

Curriculum



Nome Name:	Umberto
Cognome Surname:	D'Alesio

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Scopus Author ID:	n.d.
WOS Author ID:	n.d.
Sito WEB WEB site:	n.d.

POSIZIONE PROFESSIONALE ATTUALE / CURRENT PROFESSIONAL POSITION:

Posizione attuale Current position:	In servizio
Qualifica Qualification:	Professore Ordinario (L. 240/10)
Ateneo/Ente/Azienda University/Institution/Company:	Università degli Studi di CAGLIARI
Nazione Ateneo/Ente/Azienda University/Institution/Company Country:	ITA
Anno inizio Start Year:	2022
Anno fine End Year:	n.d.

PRECEDENTI ESPERIENZE LAVORATIVE (ULTIMI 10 ANNI) / PREVIOUS WORK EXPERIENCE (LAST 10 YEARS):

Qualifica Qualification:	Professore Associato (L. 240/10)
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Ateneo/Ente/Azienda University/Institution/Company	Università degli Studi di CAGLIARI
Posizione Sede Lavorativi (indicare Nazione e Città) Workplace Location (specify Country and City):	Cagliari, CA, Italia
Anno inizio Start Year:	2014
Anno fine End Year:	n.d.
Descrizione Description:	

LINGUE / LANGUAGES:

Lingua Language:	Inglese
Scrittura Writing:	C2
Comunicazione Communication:	C2

Lingua Language:	Spagnolo
Scrittura Writing:	C1
Comunicazione Communication:	C1

Lingua Language:	Italiano
Scrittura Writing:	madrelingua
Comunicazione Communication:	madrelingua

AREA/SETTORE SCIENTIFICO-DISCIPLINARE / AREA/SECTOR SCIENTIFIC-DISCIPLINARY

Area scientifico-disciplinare Area scientific-disciplinary:	Scienze fisiche
Area scientifico-disciplinare codice Area scientific-disciplinary code:	02
Settore scientifico-disciplinare codice Sector scientific-disciplinary code:	-Fisica teorica delle interazioni fondamentali, modelli, metodi matematici e applicazioni
Settore scientifico-disciplinare codice Sector scientific-disciplinary code:	-PHYS-02/A

**DESCRIZIONE DEI PRINCIPALI RISULTATI SCIENTIFICI
CONSEGUITI NEGLI ULTIMI 10 ANNI (CON ANNESSO ELENCO DI
MASSIMO 10 PUBBLICAZIONI) / DESCRIPTION OF THE MAIN
SCIENTIFIC RESULTS ACHIEVED IN THE LAST 10 YEARS (WITH
ATTACHED LIST OF MAXIMUM 10 PUBLICATIONS):**

Descrizione Description:	<i>Improved extractions of the transversity distribution from a global fit of data on azimuthal asymmetries in semi-inclusive deep inelastic scattering (SIDIS) and $e+e-$ processes within a Transverse Momentum Dependent (TMD) approach; Systematic phenomenological analysis within a TMD approach of semi-inclusive processes and extraction of important TMD distributions; Extension of the TMD scheme to inclusive processes in pp collisions and role of universality breaking effects; First extraction (and subsequent updates) of the polarizing fragmentation function in $e+e-$ collisions within a TMD factorization scheme; Study of the universality of the Collins function in $pp \rightarrow \text{pion jet } X$; Study of gluon TMDs in quarkonium production in lepton-proton processes at the EIC; Role of the Soffer bound in the extraction of transversity and its impact on tensor charge estimates; Several reviews upon invitation on TMDs, quarkonium and the EIC Yellow Report; Simultaneous reweighting of Transverse Momentum Dependent distributions</i>
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PUBBLICAZIONI / PUBLICATIONS:

Anno della pubblicazione Year of publication:	2024
Citazione Citation:	Boglione, M., D'Alesio, U., Flore, C., Gonzalez-Hernandez, J. O., Murgia, F., Prokudin, A. (2024). Simultaneous reweighting of Transverse Momentum Dependent distributions. PHYSICS LETTERS. SECTION B, ISSN: 0370-2693, doi: 10.1016/j.physletb.2024.138712

Anno della pubblicazione Year of publication:	2022
Citazione Citation:	Umberto D'Alesio, Leonard Gamberg, Francesco Murgia, Marco Zaccheddu (2022). Transverse Lambda polarization in $e+e-$ processes within a TMD factorization approach and the polarizing fragmentation function. JOURNAL OF HIGH ENERGY PHYSICS, vol. 2022, 74, ISSN: 1029-8479, doi: 10.1007/jhep12(2022)074

Anno della pubblicazione Year of publication:	2015
Citazione Citation:	Anselmino, M., Boglione, M., D'ALELIO, UMBERTO, Hernandez, J. O. Gonzalez, Melis, S., Murgia, F., Prokudin, A. (2015). Collins functions for pions from SIDIS and new $e+e-$ data: A first glance at their transverse momentum dependence. PHYSICAL REVIEW D, PARTICLES,

	FIELDS, GRAVITATION, AND COSMOLOGY, vol. 92, ISSN: 1550-7998, doi: 10.1103/PhysRevD.92.114023
Anno della pubblicazione Year of publication:	2024
Citazione Citation:	D'Alesio, Umberto, Gamberg, Leonard, Murgia, Francesco, Zaccheddu, Marco (2024). Transverse Λ polarization in unpolarized $pp \rightarrow \text{jet} \Lambda \uparrow X$. PHYSICS LETTERS. SECTION B, vol. 851, 138552, ISSN: 0370-2693, doi: 10.1016/j.physletb.2024.138552
Anno della pubblicazione Year of publication:	2023
Citazione Citation:	Umberto D'Alesio, Luca Maxia, Francesco Murgia, Cristian Pisano, Sangem Rajesh (2023). J/ψ polarization in large-PT semi-inclusive deep-inelastic scattering at the EIC. PHYSICAL REVIEW D, vol. 107, 114001, ISSN: 2470-0010, doi: 10.1103/physrevd.107.114001
Anno della pubblicazione Year of publication:	2021
Citazione Citation:	D'Alesio, Umberto, Murgia, Francesco, Zaccheddu, Marco (2021). General helicity formalism for two-hadron production in $e+e-$ annihilation within a TMD approach. JOURNAL OF HIGH ENERGY PHYSICS, vol. 2021, p. 1-44, ISSN: 1029-8479, doi: 10.1007/JHEP10(2021)078
Anno della pubblicazione Year of publication:	2017
Citazione Citation:	Anselmino, M., Boglione, M., D'ALESIO, UMBERTO, Murgia, F., Prokudin, A. (2017). Study of the sign change of the Sivers function from STAR collaboration W/Z production data. JOURNAL OF HIGH ENERGY PHYSICS, vol. 2017, ISSN: 1029-8479, doi: 10.1007/JHEP04(2017)046
Anno della pubblicazione Year of publication:	2020
Citazione Citation:	Boer, Daniël, D'Alesio, Umberto, Murgia, Francesco, Pisano, Cristian, Taels, Pieter (2020). J/ψ meson production in SIDIS: matching high and low transverse momentum. JOURNAL OF HIGH ENERGY PHYSICS, vol. 2020, 40, ISSN: 1029-8479, doi: 10.1007/JHEP09(2020)040
Anno della pubblicazione Year of publication:	2018
Citazione Citation:	Boglione M, D'Alesio U, Flore C, Gonzalez H. O. (2018). Assessing signals of TMD physics in SIDIS azimuthal asymmetries and in the extraction of the Sivers function. JOURNAL OF HIGH ENERGY PHYSICS, vol. 2018, p. 1-27, ISSN: 1029-8479, doi: 10.1007/JHEP07(2018)148

Anno della pubblicazione Year of publication:	2020
Citazione Citation:	D'Alesio U., Flore C., Prokudin A. (2020). Role of the Soffer bound in determination of transversity and the tensor charge. PHYSICS LETTERS. SECTION B, vol. 803, p. 1-7, ISSN: 0370-2693, doi: 10.1016/j.physletb.2020.135347

DESCRIZIONE DEI PRINCIPALI PROGETTI DI RICERCA E PREMI CONSEGUITI NEGLI ULTIMI 10 ANNI (CON ANNESSO ELENCO DI MASSIMO 10 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, PRINCIPAL INVESTIGATOR O COORDINATORE LOCALE DI PROGETTI DI RICERCA COMPETITIVI NAZIONALI O INTERNAZIONALI, SIGNIFICATIVI PREMI CONSEGUITI PER LA PROPRIA ATTIVITÀ DI RICERCA)/ DESCRIPTION OF THE MAIN RESEARCH PROJECTS AND AWARDS AWARDED IN THE LAST 10 YEARS (WITH ATTACHED LIST OF MAXIMUM 10 ACHIEVEMENTS, INCLUDING, FOR EXAMPLE, PRINCIPAL INVESTIGATOR OR LOCAL COORDINATOR OF NATIONAL OR INTERNATIONAL COMPETITIVE RESEARCH PROJECTS, SIGNIFICANT AWARDS AWARDED FOR YOUR RESEARCH ACTIVITY):

Descrizione Description:	<i>2022-2024 Participant, "Matter-antimatter asymmetry and polarisation in strange hadrons at LHCb", Cagliari U. 2020-2022 Participant, "Proton tomography at the LHC", Cagliari U. 2020 Member of the working group for the preparation of the EICUG Yellow Report since 2017 Member of the Theory Advisory Group of the PANDA experiment at GSI (Germany) since 2016 Member of the EIC User Group (Electron Ion Collider Project) (USA) since 2015 Member of the SoLID Collaboration at Jefferson Lab (USA) since 2005 Member of the PAX Collaboration since 1997 Participant, INFN research projects TO21, TO31 "Spin Physics and the Proton Structure" and, since 2014, NINPHA "National INitiative on Physics of HAdrons" 2018 Co-proponent of "The LHCSpin Project" proposal</i>
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Descrizione Description:	Local PI for the INFN Project "National Initiative on Physics of Hadrons" (NINPHA), INFN
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Descrizione Description:	Scientific Coordinator of the Cagliari unit for the Working Package "TMD-Next" within the European Project "Strong-2020", Horizon-2020 [since 2018]
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Descrizione Description:	Principal Investigator, "Quarkonium Production at LHC energies", Cagliari 2018-2020
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DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI DI SVILUPPO DI RETI E RELAZIONI SCIENTIFICHE NAZIONALI E INTERNAZIONALI (CON ANNESSO ELENCO DI MASSIMO 5 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, PARTECIPAZIONE O ORGANIZZAZIONE DI CONVEGNI NAZIONALI E INTERNAZIONALI; CONTRIBUTI A CONSORZI DI RICERCA) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS OF DEVELOPMENT OF NATIONAL AND INTERNATIONAL SCIENTIFIC NETWORKS AND RELATIONS (WITH ATTACHED LIST OF MAXIMUM 5 RESULTS, INCLUDING, FOR EXAMPLE, PARTICIPATION OR ORGANIZATION OF NATIONAL AND INTERNATIONAL CONFERENCES; CONTRIBUTIONS TO RESEARCH CONSORTIA):

<p>Descrizione Description:</p>	<p><i>Member of the International Advisory Committee for the Workshop series "QCD evolution", 2024 & 2025 Convener of the Session "New Facilities" for the International Conference "Hadron 2023", Genova; "Spin Session" for the "Diffraction and Low-x 2018, 2021 & 2023" International Workshops Chairman of the Round Table on TMDs at the International Workshop Quarkonia as Tools, Aussois, France, 2020 2015 Member of the LOC for the International Workshop "A path towards TMD extractions" (TMDe2015), Trieste; 2015 Member of the LOC for the International Workshop "Light-cone 2015" (LC2015), LNF, Frascati - Several participations at International workshops - Invited talks 1. Invited talk: "Quasi-real photon contribution to $\gamma\gamma$ in $lp \rightarrow \pi$ in a TMD approach"; International Workshop QCD Evolution 2016, Amsterdam, Netherlands, 2016 2. "Spin effects in QCD and 3D nucleon structure"; Terzo Incontro Nazionale di Fisica Nucleare INFN2016, Frascati, Italy, 2016 [plenary] 3. "TMDs from hard scattering processes"; International Workshop on 3D Parton Distributions: path to the LHC, Frascati, Italy, 2016 4. "Nucleon structure phenomenology"; Non Perturbative QCD Workshop, NPQCD 2017, Pollenzo (CN), Italy, 2017 5. "3D structure of the nucleon and transverse single-spin asymmetries"; PANDA Collaboration Meeting, GSI, Darmstadt, Germany, 2017 6. "Hadron production in $\gamma^+\gamma^-$ collisions within a TMD approach and the Λ polarizing fragmentation function"; QCD Evolution Workshop 2021, Los Angeles (USA), 2021 7. "Two-hadron production in $\gamma^+\gamma^-$ collisions within a TMD scheme and the polarizing fragmentation function"; International Workshop QCD_N 2021, Alcalá de Henares, Madrid, Spain, 2021 8. "Transverse Λ polarization in $\gamma^+\gamma^-$ annihilation and SIDIS processes within a TMD framework"; International Workshop on TMDs: Towards a Synergy between Lattice QCD and Global Analyses, CFNS Stony Brook (USA), 2023 9. "Transverse Λ polarization in $\gamma^+\gamma^-$ annihilation and SIDIS processes within a TMD approach"; International Workshop on Resummation,</i></p>
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	<i>Evolution, Factorization [REF2023], Madrid, 2023</i>
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Descrizione Description:	Member of the LOC for the International Workshop "Transversity", Frascati 2017, Pavia 2022, Trieste 2024
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Descrizione Description:	Co-chair of the 4th International Workshop "Transversity", Cagliari 2014
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Descrizione Description:	Chair of the Sardinian Workshop on Spin Studies (Sar WorS 2019, 2021, 2023), Cagliari
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DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI DI SUPPORTO ALLA COMUNITÀ SCIENTIFICA (CON ANNESSO ELENCO DI MASSIMO 5 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, RESPONSABILITÀ DI DIREZIONE DI COMITATI EDITORIALI; INCARICHI DI VALUTAZIONE DELLA RICERCA PRESSO ISTITUZIONI NAZIONALI O INTERNAZIONALI; RESPONSABILITÀ ISTITUZIONALI ALL'INTERNO DELL'ISTITUZIONE DI APPARTENENZA O DI ALTRE ISTITUZIONI) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS OF SUPPORT TO THE SCIENTIFIC COMMUNITY (WITH ATTACHED LIST OF MAXIMUM 5 RESULTS, INCLUDING, FOR EXAMPLE, MANAGEMENT RESPONSIBILITIES OF EDITORIAL COMMITTEES; RESEARCH EVALUATION ROLES AT NATIONAL OR INTERNATIONAL INSTITUTIONS; INSTITUTIONAL RESPONSIBILITIES WITHIN THE INSTITUTION OF AFFILIATION OR OTHER INSTITUTIONS):

Descrizione Description:	<p>- Member of the CAV Committee (Council of the Research Evaluation), Physics Department, Cagliari, since 2023 - Member of the Physics Department Council, Cagliari and of the Board of the Faculty of Science, Cagliari, since 2021 and also 2014-2018 - Member of the Scientific Research Committee, Physics Department, Cagliari since 2017 [Coordinator since 2023] - Member of the Physics Degree Council, Cagliari, since 2014 - Member of the Referee Board of the INFN National Scientific Theory Committee, since 2020 - Member of the Expert Peer Reviewer Panel for Italian Scientific Evaluation, since 2011 - Member of the Selection Committees for academic positions: Assistant Professor (Perugia, Cagliari), Full Professor in Theoretical Physics (Cosenza) - Member of the Jury for the PhD Defense in Theoretical Physics, Madrid and Pavia - Member of the two-year Selection Board for post-doctoral positions, INFN Cagliari, 2018-2020 -</p>
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	<i>External referee for: the Research Foundation Flanders - FWO (Belgium) [2015]; the Rosalind Franklin Fellowship Programme, Groningen (Netherlands) [2015]; the National Science Center, Poland [2021]; the Fondecyt National Projects Competition, Sub-Directorate for Research Projects, Chile [2023] - Reviewer for Advances in High Energy Physics, European Physical Journal A&C, Journal of High Energy Physics, Modern Physics Letters A, Physica A, Physics Letters B, Physical Review C&D, Physical Review Letters</i>
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Descrizione Description:	Coordinator of the PhD Board in Physics, Cagliari, since 2022 [Deputy Coordinator 2018-2022, Member since 2005]
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Descrizione Description:	Member of the VQR (Research Quality Assessment) Committee, Physics Department, Cagliari since 2020 [Coordinator since 2023]
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Descrizione Description:	Scientific Coordinator of the Cagliari INFN Theory Group; Member of the INFN National Scientific Theory Committee [since 2019]
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DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI VALORIZZAZIONE DELLE CONOSCENZE (CON ANNESSO ELENCO DI MASSIMO 3 RISULTATI, RELATIVI ALLA PARTECIPAZIONE DEL CANDIDATO ALLE ATTIVITÀ DI VALORIZZAZIONE DELLE CONOSCENZE) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS OF KNOWLEDGE VALORIZATION (WITH ATTACHED LIST OF MAXIMUM 3 RESULTS, RELATING TO THE CANDIDATE'S PARTICIPATION IN KNOWLEDGE VALORIZATION ACTIVITIES):

Descrizione Description:	<i>- Membro del Comitato scientifico del Premio Asimov per l'editoria scientifica [riconoscimento riservato ad opere di divulgazione e di saggistica scientifica particolarmente meritevoli. Esso vede come protagonisti sia gli autori delle opere in lizza che migliaia di studenti italiani, che decretano il vincitore con i loro voti e con le loro recensioni, a loro volta valutate e premiate]. Impegno di circa 50 ore anno (lettura dei libri e valutazione delle recensioni). - Organizzazione di una serie di seminari/colloquia in fisica delle alte energie (INFN e Università di Cagliari) e di una serie di seminari/colloquia in vari ambiti della fisica (Università di Cagliari), entrambe rivolte anche a studenti di Laurea Magistrale e di Dottorato</i>
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Descrizione	Member of the Scientific Committee of the
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Description:	"Asimov Award" for Educational Scientific Publishing, Italy, since 2017
Descrizione Description:	Chair of the Organising Committee for the High Energy Physics Colloquia, Physics Department and INFN-CA, Cagliari (about 20 seminars/year), since 2019
Descrizione Description:	Co-Chair of the Organizing Committee for the Physics Colloquia, Physics Department, Cagliari (about 6 seminars/year), since 2023

Informazioni aggiornate alla data di candidatura 24-05-2025

Umberto D'Alesio

Il presente curriculum costituisce allegato e parte integrante dell'incarico sottoscritto