryon densities.	BmBf	588.000	2012-2015	PI	past
Calibration of the CERBEROS pion-tracker	GSI F&E	120.000	2014-2016	PI	past
Partial Wave Analysis of Proton-Proton reaction for energies between 1.9-3.5 GeV	DFG	206.000	2014-2017	PI	past
GEM-TPC upgrade and spectroscopy with ALICE	BmBf	1.100.000	2015-2018	PI	past
Pion-induced reactions as key to unravel hadron properties within nuclear matter	BmBf	151.000	2015-2018	PI	past
Wechselwirkung von Kernmaterie unter extremene Bedingungen (05P19WOCA1)	BmBf	900.000	2018-2021	PI	past
Prolungation of TMLLFRG13-16 (HADES and R3B)	GSI F&E	150.000	2018-2021	PI	past
Project M07 in SFB1258:	DFG	390.000	2017-2021	PI	past
Prolungation of "Partial Wave Analysis of Proton-Proton reaction for energies between 1.9-3.5 GeV" (FA 898/2-1.)	DFG	100.000	2018-2020	PI	past
TARI grant for collaboration with the LNF (Frascati Lab)	INFN	10.000 /year	2011-2022	PI	
THEIA Horizon2020 Network	European Council	30.000	2019-2022	Co-PI	

Additionally to the investments listed above I have supported and hosted within my group four young investigator groups

- 2015-2019 Dr. Torsten Dahms, Junior Group Leader (Excellence Cluster Universe) '*Studying the quark-gluon plasma via low-mass dilepton with ALICE* ', 0.8 MEuro.
- 2018-2022 Dr. Ante Bilandzic, ERC Starting Grant, '*QGP Mistery: Demystifying the Quark Gluon Plasma*', 1.4 MEuro
- 2021-2025 Dr. Francesca Bellini, ERC Starting Grant, '*Cosmic Antinuclei*' 1.5 MEuro.
- 2021-2023 Dr. Valentina Mantovani-Sarti, "*C³ATS: Effekte aufgrund der Kopplung der Kanäle im Analysis Tool für Korrelationen das die Schrödinger Gleichung verwendet*', MA 8660/1-1, DFG Sachbeihilfe, 300.000 Euro

Invited lectures:

1. Hadron Physics and Heavy Reaction: Introductory Lecture XVI International Winter Meeting on Nuclear Physics, Studente Lectures Bormio, Italy, 20 Jan. 2013., 2014, 2015.

2. "Strangeness in elementary and heavy ion collisions measured with HADES", International Research and Training Group School on Physics of Rare Probes, Heidelberg, Germany, 7 May 2012.
3. "The Λ1405) Tale", Indian Summer School, Prague, 2014.
4. Lectures at the PHD Graduate School of the Austrian academy of science, Vienna 2015.
5. SNP School HYP2015.
6. Indian Summer School Hyp2022

Public Outreach Events:

1. TEDX 2017, https://www.youtube.com/watch?v=WGPQM1J7Jcw
2. Physik im Theather Mainz 2023 , https://www.mitp.uni-mainz.de/files/2023/09/2023_Physik-im-Theater-Poster.pdf
3. Deutsches Museum Vortrag über Neutronensterne 2022 , https://www.youtube.com/watch?v=R8Tj3G9bUpg&t=14s
4. Deutsches Museum Vortrag über Antihelium und Dunkele Materie 2023, https://www.youtube.com/watch?v=L7S10vp8-8g&t=4043s
5. ETC* 30th anniversary 2024, https://www.ectstar.eu/30th-anniversary-a-special-year-for-ect/, https://www.youtube.com/watch?v=GEVv1T2Xku0&t=488s

Invited talks since 2009:

Here the list of my invited talks. **Plenary talks are highlighted in blue.**

1. "Femtoscopy in small systems", Light Ion collisions at the LHC workshop, CERN November 2024.
2. "Hunting three body nuclear forces at the LHC", invited seminar at the Beihang University, China, August 2024.
3. "ALICE3 Outer tracker", Workshop at the Fudan university, Shangai, August 2024.
4. "Can we measure genuine three body forces with femtoscopy?", 10th International Conference on Quark and Nuclear Physics (QNP24), Barcelona, July 2024.
5. "Can we measure genuine three body forces with femtoscopy?", EMMI Physics Day 2024, GSI Darmstadt, July 2024.
6. "Femtoscopy with D mesons: a tool to study molecular states in ALICE", Rencontres de Moriond: QCD & High Energy Interactions, Moriond France, April 2024.
7. "Towards many body interaction studies at the LHC", Meson2023 Conference, Crakow Poland, July 2023.
8. "Overview of the ALICE3 Outer Tracker", Alice upgrade week, CERN, July 2023.
9. "Three body interactions studied at the LHC", RHIC-BES on-line seminar, June 2023, online.
10. "Multi-particle femtoscopy and axions properties in neutron stars", Inauguration of the GRASP institute in Utrecht, The Neitherland, May 2023.
11. "The long Journey of antinuclei in our Galaxy", Invited seminar at the Max Planck Institute for Particle Physics, Munich, February 2023.
12. "ALICE determines the transparency of our Galaxy to the passage of antihelium nuclei", Invited Seminar at Nikhef, Amsterdam the Netherlands, February 2023.
13. "How to employ the LHC to study the equation of state of neutron stars", Invited seminar at the Utrecht university, Utrecht the Neitherlands, February 2023.
14. "Studying two- and three-body hadron systems at the LHC ", ClusHIC222, Japan, November 2022
15. "Femtoscopy: a new tool to study molecular state", Invited Seminar at the Sapienza University Rome Italy, February 2024.
16. "How to employ the LHC to study the equation of state of neutron stars' Seminar ETH Zürich, November 2022.
17. "The dark side of ALICE: from antinuclei interactions to dark matter searches in space", Seminar at the Lund University August 2022.
18. „D meson scattering parameters with light-flavor hadrons", HFWINC22 Workshop, Turin, July 2022.

19. "Recent results on strong interactions and hadron physics", ICHEP2022, Bologna, Italy, July 2022
20. "How to employ the LHC to study the equation of state of neutron stars", Professor Judah Eisenberg Memorial Lecture 2022, Tel Aviv University, 10th of May 2022.
21. "Heavy-ion programme for Run5 and Run6 at the LHC", LHCP 2022, Large Hadron Collider Physics Conference, 16-20 May 2022, online.
22. "Nuclear physics at the LHC", JENAS 2022, 2nd joint ECFA-NuPECC-APPECC Symposium, 3-5 May 2002, Madrid, Spain.
23. "Strong interaction studies at the LHC and connections to neutron stars", ELEMENTS annual conference, 3-5 May 2022, Frankfurt, Germany.
24. "The Renaissance of hadron physics at the LHC", Seminar at the UK IoP Nuclear Physics Colloquium, 3rd November 2021, online.
25. "The Renaissance of nuclear physics at the LHC", Seminar at the Niels Bohr institute in Copenhagen, Danemark, October 2021, online.
26. "Measurements of hadron-hadron interactions with ALICE",Exa 202, International conference on exotic atoms and related topics, 13-17 September 2021, Vienna, online.
27. "ALICE unveils strong interaction among stable and unstable hadrons", Hadron2021, International conference on Hadron Spectroscopy and structure, 26-31 July 2021, Mexico City, Mexico, online.
28. "Renaissance of nuclear physics at the LHC", Plenary talk at the DPG2021, online.
29. "A new laboratory to study hadron-hadron interactions", ERICE school on nuclear physics 2021, 16-22 Septemeber 2021, Erice, Italy.
30. "Antinuclei studies at accelerator as a doorway for indirect dark matter searches",Seminar at DESY Zeuthen, Berlin, 10th May 2021, online.
31. Strange nuclear physics at the LHC: at the frontiers of the standard model", Seminar at the Campina University, Brasil, 15th April 2021, online.
32. "How to study the residual strong interaction among hyperons and nucleons at the LHC",Israel joint nuclear physics seminar, 21st March 2021, online.
33. "ALICE unveils strong interaction among stable and unstable hadrons", Yamada Conference LXXII: The 8th Asian-Pacific Conference on Few-Body problems in Physics, (online) 1st March 2021.
34. "Renaissance of nuclear Physics at the LHC", Strong-2020 publics lectures series 20th January 2020, (online)
35. "ALICE unveils strong interaction among stable and unstable hadrons", CERN EP/LHC SEMINAR, CERN, (online), 15 December 2020.
36. "Renaissance of nuclear Physics at the LHC", MIT Laboratory for Nuclear Science colloquium, (online), 5th October 2020.
37. "A new laboratory hadron-hadron interactions", Quark Matter 2019 (QM2019), Wuhan China, November 2019.
38. "Probing (Strong) interaction potentials with femtoscopy measurements in ALICE', Strange Quark Matter 2019 (SQM2019), Bari, Italy, June 2019.
39. "Strange Hadrons and Neutron Stars", XIV Workshop on Particle Correlations and Femtoscopy WCPF2019, Dubna, June 2019.
40. "A new generation of hadron-hadron interaction measurements with ALICE", Hadron Interactions and Polarization from Lattice QCD, Quark Model and Heavy Ion Collisions, Kyoto April 2019.
41. "Hyperon-nucleon and hyperon-hyperon interaction studied via two-particles correlations", EMMI Workshop on Probing dense baryonic matter with hadrons: Status and Perspective, GSI Darmstadt Feb 11-13, 2019
42. "Renaissance of Hadron-hadron Interaction Studies with ALICE at the LHC", Physikalische Kolloquium Heidelberg, 20 April 2019.
43. "A new generation of hadron-hadron interaction measurements with ALICE", Physikalisches Kolloquium at the Goethe Univ. Frankfurt , 15 February 2019.
44. "A new generation of hadron-hadron interaction measurements with ALICE", Colloquium at the Univ. Darmstadt, 15 February 2019.
45. "A new generation of hadron-hadron interaction measurements with ALICE", CERN EP/LHC SEMINAR, CERN, 25 September 2018.
46. "Hyperon-Nucleon interaction studied via femtoscopy in pp and pPb collisions at the LHC", ALICE week Physics Highlight talk, 20 March 2018.

47. Summary talk at the Meson2018 conference, Crakow, Poland, June 2018.
48. Femtoscopy in pp and pA collisions at GeV and TeV energies as a tool to shed light on the hyperon puzzle ' Hyp2018, The 13th International Conference on Hypernuclear and Strange Particle Physics, Portsmouth, Virginia, June 2018.
49. 'Scattering experiments with hyperons and nucleons at the LHC', Workshop on Non-equilibrium Dynamic, Cuba, 14-18 April 2018.
50. 'Hyperon-Nucleon interaction studied via femtoscopy in pp and pPb collisions at the LHC', Topical talk at the ALICE week, CERN, February 2018.

- Public Outreach 'What is inside neutron stars?', Reformation of tomorrow, TUM TEDx Talk, Munich, Germany 2 Dec 2017. https://www.youtube.com/watch?v=WGPQM1J7Jcw

51. 'Hyperon-baryon interactions from correlations at the LHC energies', Workshop on anti-matter, hyper-matter and exotica production at the LHC, Turin, Italy, 6-10 November 2017.
52. 'Hadrons interaction and consequences for neutron stars', Nuclear Physics Colloquium at the Yale University, Yale, New Heaven, 7 September 2017.
53. '(Anti)Kaon in Medium',Hadron2017 Conference, Salamanca, Spain, 25-29 September.
54. "First Measurement of the energy dependent N* production Amplitudes with Partial Wave Analysis", L. Fabbietti, Strange Quark Matter Conference, Utrecht, Holland,10-15 July 2017.
55. "Kaon and Phi Production in Pion-Induced Reactions at 1.7 GeV/c", L. Fabbietti, Jagielloniam Symposium on Fundamental and Applied Subatomic Physics, Jagiellonian University in Krakow, Poland, 2017.
56. "Terrestrial Experiments to understand Neutron Stars", L. Fabbietti, EMMI Colloquium GSI, Darmstadt, 24 May 2017.
57. "Die dichtesten Objekte in unserem Universum – Neutronensterne", L. Fabbietti, Fraunhofer EMFT (Einrichtung für Mikrosysteme und Festkörper Technologie), EMFT Jahresversammlung, München, 15 March 2017.
58. "Terrestrial Experiments to understand Neutron Stars", L. Fabbietti, Max Planck for Particle Physics Colloquium, München, 24 February 2017.
59. "Proton-Proton and Lambda-proton correlations in p+Nb reactions at 3.5 GeV", L. Fabbietti, Exotic Hadron in Heavy Ion Collisions, ExHIC Workshop, YITP, Kyoto, March 23-April 6, 2016.
60. "Partial Wave Analysis of Strangeness Production at GeV Energies", L. Fabbietti, Exotic Hadron in Heavy Ion Collisions, ExHIC Workshop, YITP, Kyoto, March 23-April 6, 2016.
61. "Strange Hadrons and Neutron stars", L. Fabbietti, Colloquium, Los Alamos Laboratory, New Mexiko, 2016.
62. "Strange Hadrons and Neutron stars", L. Fabbietti, Colloquium, MSU, Michigan, 2016.
63. "Understanding neutron stars with terrestrial experiments", L. Fabbietti, ETC*, Trento, Workshop on Theoretical aspects of neutrons stars, 30 May-2 June 2016.
64. "Summary talk of the Research Area D', L. Fabbietti, Science Week of the Excellence Cluster 'Universe', Munich, (Germany), 2016.
65. ' Summary talk of the Research Area D', L. Fabbietti, Science Week of the Excellence Cluster 'Universe', Munich, (Germany), 2015.
66. ' Strange Hadrons and Neutron Stars', L. Fabbietti, Research Area D- Day, Munich (Germany), 2015.
67. Femptoscopy in elementary reactions to study the hyperon-nucleon interaction', L. Fabbietti, Workshop: Frontiers in hadron and nuclear physics with strangeness and charm, ECT*, Trento (Italy), 2015.
68. 'Understanding neutron stars with terrestrial experiments', L. Fabbietti, ECT* Colloquium, Trento (Italy), 2015.
69. 'Strange resonance production in pA and pp collisions at 3.5 GeV', L. Fabbietti, Strange Quark Matter 2015 (SQM15), Dubna (Russia), 2015.
70. 'Critical overview of experimental results on kaonic clusters', L. Fabbietti, Jagielloniam Symposium on Fundamental and Applied Subatomic Physics, Jagiellonian University in Krakow, Poland, 2015.
71. 'In-Medium Properties of hadron in nuclear Matter', L. Fabbietti, Excellence Cluster Universe PhD Symposium, Germany 2015.
72. "Hyperon-Nucleon interaction in p+p and p+A collisions via Femtoscopy", Correlation and Fluctuation Workshop, CERN, 2015.
73. "Strangeness in Nucleus", Hirschegg 2015, Nuclear Structure and Reactions: Weak, Strange and Exotic, Austria, 2015.

74. „What do Hadron-Hadron interaction have to do with Neutron Stars? Maybe Nothing“NIKHEF Colloquium 2015, Amsterdam, 2014.
75. Properties of strange hadrons in vacuum and cold nuclear matter:" TURIC2014, Greece, 2014.
76. "Pion-induced reactions at SIS18: the strangeness program", ECT* Workshop, Trento, Italy, 2014.
77. "Λ(1405) Observations in p+p and K-induced reaction", EXA2014, Vienna, Austria, 2014.
78. "Looking inside Neutron stars", EMMEF Colloquium, Utrecht University, 2014.
79. "Strange hadron Resonances in elementary collisions", ConfXI, St. Petersburg, Russia, 2014.
80. "Strange Hadron production in elementary collisions: physics for control freaks", Berkeley Lorentz National Laboratory, 2014.
81. ‚SIS18 and Strangeness: kind of boring or still fashionable?' Nuclear Physics Colloquium, Frankfurt, 2013.
82. "Kaons and Anti-kaons in nuclear mater" INPC 2013, Florence, Italy.
83. „Why does the HADES □ (1405) sit at 1385 MeV/c²?, NSTAR 2013 , Valencia, Spain.
84. „Strangeness production with hadron probes“, CLAS12Workshop, Glasgow, Great Britain, 2013.
85. „Summary of the Research Area D“, Science Week 2012 of the Excellence Cluster Universe.
86. „HADES: Was machen wir?“, Jahrestagung des Komitees fr Hadronen- und Kernphysik,Bad-Honnef, Germany, 2012.
87. „Strangeness measurements exploiting pion beams at GSI“, ECT* workshop on new trends in low energy QCD,Trento, 2012.
88. „Λ(1405) and ppK- states from p+p collisions“, HYP2012,Barcelona, Spain 2012.
89. „Kaon properties in cold or dense nuclear matter“, ASY-EOS 2012, International Workshop on Nuclear Symmetry Energyand Reaction Mechanisms,cSiracusa, Italy 2012.
90. "Elementary reactions studied with Hades: a hadron landscape", Meson2012, 12th International Workshop on Meson Production, Properties and Interaction, Krakow, Poland, 2012.
91. "Strange Bound States", GK and EMG Seminar at the Mainz University,Mainz, Germany, 2012.
92. "Production of strange resonances at intermediate energies", 27th Winter Workshop on nuclear Dynamics, Colorado, USA, 2011.
93. "Strange Resonances at SIS18", International Conference on Exotic Atoms and Related Topics - EXA2011, Vienna, Austria, 2011.
94. "Strangeness production near the free NN-threshold", Chiral10 Workshop,Valencia, Spain 2010.
95. "In-Medium Properties of the Phi Meson" WISH2010, International Workshop on Interplay between Soft and Hard interactions in particle production at ultra relativistic heavy ions collisions, Catania,2010.
96. "The sociology of hadrons", Science Week of the Excellence Cluster 'Origin and Structure of the Universe', Munich, Germany, 2010.
97. "The Σ1385: pure and dressed (invited)", Workshop about Strangeness in Nuclei",Trento, Italy, Oct. 4 - October 8, 2010.
98. "Strangeness Physics with FOPI", Meson2010 11th International Workshop on Meson Production, Properties and Interaction, Krakow, Poland, 2010.
99. "Was haben Hadronen mit Sternen zu tun?", Deutsche Physikerinnen Tagung, Munich,Germany, 2010
100. "Seltsamkeit Produktion in warmer und kalter Kernmaterie", Deutsche Physikerinnen Tagung, Frankfurt, Germany, 2009.
101. "Future experiments with pion beams at GSI", International Workshop on Hadronic Atoms and Kaonic Nuclei, Trento, 2009.
102. "Strangeness with HADES", SQM2007, Beijing, China, 2009.