europass

Nazario Tantalo

Nationality: Italian **Date of birth:** 14/01/1978 **Phone number:** (+39) 3470083158

Email address: nazario.tantalo@roma2.infn.it

Work: Via della Ricerca Scientifica 1, 00133 Rome (Italy)

WORK EXPERIENCE

Full Professor in Theoretical Physics

University of Rome Tor Vergata [17/03/2025 – Current]

City: Rome | **Country:** Italy | **Name of unit or department:** Physics

Associate Professor In Theoretical Physics

University of Rome Tor Vergata [30/09/2017 – 16/03/2025]

City: Rome | **Country:** Italy

Research Staff, Permanent

University of Rome Tor Vergata [31/10/2010 – 29/09/2017]

City: Rome | **Country:** Italy

Scientific Associate

CERN Physics Department [28/02/2014 – 27/02/2015]

City: Geneva | **Country:** Switzerland

Research Staff, Non Permanent

INFN [30/04/2007 – 30/10/2010]

City: Rome | **Country:** Italy

Research Fellow

INFN [30/04/2005 – 29/04/2007]

City: Rome | **Country:** Italy

Scientific Advisor and Research Fellow

Museo Storico della Fisica e Centro Ricerche "E. Fermi" [29/02/2004 – 30/10/2010]

City: Rome | **Country:** Italy

Scientific Fellow

University of Rome La Sapienza [31/05/2001 – 29/10/2001]

City: Rome | **Country:** Italy

EDUCATION AND TRAINING

Ph.D in Physics

University of Rome Tor Vergata [31/10/2001 – 29/04/2005]

Master Degree in Physics

University of Rome La Sapienza [1996 – 2001]

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING C2 **READING** C2 **WRITING** C2

SPOKEN PRODUCTION C2 **SPOKEN INTERACTION** C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

PROJECTS

[2019 – Current]

Flavour Lattice Averaging Group (FLAG)

member of the international collaboration Flavour Lattice Averaging Group (FLAG), providing ratings and averages of the non–perturbative lattice results for the hadronic observables relevant for flavour physics. More info on

Link: http://flag.unibe.ch

[2009 – Current]

RM123 INFN scientific initiative and lattice collaboration

I have been one of the founders of the RM123 INFN scientific initiative and lattice collaboration. I'm currently the responsible of the Tor Vergata node of the INFN initiative, recently re–evaluated and funded again, under the name LQCD123

[2022 – Current]

Extended Twisted Mass Collaboration

I'm a member of the international ETM lattice Collaboration focused on performing state-of-the-art non-perturbative lattice simulations of the theory of strong interactions and in the calculation of the QED radiative corrections to hadronic processes.

[2014 – Current]

International Collaboration RC*

I'm one of the founders and scientific leaders of the International Collaboration RC* focused on QCD+QED lattice simulations

[2024 – Current]

PRIN 2022: Nonperturbative aspects of fundamental interactions, in the Standard Model and beyond

Member of the project, funded by MUR, with a local budget for the University of Rome Tor Vergata of 65KEuro.

[2018 – 2021]

Strong Interactions: from Lattice QCD to Strings, Branes and Holography

member of the project, funded by the University of Rome Tor Vergata, budget 16KEuro, to study strong–interacting new physics models with lattice and string–theory techniques

[2016 – 2020]

European Joint Doctorate STIMULATE

member of the project, funded by the European Commission, Horizon2020, Marie Skodowska–Curie Action with a budget for the Tor Vergata Unit of 500KEuro. More info on

Link: http://stimulate-ejd.eu/people

[2017 – 2019]

PLNUGAMMA

PI of the project, funded by the University of Rome Tor Vergata, budget 12KEuro, to perform the first non-perturbative calculation of the QED radiative corrections real-photon-emission contributions to the leptonic decay rates of light and heavy-light pseudoscalar mesons

[2013 – 2016]

LIBETOV

member of the project , funded by the University of Rome Tor Vergata, budget 18KEuro, to study leading isospin breaking effects on hadronic observables

[2008 – 2011]

PRIN 2009: Teorie di Campo su Reticolo all'Epoca di LHC

I have been a member of the project, funded by the MIUR, with a local budget for the University of Tor Vergata node of about 71KEuro

[2007 – 2011]

APE collaboration and INFN committee for super-computing resources in theoretical physics

INFN

[2003 – 2010]

Problemi Interdisciplinari riconducibili a Simulazioni Numeriche su Larga Scala

Museo Storico della Fisica e Centro Studi e Ricerche E. Fermi

I have been a member of the scientific board and I have directed a supercomputing center hosting the E. Fermi PC clusters in a dedicated lab at the University of Rome Tor Vergata.

DIGITAL SKILLS

Parallel computing systems / Knowledge of programming paradigms (object oriented parallel logical and functional) / Advanced Parallel Programming knowledge / Machine Learning

TEACHING

[2023 – Current]
Ph.D. School in Physics

University of Rome Tor Vergata

member of the Board of Teachers

[2018 – Current]
Quantum Field Theory and Particle Physics

University of Rome Tor Vergata

undergraduate and Ph.D students

[2024 – Current]
Computational Physics

University of Rome Tor Vergata

undergraduate students

[2018 – 2023]
Advanced Quantum Mechanics, Complements

University of Rome Tor Vergata

main course Advanced Quantum Mechanics, Prof. A. Salvio

undergraduate students

[2019 – 2020]
Inverse Problems

STIMULATE European Joint Doctorate Horizon2020

Marie Skodowska–Curie Action

mini course for Ph.D. students

[2019 – 2020]
Finite Volume Effects in Lattice QCD+QED Simulations

EUROPLEX European Joint Doctorate Horizon2020

Marie Skodowska–Curie Action

mini course for Ph.D. students

[2015 – 2018]
Phenomenology of the Elementary Particles

University of Rome Tor Vergata

undergraduate and Ph.D students

[2016 – 2018]
Classical Field Theory

University of Rome Tor Vergata

undergraduate students

[2014 – 2018]
Quantum Field Theory and Particle Physics, Complements

University of Rome Tor Vergata

main course Quantum Field Theory and Particle Physics, Prof. M. Bianchi

undergraduate and Ph.D. students

[2010 – 2018]

Advanced Quantum Mechanics, Complements

University of Rome Tor Vergata

main course Advanced Quantum Mechanics, Prof. E. Pace

undergraduate students

[2003 – 2012]

Lattice Gauge Theories

University of Rome Tor Vergata

undergraduate and Ph.D. students

[2003 – 2012]

Quantum Field Theory and Particle Physics, Complements

University of Rome Tor Vergata

main course: Quantum Field Theory and Particle Physics, Prof. R. Petronzio

undergraduate and Ph.D. students

[2001 – 2002]

Classical Mechanics, Complements

University of Rome Tor Vergata

main course: Classical Mechanics, Prof. G.C. Rossi

undergraduate students

EVALUATION COMMITTEES

[2017 – Current]
INFN Evaluation Working Group (GLV)

The group has the responsibility of collecting, analyzing and evaluating the research products of the INFN. More info on

Link: https://home.infn.it/it/istituto/valutazione-della-ricerca

[2004 – Current]
Referee

I'm regularly serving as referee for important scientific journals such as Science, PRL, JHEP, Nuclear Physics B, Physics Letters B.

I have also served as referee for DiRAC (the national HPC resource for the UK astronomy, cosmology, particle physics and nuclear physics communities) and the Rita Levi-Montalcini fellowship programme of the Italian MUR.

I'm also regularly serving as referee for the Ph.D programmes of international institutions

[2023 – Current]
Research Quality Committee Physics Department University of Rome Tor Vergata

[2014 – 2015]
INFN Fubini prize

PUBLICATIONS

PUBLICATIONS

The full list of my publications can be found at

INSPIRE-HEP

https://inspirehep.net/literature?sort=mostrecent&size=25&page=1&q=f%20a%20n%20tantalo&ui-citation-summary=true

GOOGLE-SCHOLAR

https://scholar.google.com/citations?user=I3o7ZdoAAAAJ&hl=it

2025 PEER-REVIEWED

Strange and charm quark contributions to the muon anomalous magnetic moment in lattice QCD with twisted-mass fermions

Extended Twisted Mass Collaboration • C. Alexandrou (Cyprus U. and Cyprus Inst.) et al.

e-Print: 2411.08852 [hep-lat]

DOI: 10.1103/PhysRevD.111.054502 (publication)

Published in: Phys.Rev.D 111 (2025) 5, 054502

Bayesian solution to the inverse problem and its relation to Backus–Gilbert methods

Luigi Del Debbio (U. Edinburgh, Higgs Ctr. Theor. Phys.), Alessandro Lupo (Marseille, CPT), Marco Panero (Turin U. and INFN, Turin), Nazario Tantalo (Turin U. and INFN, Turin)

e-Print: 2409.04413 [hep-lat]

DOI: 10.1140/epjc/s10052-025-13885-9

Published in: Eur.Phys.J.C 85 (2025) 2, 185

Scattering amplitudes from Euclidean correlators: Haag-Ruelle theory and approximation formulae

Agostino Patella (Humboldt U., Berlin and DESY, Zeuthen), Nazario Tantalo (Rome U., Tor Vergata and INFN, Rome)

e-Print: 2407.02069 [hep-lat]

DOI: 10.1007/JHEP01(2025)091

Published in: JHEP 01 (2025), 091

2024 PEER-REVIEWED

Inclusive Hadronic Decay Rate of the ℓ Lepton from Lattice QCD: The ū̄d Flavor Channel and the Cabibbo Angle

Extended Twisted Mass Collaboration • Constantia Alexandrou (Cyprus U. and Cyprus Inst.) et al.

e-Print: 2403.05404 [hep-lat]

DOI: 10.1103/PhysRevLett.132.261901 (publication)

Published in: Phys.Rev.Lett. 132 (2024) 26, 261901

$K^0 \to \pi^+\pi^-\ell^+\nu_\ell$ decay rate at large q^2 from lattice QCD

R. Frezzotti (Rome U., Tor Vergata and INFN, Rome2), N. Tantalo (Rome U., Tor Vergata and INFN, Rome2), G. Gagliardi (INFN, Rome3), F. Sanfilippo (INFN, Rome3), S. Simula (INFN, Rome3) et al.

e-Print: 2402.03262 [hep-lat]

DOI: 10.1103/PhysRevD.109.114506 (publication)

Published in: Phys.Rev.D 109 (2024) 11, 114506

2023 PEER-REVIEWED

Inclusive hadronic decay rate of the ϑ lepton from lattice QCD

Extended Twisted Mass Collaboration • Antonio Evangelista (Rome U., Tor Vergata and INFN, Rome2) et al.

e-Print: 2308.03125 [hep-lat]

DOI: 10.1103/PhysRevD.108.074513 (publication)

Published in: Phys.Rev.D 108 (2023) 7, 074513

Teaching to extract spectral densities from lattice correlators to a broad audience of learning-machines

Michele Buzzicotti (Rome U., Tor Vergata and INFN, Rome2), Alessandro De Santis (Rome U., Tor Vergata and INFN, Rome2), Nazario Tantalo (Rome U., Tor Vergata and INFN, Rome2)

e-Print: 2307.00808 [hep-lat]

DOI: 10.1140/epjc/s10052-024-12399-0

Published in: Eur.Phys.J.C 84 (2024) 1, 32

Spectral-function determination of complex electroweak amplitudes with lattice QCD

R. Frezzotti (Rome U., Tor Vergata), N. Tantalo (Rome U., Tor Vergata), G. Gagliardi (Rome III U.), F. Sanfilippo (Rome III U.), S. Simula (Rome III U.) et al.

e-Print: 2306.07228 [hep-lat]

DOI: 10.1103/PhysRevD.108.074510 (publication)

Published in: Phys.Rev.D 108 (2023) 7, 074510

Lattice calculation of the ϑϑ meson radiative form factors over the full kinematical range

R. Frezzotti (Rome U., Tor Vergata), N. Tantalo (Rome U., Tor Vergata), G. Gagliardi (Rome III U.), F. Sanfilippo (Rome III U.), S. Simula (Rome III U.) et al.

e-Print: 2306.05904 [hep-lat]

DOI: 10.1103/PhysRevD.108.074505 (publication)

Published in: Phys.Rev.D 108 (2023) 7, 074505

Probing the Energy-Smeared ϑ Ratio Using Lattice QCD

Extended Twisted Mass Collaboration (ETMC) Collaboration • Constantia Alexandrou (Cyprus U. and Cyprus Inst.) et al.

e-Print: 2212.08467 [hep-lat]

DOI: 10.1103/PhysRevLett.130.241901 (publication)

Published in: Phys.Rev.Lett. 130 (2023) 24, 241901

Multi-representation dynamics of SU(4) composite Higgs models: chiral limit and spectral reconstructions

Luigi Del Debbio (U. Edinburgh, Higgs Ctr. Theor. Phys.), Alessandro Lupo (U. Edinburgh, Higgs Ctr. Theor. Phys.), Marco Panero (Turin U. and INFN, Turin), Nazario Tantalo (INFN, Rome2 and Rome U., Tor Vergata)

e-Print: 2211.09581 [hep-lat]

DOI: 10.1140/epjc/s10052-023-11363-8

Published in: Eur.Phys.J.C 83 (2023) 3, 220

First results on QCD+QED with C* boundary conditions

RCstar Collaboration • Lucius Bushnaq (Trinity Coll., Dublin) et al.

e-Print: 2209.13183 [hep-lat]

DOI: 10.1007/JHEP03(2023)012

Published in: JHEP 03 (2023), 012

2022 PEER-REVIEWED

Lattice QCD study of inclusive semileptonic decays of heavy mesons

Paolo Gambino (Turin U.), Shoji Hashimoto (KEK, Tsukuba and Sokendai, Tsukuba), Sandro Mächler (Turin U. and Zurich U.), Marco Panero (Turin U., Alessandria), Francesco Sanfilippo (INFN, Rome3) et al.

e-Print: 2203.11762 [hep-lat]

DOI: 10.1007/JHEP07(2022)083

Published in: JHEP 07 (2022), 083

Virtual photon emission in leptonic decays of charged pseudoscalar mesons

G. Gagliardi (INFN, Rome3), F. Sanfilippo (INFN, Rome3), S. Simula (INFN, Rome3), V. Lubicz (Rome III U. and INFN, Rome3), F. Mazzetti (Rome III U. and INFN, Rome3) et al.

e-Print: 2202.03833 [hep-lat]

DOI: 10.1103/PhysRevD.105.114507 (publication)

Published in: Phys.Rev.D 105 (2022) 11, 114507

Inclusive rates from smeared spectral densities in the two-dimensional O(3) non-linear σ-model

John Bulava (DESY, Zeuthen), Maxwell T. Hansen (Edinburgh U.), Michael W. Hansen (Graz U.), Agostino Patella (Humboldt U., Berlin), Nazario Tantalo (INFN, Rome and Rome U.)

e-Print: 2111.12774 [hep-lat]

DOI: 10.1007/JHEP07(2022)034

Published in: JHEP 07 (2022), 034

FLAG Review 2021

Flavour Lattice Averaging Group (FLAG) Collaboration • Y. Aoki (RIKEN AICS, Kobe) et al.

e-Print: 2111.09849 [hep-lat]

DOI: 10.1140/epjc/s10052-022-10536-1

Published in: Eur.Phys.J.C 82 (2022) 10, 869

2021 PEER-REVIEWED

Comparison of lattice QCD+QED predictions for radiative leptonic decays of light mesons with experimental data

R. Frezzotti (Rome U., Tor Vergata and INFN, Rome2), M. Garofalo (Rome III U. and INFN, Rome3 and Bonn U., HISKP), V. Lubicz (Rome III U. and INFN, Rome3), G. Martinelli (Rome U. and INFN, Rome), C.T. Sachrajda (Southampton U.) et al.

e-Print: 2012.02120 [hep-ph]

DOI: 10.1103/PhysRevD.103.053005

Published in: Phys.Rev.D 103 (2021) 5, 053005

First lattice calculation of radiative leptonic decay rates of pseudoscalar mesons

A. Desiderio (Rome U., Tor Vergata and INFN, Rome), R. Frezzotti (Rome U., Tor Vergata and INFN, Rome), M. Garofalo (Rome III U. and INFN, Rome3), D. Giusti (Regensburg U. and INFN, Rome3), M. Hansen (U. Southern Denmark, Odense, DIAS) et al.

e-Print: 2006.05358 [hep-lat]

DOI: 10.1103/PhysRevD.103.014502

Published in: Phys.Rev.D 103 (2021) 1, 014502

2020 PEER-REVIEWED

openQ*D code: a versatile tool for QCD+QED simulations

RC* Collaboration • Isabel Campos (Cantabria Inst. of Phys.) et al.

e-Print: 1908.11673 [hep-lat]

DOI: 10.1140/epjc/s10052-020-7617-3

Published in: Eur.Phys.J.C 80 (2020) 3, 195

2019 PEER-REVIEWED

Light-meson leptonic decay rates in lattice QCD+QED

M. Di Carlo (INFN, Rome and Rome U.), D. Giusti (INFN, Rome3 and Rome III U.), V. Lubicz (INFN, Rome3 and Rome III U.), G. Martinelli (INFN, Rome and Rome U.), C.T. Sachrajda (Southampton U.) et al.

e-Print: 1904.08731 [hep-lat]

DOI: 10.1103/PhysRevD.100.034514

Published in: Phys.Rev.D 100 (2019) 3, 034514

Extraction of spectral densities from lattice correlators

Martin Hansen (INFN, Rome2), Alessandro Lupo (Rome U., Tor Vergata), Nazario Tantalo (Rome U., Tor Vergata and INFN, Rome2)

e-Print: 1903.06476 [hep-lat]

DOI: 10.1103/PhysRevD.99.094508

Published in: Phys.Rev.D 99 (2019) 9, 094508

2018 PEER-REVIEWED

Gauge invariant determination of charged hadron masses

Martin Hansen (Southern Denmark U., CP3-Origins), Biagio Lucini (Swansea U. (main)), Agostino Patella (CERN and Plymouth U.), Nazario Tantalo (U. Rome 2, Tor Vergata (main) and INFN, Rome2)

e-Print: 1802.05474 [hep-lat]

DOI: 10.1007/JHEP05(2018)146

Published in: JHEP 05 (2018), 146

First lattice calculation of the QED corrections to leptonic decay rates

D. Giusti (INFN, Rome3 and Rome III U.), V. Lubicz (INFN, Rome3 and Rome III U.), G. Martinelli (INFN, Rome and Rome U.), C.T. Sachrajda (Southampton U.), F. Sanfilippo (INFN, Rome3) et al.

e-Print: 1711.06537 [hep-lat]

DOI: 10.1103/PhysRevLett.120.072001

Published in: Phys.Rev.Lett. 120 (2018) 7, 072001

2017 PEER-REVIEWED

Leading isospin-breaking corrections to pion, kaon and charmed-meson masses with Twisted-Mass fermions

D. Giusti (INFN, Rome3 and Rome III U.), V. Lubicz (INFN, Rome3 and Rome III U.), C. Tarantino (INFN, Rome3 and Rome III U.), G. Martinelli (Rome U. and INFN, Rome), F. Sanfilippo (INFN, Rome3) et al.

e-Print: 1704.06561 [hep-lat]

DOI: 10.1103/PhysRevD.95.114504

Published in: Phys.Rev.D 95 (2017) 11, 114504

Finite-Volume QED Corrections to Decay Amplitudes in Lattice QCD

V. Lubicz (Rome III U. and INFN, Rome3), G. Martinelli (CERN and INFN, Rome and Rome U.), C.T. Sachrajda (Southampton U.), F. Sanfilippo (Southampton U.), S. Simula (INFN, Rome3) et al.

e-Print: 1611.08497 [hep-lat]

DOI: 10.1103/PhysRevD.95.034504

Published in: Phys.Rev.D 95 (2017) 3, 034504

2016 PEER-REVIEWED

Charged hadrons in local finite-volume QED+QCD with C* boundary conditions

Biagio Lucini (Swansea U.), Agostino Patella (CERN and Plymouth U., Math. Stat. Dept.), Alberto Ramos (CERN), Nazario Tantalo (CERN and INFN, Rome2 and Rome U., Tor Vergata)

e-Print: 1509.01636 [hep-th]

DOI: 10.1007/JHEP02(2016)076

Published in: JHEP 02 (2016), 076

2015 PEER-REVIEWED

QED Corrections to Hadronic Processes in Lattice QCD

N. Carrasco (Rome III U. and INFN, Rome3), V. Lubicz (Rome III U. and INFN, Rome3), G. Martinelli (INFN, Rome and SISSA, Trieste), C.T. Sachrajda (Southampton U.), N. Tantalo (CERN and INFN, Rome2 and Rome U., Tor Vergata) et al.

e-Print: 1502.00257 [hep-lat]

DOI: 10.1103/PhysRevD.91.074506

Published in: Phys.Rev.D 91 (2015) 7, 074506

2013 PEER-REVIEWED

Doubly charmed tetraquarks in B_c and Ξ_{bc} decays

A. Esposito (Rome U. and Columbia U.), M. Papinutto (Rome U. and INFN, Rome), A. Pilloni (Rome U. and INFN, Rome), A.D. Polosa (Rome U. and INFN, Rome), N. Tantalo (Rome U., Tor Vergata and INFN, Rome2)

e-Print: 1307.2873 [hep-ph]

DOI: 10.1103/PhysRevD.88.054029

Published in: Phys.Rev.D 88 (2013) 5, 054029

Leading isospin breaking effects on the lattice

RM123 Collaboration • G.M. de Divitiis (Rome U., Tor Vergata and INFN, Rome2) et al.

e-Print: 1303.4896 [hep-lat]

DOI: 10.1103/PhysRevD.87.114505

Published in: Phys.Rev.D 87 (2013) 11, 114505

2012 PEER-REVIEWED

On the extraction of zero momentum form factors on the lattice

G.M. de Divitiis (Rome U., Tor Vergata and INFN, Rome2), R. Petronzio (Rome U., Tor Vergata and INFN, Rome2), N. Tantalo (Rome U., Tor Vergata and INFN, Rome2)

e-Print: 1208.5914 [hep-lat]

DOI: 10.1016/j.physletb.2012.10.035

Published in: Phys.Lett.B 718 (2012), 589-596

Parameters of Heavy Quark Effective Theory from Nf=2 lattice QCD

ALPHA Collaboration • Benoit Blossier (Orsay, LPT) et al.

e-Print: 1203.6516 [hep-lat]

DOI: 10.1007/JHEP09(2012)132

Published in: JHEP 09 (2012), 132

Isospin breaking effects due to the up-down mass difference in Lattice QCD

G.M. de Divitiis (Rome U., Tor Vergata and INFN, Rome2), P. Dimopoulos (Rome U. and INFN, Rome), R. Frezzotti (Rome U., Tor Vergata and INFN, Rome2), V. Lubicz (Rome III U. and INFN, Rome3), G. Martinelli (SISSA, Trieste and INFN, Rome) et al.

e-Print: 1110.6294 [hep-lat]

DOI: 10.1007/JHEP04(2012)124

Published in: JHEP 04 (2012), 124

2010 PEER-REVIEWED

Distance preconditioning for lattice Dirac operators

G.M. de Divitiis (Rome U., Tor Vergata and INFN, Rome2), R. Petronzio (Rome U., Tor Vergata and INFN, Rome2), N. Tantalo (INFN, Rome2 and Enrico Fermi Ctr., Rome)

e-Print: 1006.4028 [hep-lat]

DOI: 10.1016/j.physletb.2010.07.031

Published in: Phys.Lett.B 692 (2010), 157-160

Non-perturbative improvement of quark mass renormalization in two-flavour lattice QCD

Patrick Fritzsch (Southampton U. and Munster U., ITP), Jochen Heitger (Munster U., ITP), Nazario Tantalo (Rome U., Tor Vergata and INFN, Rome2 and Enrico Fermi Ctr., Rome)

e-Print: 1004.3978 [hep-lat]

DOI: 10.1007/JHEP08(2010)074

Published in: JHEP 08 (2010), 074

Flavor Physics in the Quark Sector

Mario Antonelli (Frascati), David Mark Asner (Carleton U.), D. Bauer (Imperial Coll., London), Thomas G. Becher (Fermilab), M. Beneke (Aachen, Tech. Hochsch.) et al.

e-Print: 0907.5386 [hep-ph]

DOI: 10.1016/j.physrep.2010.05.003

Published in: Phys.Rept. 494 (2010), 197-414,

2009 PEER-REVIEWED

Computer simulations of the theory of strong interactions

N. Tantalo

DOI: 10.1393/ncc/i2009-10417-5

Published in: Nuovo Cim.C 32N2 (2009), 267-271,

Quenched lattice calculation of the vector channel B ---> D* l nu decay rate

G.M. de Divitiis (Rome U., Tor Vergata and INFN, Rome2), R. Petronzio (Rome U., Tor Vergata and INFN, Rome2), N. Tantalo (INFN, Rome2 and Enrico Fermi Ctr., Rome)

e-Print: 0807.2944 [hep-lat]

DOI: 10.1016/j.nuclphysb.2008.09.013

Published in: Nucl.Phys.B 807 (2009), 373-395

2008 PEER-REVIEWED

Computing for Lattice QCD: New developments from the APE experiment

R. Ammendola (INFN, Rome2), A. Biagioni (INFN, Rome), S. De Luca (INFN, Rome), F. Lo Cicero (INFN, Rome), A. Lonardo (INFN, Rome) et al.

DOI: 10.1393/ncb/i2008-10649-8

Published in: Nuovo Cim.B 123 (2008), 964-968,

Precision for B-meson matrix elements

Damiano Guazzini (DESY, Zeuthen), Rainer Sommer (DESY, Zeuthen), Nazario Tantalo (INFN, Rome2 and Enrico Fermi Ctr., Rome)

e-Print: 0710.2229 [hep-lat]

DOI: 10.1088/1126-6708/2008/01/076

Published in: JHEP 01 (2008), 076

2007 PEER-REVIEWED

Quenched lattice calculation of the B ---> D l nu decay rate

G.M. de Divitiis (Rome U., Tor Vergata and INFN, Rome2), E. Molinaro (SISSA, Trieste), R. Petronzio (Rome U., Tor Vergata and INFN, Rome2), N. Tantalo (INFN, Rome2 and Enrico Fermi Ctr., Rome)

e-Print: 0707.0582 [hep-lat]

DOI: 10.1016/j.physletb.2007.08.085

Published in: Phys.Lett.B 655 (2007), 45-49

Quenched lattice calculation of semileptonic heavy-light meson form factors

G.M. de Divitiis (Rome U., Tor Vergata and INFN, Rome2), R. Petronzio (Rome U., Tor Vergata and INFN, Rome2), N. Tantalo (INFN, Rome2 and Enrico Fermi Ctr., Rome)

e-Print: 0707.0587 [hep-lat]

DOI: 10.1088/1126-6708/2007/10/062

Published in: JHEP 10 (2007), 062

QCD with light Wilson quarks on fine lattices. II. DD-HMC simulations and data analysis

L. Del Debbio (Edinburgh U.), Leonardo Giusti (CERN), M. Luscher (CERN), R. Petronzio (Rome U., Tor Vergata and INFN, Rome2), N. Tantalo (Rome U., Tor Vergata and INFN, Rome2 and Enrico Fermi Ctr., Rome)

e-Print: hep-lat/0701009 [hep-lat]

DOI: 10.1088/1126-6708/2007/02/082

Published in: JHEP 02 (2007), 082

QCD with light Wilson quarks on fine lattices (I): First experiences and physics results

L. Del Debbio (Edinburgh U.), Leonardo Giusti (CERN), M. Luscher (CERN), R. Petronzio (Rome U., Tor Vergata and INFN, Rome2), N. Tantalo (Rome U., Tor Vergata and INFN, Rome2 and Enrico Fermi Ctr., Rome)

e-Print: hep-lat/0610059 [hep-lat]

DOI: 10.1088/1126-6708/2007/02/056

Published in: JHEP 02 (2007), 056

2006 PEER-REVIEWED

Stability of lattice QCD simulations and the thermodynamic limit

L. Del Debbio (CERN), Leonardo Giusti (CERN), M. Luscher (CERN), R. Petronzio (INFN, Rome2), N. Tantalo (INFN, Rome2 and Enrico Fermi Ctr., Rome)

e-Print: hep-lat/0512021 [hep-lat]

DOI: 10.1088/1126-6708/2006/02/011

Published in: JHEP 02 (2006), 011

Stability and structure of oligomers of the Alzheimer peptide Aβ16–22: from the dimer to the 32-mer

UF Röhrig, A Laio, N Tantalo, M Parrinello, R Petronzio

Biophysical journal 91 (9), 3217-3229

2004 PEER-REVIEWED

On the discretization of physical momenta in lattice QCD

G.M. de Divitiis (Rome U., Tor Vergata and INFN, Rome2), R. Petronzio (Rome U., Tor Vergata and INFN, Rome2), N. Tantalo (Rome U., Tor Vergata and INFN, Rome2)

e-Print: hep-lat/0405002 [hep-lat]

DOI: 10.1016/j.physletb.2004.06.035

Published in: Phys.Lett.B 595 (2004), 408-413

2003 PEER-REVIEWED

Heavy light decay constants in the continuum limit of quenched lattice QCD

G.M. de Divitiis (Rome U., Tor Vergata and INFN, Rome2), M. Guagnelli (Rome U., Tor Vergata and INFN, Rome2), F. Palombi (Enrico Fermi Ctr., Rome), R. Petronzio (Rome U., Tor Vergata and INFN, Rome2), N. Tantalo (Rome U., Tor Vergata and INFN, Rome2)

e-Print: hep-lat/0307005 [hep-lat]

DOI: 10.1016/j.nuclphysb.2003.09.013

Published in: Nucl.Phys.B 672 (2003), 372-386

Heavy quark masses in the continuum limit of quenched lattice QCD

Giulia Maria de Divitiis (Rome U., Tor Vergata and INFN, Rome2), Marco Guagnelli (Rome U., Tor Vergata and INFN, Rome2), Roberto Petronzio (Rome U., Tor Vergata and INFN, Rome2), Nazario Tantalo (Rome U., Tor Vergata and INFN, Rome2), Filippo Palombi (Enrico Fermi Ctr., Rome)

e-Print: hep-lat/0305018 [hep-lat]

DOI: 10.1016/j.nuclphysb.2003.10.001

Published in: Nucl.Phys.B 675 (2003), 309-332

2002 PEER-REVIEWED

The Lattice scale at large beta in quenched QCD

Marco Guagnelli (Rome U., Tor Vergata and INFN, Rome2), Roberto Petronzio (Rome U., Tor Vergata and INFN, Rome2), Nazario Tantalo (Rome U., Tor Vergata and INFN, Rome2)

e-Print: hep-lat/0209112 [hep-lat]

DOI: 10.1016/S0370-2693(02)02819-8

Published in: Phys.Lett.B 548 (2002), 58-62

f(B) and two scales problems in lattice QCD

Marco Guagnelli (Rome U., Tor Vergata and INFN, Rome2), Filippo Palombi (Rome U., Tor Vergata and INFN, Rome2), Roberto Petronzio (Rome U., Tor Vergata and INFN, Rome2), Nazario Tantalo (Rome U., Tor Vergata and INFN, Rome2)

e-Print: hep-lat/0206023 [hep-lat]

DOI: 10.1016/S0370-2693(02)02700-4

Published in: Phys.Lett.B 546 (2002), 237-246

Remarks on the gauge dependence of the RI / MOM renormalization procedure

Leonardo Giusti (CERN), S. Petrarca (Rome U. and INFN, Rome), B. Taglienti (INFN, Rome), N. Tantalo (Rome U., Tor Vergata)

e-Print: hep-lat/0205009 [hep-lat]

DOI: 10.1016/S0370-2693(02)02243-8

Published in: Phys.Lett.B 541 (2002), 350-355

CONFERENCES AND SEMINARS

overview
I have given more than 80 talks at international conferences, workshops, universities, labs and research institutions. Here below I list a selection of the invited and plenary talks I have given at international conferences and workshops.

[2024] CERN
Smeared R-ratio and applications to g-2
CERN Theoretical Institute LATTICE@TH 2024

[2023] Edinburgh, UK
Converging on QC+ED prescriptions
FLAG international workshop on the definition of QCD

[2022] Bonn, Germany
Matching lattice QC+ED to Nature
Plenary talk at The XXXIX International Symposium on Lattice Field Theory

[2022] Stavanger, Norway
Non-perturbative calculation of radiative corrections in weak decays
Plenary talk at the 14th International Conference on Quark Confinement and the Hadron Spectrum

[2021] Melbourne, Australia
QED radiative corrections to pi and K decays
11th International Workshop on the CKM Unitarity Triangle (CKM 2021)

[2021] Cyprus
Extraction of hadronic spectral densities from lattice correlators

[2021] ECT*, Trento, Italy
Numerical approaches to inverse problems
International Workshop on Tackling the real-time challenge in strongly correlated systems: spectral properties from euclidean Path integrals

[2019] CERN
QED radiative corrections to hadronic decays
Theory colloquium and plenary talk at the Advances in Lattice Gauge Theory 2019 workshop

[2018] Heidelberg, Germany
|Vus/Vud| from Kμ2/Kpi2
10th International Workshop on the CKM Unitarity Triangle (CKM 2018)

[2017] Monte Porzio Catone, Italy
International Symposium in honour of Roberto Petronzio
Member of the organization committee

[2014] Vienna, AU
Review of the Lattice QCD results
8th International Workshop on the CKM Unitarity Triangle (CKM 2014)

[2013] Mainz, Germany
Isospin Breaking Effects in Lattice QCD
Plenary talk at The XXXI International Symposium on Lattice Field Theory

[2012] Cincinnati, USA
Lattice QCD calculations of isospin corrections to Kl2 and Kl3 decays
7th International Workshop on the CKM Unitarity Triangle (CKM 2012)

[2011] Grenoble, France
Lattice flavour physics
2011 Europhysics Conference On High Energy Physics: HEP 2011 (EPS-HEP2011)

[2010] Villasimius, Italia
LATTICE 2010
Member of the Organizing Committee of The XXVIII International Symposium on Lattice Field Theory

[2008] Rome, Italy
Future prospects for LQCD form factors calculations
5th International Workshop on the CKM Unitarity Triangle (CKM 2008)

[2008] Philadelphia, USA
Heavy-light meson's physics in Lattice QCD
34th International Conference on High Energy Physics (ICHEP 2008)

[2008] La Biodola, Italy
Lattice QCD in view of the SuperB

[2006] Nagoya, Japan
Lattice calculations for B and K mixing
4th International Workshop on the CKM Unitarity Triangle (CKM 2006)