Elenco pubblicazioni sottoposte a valutazione

Tesi di dottorato

Copia della tesi di dottorato dal titolo: *" Interplay between Generation Mechanisms and Detection of SuperSymmetric Dark Matter in the LHC Era"*

Pubblicazioni su rivista (in numero di 12)

1. Giorgio Arcadi, Yann Mambrini, Francois Richard; *Z-portal Dark Matter;* **JCAP 1503 (2015) 018.**
2. Asmaa Abada, Giorgio Arcadi, Valerie Domcke, Michele Lucente; *Lepton Number Violation as a Key for Low Energy Leptogenesis;* **JCAP 1511 (2015) 041.**
3. Giorgio Arcadi, Christian Gross, Oleg Lebedev, Yann Mambrini, Stefan Pokorski, Takashi Toma; *Multi-Component Dark Matter from Gauge Symmetry;* **JHEP 1612 (2016) 081.**
4. Giorgio Arcadi, Pradipta Ghosh, Y. Mambrini, M. Pierre, Farinaldo S. Queiroz, *Z' portal to Chern-Simons Dark Matter,* **JCAP 1711 (2017), 020.**
5. Alexandre Alves, Giorgio Arcadi, Yann Mambrini, Stefano Profuno, Farinaldo Queiroz; *Augury of Darkness: the Low Mass Dark Z' Portal;* **JHEP 1704 (2017) 164.**
6. A. Abada, Giorgio Arcadi, Valerie Domcke, Michele Lucente; *Neutrino masses, leptogenesis and dark matter from small lepton number violation?;* **JCAP 1712 (2017) 024.**
7. Giorgio Arcadi, Maira Dutra, Pradipta Ghosh, Manfred Lindner, Yann Mambrini, Mathias Pierre, Stefano Profumo, Farinaldo Queiroz; *The Waning of the WIMP? A review of Model Searches and Constraints;* **Eur. Phys. J. C78 (2018), 203.**
8. Giorgio Arcadi, Manfred Lindner, Farinaldo S. Queiroz, Wernder Rodejohann and Stefan Vogl, *Pseudoscalar Mediators: a WIMP Model at the Neutrino Floor;* **JCAP 1803 (2018), 042.**
9. Giorgio Arcadi; *2HDM Portal to Singlet-Doublet Dark Matter;* **Eur. Phys. J. C78 (2018) 864.**
10. Asmaa Abada, Giorgio Arcadi, Valerie Domcke, Marco Drewes, Juraj Klaric, Michele Lucente; *Low Scale Leptogenesis with Three Heavy Neutrinos;* **JHEP 1901 (2019) 064.**
11. Giorgio Arcadi, Oleg Lebedev, Stefan Pokorski, Takashi Toma; *Real Scalar Dark Matter: Relativistic Treatment;* **JHEP 1908 (2019) 050.**
12. Giorgio Arcadi, A. Djouadi, M. Raidal, *Dark Matter Through the Higgs Portal,* **Phys. Rep. 842 (2020), 1-180**.

Chiara Arina

Selected publications

Tesi di dottorato

C. Arina, *Sneutrino phenomenology in supersymmetric models: relevance as cold dark matter in the light of its cosmological and detection properties*, relatore Prof. N. Fornengo.

Peer-reviewed articles

[1] C. Arina, F. Bazzocchi, N. Fornengo, J. Romao, and J. Valle, *Minimal supergravity sneutrino dark matter and inverse seesaw neutrino masses*, *Phys.Rev.Lett.* **101** (2008) 161802, [arXiv:0806.3225], **top cite 50+**.

[2] S. Andreas, C. Arina, T. Hambye, F.-S. Ling, and M. H. Tytgat, *A light scalar WIMP through the Higgs portal and CoGeNT*, *Phys.Rev.* **D82** (2010) 043522, [arXiv:1003.2595], **top cite 100+**.

[3] C. Arina, T. Hambye, A. Ibarra, and C. Weniger, *Intense Gamma-Ray Lines from Hidden Vector Dark Matter Decay*, *JCAP* **1003** (2010) 024, [arXiv:0912.4496], **top cite 50+**.

[4] C. Arina, J. Hamann, and Y. Y. Wong, *A Bayesian view of the current status of dark matter direct searches*, *JCAP* **1109** (2011) 022, [arXiv:1105.5121], **top cite 50+**.

[5] C. Arina and N. Sahu, *Asymmetric Inelastic Inert Doublet Dark Matter from Triplet Scalar Leptogenesis*, *Nucl.Phys.* **B854** (2012) 666–699, [arXiv:1108.3967], **top cite 50+**.

[6] C. Arina, J.-O. Gong, and N. Sahu, *Unifying darko-lepto-genesis with scalar triplet inflation*, *Nucl.Phys.* **B865** (2012) 430–460, [arXiv:1206.0009].

[7] C. Arina, G. Bertone, and H. Silverwood, *Complementarity of direct and indirect Dark Matter detection experiments*, *Phys.Rev.* **D88** (2013), no. 1 013002, [arXiv:1304.5119].

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[9] C. Arina, T. Bringmann, J. Silk, and M. Vollmann, *Enhanced Line Signals from Annihilating Kaluza-Klein Dark Matter*, *Phys.Rev.* **D90** (2014) 083506, [arXiv:1409.0007].

[10] C. Arina et al., *A comprehensive approach to dark matter studies: exploration of simplified top-philic models*, *JHEP* **11** (2016) 111, [arXiv:1605.09242], **top cite 50+**.

[11] F. Ambrogi, C. Arina, M. Backovic, J. Heisig, F. Maltoni, L. Mantani, O. Mattelaer, and G. Mohlabeng, *MadDM v.3.0: a Comprehensive Tool for Dark Matter Studies*, *Phys. Dark Univ.* **24** (2019) 100249, [arXiv:1804.00044].

[12] C. Arina, A. Beniwal, C. Degrande, J. Heisig, and A. Scaffidi, *Global fit of pseudo-Nambu-Goldstone Dark Matter*, *JHEP* **04** (2020) 015, [arXiv:1912.04008].

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Le seguenti pubblicazioni vengono presentate dal candidato:

1. E. Bagnaschi, G. Degrassi, P. Slavich, and A. Vicini. *Higgs production via gluon fusion in the POWHEG approach in the SM and in the MSSM.* JHEP, 1202:088, 2012

2. E. Bagnaschi, R. Harlander, S. Liebler, H. Mantler, P. Slavich, et al. *Towards precise predictions for Higgs-boson production in the MSSM.* JHEP, 1406:167, 2014

3. E. Bagnaschi, G. F. Giudice, P. Slavich, and A. Strumia. *Higgs Mass and Unnatural Supersymmetry.* JHEP, 1409:092, 2014

4. E. Bagnaschi, M. Cacciari, A. Guffanti, and L. Jenniches. *An extensive survey of the estimation of uncertainties from missing higher orders in perturbative calculations.* JHEP, 02:133, 2015

5. E. A. Bagnaschi et al. *Supersymmetric Dark Matter after LHC Run 1.* Eur. Phys. J., C75:500, 2015

6. E. Bagnaschi and A. Vicini. *The Higgs transverse momentum distribution in gluon fusion as a multi-scale problem.* JHEP, 01:056, 2016

7. E. Bagnaschi, F. Brümmer, W. Buchmüller, A. Voigt, and G. Weiglein. *Vacuum stability and supersymmetry at high scales with two Higgs doublets.* JHEP, 03:158, 2016

8. E. Bagnaschi, J. Pardo Vega, and P. Slavich. *Improved determination of the Higgs mass in the MSSM with heavy superpartners.* Eur. Phys. J., C77(5):334, 2017

9. E. Bagnaschi, K. Sakurai, et al. *Likelihood Analysis of the pMSSM11 in Light of LHC 13-TeV Data.* Eur. Phys. J., C78(3):256, 2018

10. E. Bagnaschi, F. Maltoni, A. Vicini, and M. Zaro. *Lepton-pair production in association with a $b\bar{b}$ pair and the determination of the W boson mass.* JHEP, 07:101, 2018

11. E. Bagnaschi et al. *MSSM Higgs Boson Searches at the LHC: Benchmark Scenarios for Run 2 and Beyond.* Eur. Phys. J., C79(7):617, 2019

12. E. Bagnaschi, J. Costa, K. Sakurai, et al. *Global Analysis of Dark Matter Simplified Models with Leptophobic Spin-One Mediators using MasterCode.* Eur. Phys. J., C79(11):895, 2019

In aggiunta, viene presentata anche la tesi di dottorato:

- E. A. Bagnaschi. *Precision phenomenology at the LHC and characterization of theoretical uncertainties.* PhD thesis, Diderot U., Paris, 2014

Daniele Barducci

Università degli Studi di Roma La Sapienza
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Elenco 12 pubblicazioni presentate

[1] *Minimal flavor violation in the see-saw portal*
D. Barducci, E. Bertuzzo, A. Caputo and P. Hernandez
JHEP 2006 (2020) 185, arXiv:2003.08391 [hep-ph]
DOI: 10.1007/JHEP06(2020)185

[2] *Enlarging the scope of resonant di-Higgs searches: Hunting for Higgs-to-Higgs cascades in 4b final states at the LHC and future colliders*
D. Barducci, K. Mimasu, J.M. No, C. Vernieri and J. Zurita
JHEP 2002 (2020) 002, arXiv:1910.08574 [hep-ph]
DOI: 10.1007/JHEP02(2020)002

[3] *Precision diboson measurements at hadron colliders*
A. Azatov, D. Barducci and E. Venturini
JHEP 1904 (2019) 075, arXiv:1901.04821 [hep-ph]
DOI: 10.1007/JHEP04(2019)075

[4] *Combined explanations of B-physics anomalies: the sterile neutrino solution*
A. Azatov, D. Barducci, D. Ghosh, D. Marzocca and L. Ubaldi
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[5] *In search of a UV completion of the Standard Model - 378,000 models that don't work*
D. Barducci, M. Fabbrichesi, C.M. Nieto, R. Percacci and V. Skrinjar
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DOI: 10.1007/JHEP11(2018)057

[6] *Neutral Hadrons Disappearing into the Darkness*
D. Barducci, M. Fabbrichesi and E. Gabrielli
Phys.Rev. D98 (2018) 035049, arXiv:1806.05678 [hep-ph]
DOI: 10.1103/PhysRevD.98.035049

[7] *An almost elementary Higgs: Theory and Practice*
D. Barducci, S. De Curtis, M. Redi and A. Tesi
JHEP 1808 (2018) 017 arXiv:1805.12578 [hep-ph]
DOI: 10.1007/JHEP08(2018)017

[8] *Cornering pseudoscalar-mediated dark matter with the LHC and cosmology*
S. Banerjee, D. Barducci, G. Bélanger, B. Fuks, A. Goudelis and B. Zaldivar
JHEP 1707 (2017) 080, arXiv:1705.02327 [hep-ph]
DOI: 10.1007/JHEP07(2017)080

[9] *Implications of a High-Mass Diphoton Resonance for Heavy Quark Searches*
S. Banerjee, D. Barducci, G. Bélanger and C. Delaunay
JHEP 1611 (2016) 154 , arXiv:1606.09013 [hep-ph]
DOI: 10.1007/JHEP11(2016)154

[10] *Uncovering Natural Supersymmetry via the interplay between the LHC and Direct Dark Matter Detection*
D. Barducci, A. Belyaev, A. Bharucha, W. Porod and V. Sanz
JHEP 1507 (2015) 066, arXiv:1504.02472 [hep-ph]
DOI: 10.1007/JHEP07(2015)066

[11] *Framework for Model Independent Analyses of Multiple Extra Quark Scenarios*
D. Barducci, M. Buchkremer, A. Belyaev, G. Cacciapaglia, A. Deandrea, S. De Curtis, J. Marrouche, S. Moretti and L. Panizzi
JHEP 1412 (2014) 080, arXiv:1405.0737 [hep-ph]
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[12] *Exploring Drell-Yan signals from the 4D Composite Higgs Model at the LHC*
D. Barducci, A. Belyaev, S. De Curtis, S. Moretti and G. M. Pruna
JHEP 1304 (2013) 152, arXiv:1210.2927 [hep-ph]
DOI: 10.1007/JHEP04(2013)152

Emilio Bellini | Selected Publications

University of Oxford, Astrophysics, Denys Wilkinson Building, Keble Road
OX1 3RH, Oxford – United Kingdom

[1] E. Bellini, I. Sawicki, and M. Zumalacárregui, "hi_class: Background Evolution, Initial Conditions and Approximation Schemes," *JCAP* **2002** (2020) 008, arXiv:1909.01828 [astro-ph.CO].

[2] M. Lagos, E. Bellini, J. Noller, P. G. Ferreira, and T. Baker, "A general theory of linear cosmological perturbations: stability conditions, the quasistatic limit and dynamics," *JCAP* **1803** no. 03, (2018) 021, arXiv:1711.09893 [gr-qc].

[3] T. Baker, E. Bellini, P. G. Ferreira, M. Lagos, J. Noller, and I. Sawicki, "Strong constraints on cosmological gravity from GW170817 and GRB 170817A," *Phys. Rev. Lett.* **119** no. 25, (2017) 251301, arXiv:1710.06394 [astro-ph.CO].

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[6] D. Alonso, E. Bellini, P. G. Ferreira, and M. Zumalacárregui, "Observational future of cosmological scalar-tensor theories," *Phys. Rev.* **D95** no. 6, (2017) 063502, arXiv:1610.09290 [astro-ph.CO].

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[8] E. Bellini and M. Zumalacarregui, "Nonlinear evolution of the baryon acoustic oscillation scale in alternative theories of gravity," *Phys. Rev.* **D92** no. 6, (2015) 063522, arXiv:1505.03839 [astro-ph.CO].

[9] E. Bellini, R. Jimenez, and L. Verde, "Signatures of Horndeski gravity on the Dark Matter Bispectrum," *JCAP* **1505** no. 05, (2015) 057, arXiv:1504.04341 [astro-ph.CO].

[10] E. Bellini and I. Sawicki, "Maximal freedom at minimum cost: linear large-scale structure in general modifications of gravity," *JCAP* **1407** (2014) 050, arXiv:1404.3713 [astro-ph.CO].

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December 2, 2020

ELENCO DELLE PUBBLICAZIONI PRESENTATE PER LA VALUTAZIONE E TESI DI DOTTORATO

Giuseppe Bevilacqua

Pubblicazioni presentate:

1. G. Bevilacqua, H. Y. Bi, H. B. Hartanto, M. Kraus and M. Worek, "The simplest of them all: $t\bar{t}W^{\pm}$ at NLO accuracy in QCD",
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7. G. Bevilacqua, M. Czakon, M. Kubocz and M. Worek, "Complete Nagy-Soper subtraction for next-to-leading order calculations in QCD",
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10. G. Bevilacqua, M. Czakon, A. van Hameren, C. G. Papadopoulos and M. Worek, "Complete off-shell effects in top quark pair hadroproduction with leptonic decay at next-to-leading order",
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11. G. Bevilacqua, M. Czakon, C. G. Papadopoulos and M. Worek, "Dominant QCD Backgrounds in Higgs Boson Analyses at the LHC: A Study of pp $\rightarrow$ t anti-t + 2 jets at Next-To-Leading Order",
Phys. Rev. Lett. **104** (2010) 162002
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12. A. Ballestrero, A. Belhouari, G. Bevilacqua, V. Kashkan and E. Maina, "PHANTOM: A Monte Carlo event generator for six parton final states at high energy colliders",
Comput. Phys. Commun. **180** (2009), 401-417
DOI:10.1016/j.cpc.2008.10.005

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- G. Bevilacqua, "Vector Boson Scattering as a probe of Electroweak Symmetry Breaking: a six fermion perspective". Tesi di Dottorato discussa il 10/11/2008 presso l'Università degli Studi di Torino.

Debrecen, 1 dicembre 2020

ELENCO PUBBLICAZIONI ALLEGATE:

1. **M. Biagetti**, G. Orlando, *"Primordial Gravitational Waves from Galaxy Intrinsic Alignments", JCAP 07 (2020) 005*, *arXiv:2001.05930*
2. **M. Biagetti**, "The Hunt for Primordial Interactions in the Large Scale Structures of the Universe", *Galaxies 7, 3 (2019), arXiv:1906.12244*
3. F. Beutler, **M. Biagetti**, D. Green, A. Slosar, B. Wallisch, "Primordial Features from Linear to Nonlinear Scales", *PRR 1 ,3, 033209 (2019)*, *arXiv: 1906.08758*
4. **M. Biagetti**, G. Franciolini, A. Kehagias, A. Riotto, "Primordial Black Holes from Inflation and Quantum Diffusion", *JCAP 1807, 032 (2018), arXiv:1804.07124*
5. **M. Biagetti**, M. Fasiello, E. Dimastrogiovan*ni,* "Possible Signatures of the Inflationary Particle Content: Spin-2 fields"*, JCAP 1710, 038 (2017), arXiv:1708.01587*
6. **M. Biagetti**, T. Lazeyras, T. Baldauf, V. Desjacques, F. Schmidt, "Verifying the consistency relation for the scale dependent bias from local primordial non-Gaussianity", *MNRAS 468, 3 (2017), arXiv:1611.04901*
7. **M. Biagetti**, A. Kehagias, D. Racco, A. Riotto, "The Halo Boltzmann Equation", *JCAP 1604, 040 (2016), arXiv:1508.07330*
8. **M. Biagetti**, A. Kehagias, A. Riotto, "What can we learn from the running of the spectral index if no tensors are detected in the cosmic microwave background anisotropy", *PRD D91 103527 (2015), arXiv:1502.02289*
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10. **M. Biagetti**, V. Desjacques, A. Kehagias and A. Riotto, "Nonlocal halo bias with and without massive neutrinos", *PRD D90, 045022 (2014), arXiv:1405.1435*
11. **M. Biagetti**, M. Fasiello, A. Riotto, "Enhancing Inflationary Tensor Modes Through Spectator Fields", *PRD D88 103518 (2013), arXiv:1305.7241*
12. **M. Biagetti**, A. Kehagias, E. Morgante, H. Perrier, A. Riotto, "Symmetries of vector perturbations during DeSitter epoch", *JCAP 1307, 030 (2013), arXiv: 1304.7785*
13. **M. Biagetti,** Theoretical Aspects of the Large Scale Clustering of Dark Matter Haloes, Tesi di Dottorato

Trieste, 23/11/2020

ELENCO TESI + 12 PUBBLICAZIONI

"Higgs boson production at hadron colliders and its transverse momentum distribution"
G. Bozzi
PhD Thesis, U. of Florence, 25/06/2004

1. **"The q(T) spectrum of the Higgs boson at the LHC in QCD perturbation theory"**
   G. Bozzi, S. Catani, D. de Florian and M. Grazzini
   Phys. Lett. B **564**, 65 (2003)

2. **"Transverse-momentum resummation and the spectrum of the Higgs boson at the LHC"**
   G. Bozzi, S. Catani, D. de Florian and M. Grazzini
   Nucl. Phys. B **737**, 73 (2006)

3. **"VBFNLO: A parton level Monte Carlo for processes with electroweak bosons"**
   K. Arnold *et al.*
   Comput. Phys. Commun. **180**, 1661 (2009)

4. **"Production of Drell-Yan lepton pairs in hadron collisions: Transverse-momentum resummation at next-to-next-to-leading logarithmic accuracy"**
   G. Bozzi, S. Catani, G. Ferrera, D. de Florian and M. Grazzini
   Phys. Lett. **B696**, 207-213 (2011)

5. **"Next-to-leading order QCD corrections to W+ Z and W- Z production via vector-boson fusion"**
   G. Bozzi, B. Jager, C. Oleari and D. Zeppenfeld
   Phys. Rev. D **75**, 073004 (2007)

6. **"Higgs boson production at the LHC: Transverse-momentum resummation and rapidity dependence"**
   G. Bozzi, S. Catani, D. de Florian and M. Grazzini
   Nucl. Phys. B **791**, 1 (2008)

7. **"The Impact of PDF uncertainties on the measurement of the W boson mass at the Tevatron and the LHC"**
   G. Bozzi, J. Rojo and A. Vicini
   Phys. Rev. D **83**, 113008 (2011)

8. **"Transverse-momentum resummation: A Perturbative study of Z production at the Tevatron"**
   G. Bozzi, S. Catani, G. Ferrera, D. de Florian and M. Grazzini
   Nucl. Phys. B **815**, 174 (2009)

9. **"Parton density function uncertainties on the W boson mass measurement from the lepton transverse momentum distribution"**
   G. Bozzi, L. Citelli and A. Vicini
   Phys. Rev. D **91**, no. 11, 113005 (2015)

10. **"Prospects for improving the LHC W boson mass measurements with forward muons"**
    G. Bozzi, L. Citelli, M. Vesterinen and A. Vicini
    Eur. Phys. J. C **75**, no. 12, 601 (2015)

11. **"Difficulties in the description of Drell-Yan processes at moderate invariant mass and high transverse momentum"**
    A. Bacchetta, G. Bozzi, M. Lambertsen, F. Piacenza, J. Steiglechner, W. Vogelsang
    Phys. Rev. D **100**, no. 1, 014018 (2019)

12. **"Transverse-momentum-dependent parton distributions up to N3LL from Drell-Yan data"**
    A. Bacchetta, V. Bertone, C. Bissolotti, G. Bozzi, F. Delcarro, F. Piacenza and M. Radici
    JHEP **07**, 117 (2020)

Milano, 01/12/2020

Alessandro Broggio

Elenco delle 12 pubblicazioni allegate e tesi di dottorato

22 Novembre 2020

1. M. Beneke, A. Broggio, S. Jaskiewicz, L. Vernazza,
   Threshold factorization of the Drell-Yan process at next-to-leading power,
   JHEP 20 (2020) 078, [arXiv:1912.01585].

2. S. Alioli, A. Broggio, S. Kallweit, M.A. Lim, L. Rottoli,
   Higgsstrahlung at NNLL′+NNLO Matched to Parton Showers in GENEVA, Phys. Rev. D 100, 096016, [arXiv:1909.02026].

3. A. Broggio, A. Ferroglia, R. Frederix, D. Pagani, B. D. Pecjak, I. Tsinikos,
   Top-quark pair hadroproduction in association with a heavy boson at NLO+NNLL including EW corrections, JHEP 1908 (2019) 039, [arXiv:1907.04343].

4. M. Beneke, A. Broggio, C. Hasner, K. Urban, M. Vollmann,
   Resummed photon spectrum from dark matter annihilation for intermediate and narrow energy resolution, JHEP 1908 (2019) 103, [arXiv:1903.08702].

5. M. Beneke, A. Broggio, M. Garny, S. Jaskiewicz, R. Szafron, L. Vernazza, J. Wang,
   Leading-logarithmic threshold resummation of the Drell-Yan process at next-to-leading power,
   JHEP 1903 (2019) 043, [arXiv:1809.10631].

6. A. Broggio, A. Ferroglia, B. D. Pecjak, L. Yang,
   NNLL resummation for the associated production of a top pair and a Higgs boson at the LHC,
   JHEP 1702 (2017) 126, [arXiv:1611.00049].

7. A. Broggio, A. Ferroglia, B. D. Pecjak, A. Signer, L. Yang,
   Associated production of a top pair and a Higgs boson beyond NLO,
   JHEP 1603 (2016) 124, [arXiv:1510.01914].

8. A. Broggio, C. Gnendiger, A.Signer, D. Stöckinger, A. Visconti,
   SCET approach to regularization-scheme dependence of QCD amplitudes,
   JHEP 1601 (2016) 078, [arXiv:1506.05301].

9. T. Becher, A. Broggio, A. Ferroglia,
   Introduction to Soft-Collinear Effective Theory,
   Lecture Notes in Physics vol. 896 (2015), Springer, [arXiv:1410.1892].

10. A. Broggio, E.J. Chun, M. Passera, K.M. Patel, S.K. Vempati,
    Limiting two-Higgs-doublet models,
    JHEP 1411 (2014) 058, [arXiv:1409.3199].

11. A. Broggio, A.S. Papanastasiou, A. Signer,
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12. A. Broggio, A. Ferroglia, M. Neubert, L. Vernazza, L. Yang,
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1. L. Calibbi, T. Li, Y. Li and B. Zhu, "Simple model for large CP violation in charm decays, B-physics anomalies, muon $g-2$ and dark matter," JHEP **10** (2020), 070 [arXiv:1912.02676 [hep-ph]].

2. L. Calibbi, L. Lopez-Honorez, S. Lowette and A. Mariotti, "Singlet-Doublet Dark Matter Freeze-in: LHC displaced signatures versus cosmology," JHEP **1809** (2018) 037 [arXiv:1805.04423 [hep-ph]].

3. L. Calibbi, R. Ziegler and J. Zupan, "Minimal models for dark matter and the muon g-2 anomaly," JHEP **1807** (2018) 046 [arXiv:1804.00009 [hep-ph]].

4. L. Calibbi, A. Crivellin and T. Li, "A model of vector leptoquarks in view of the B-physics anomalies," Phys. Rev. D **98** (2018) no.11, 115002 [arXiv:1709.00692 [hep-ph]].

5. L. Calibbi and G. Signorelli, "Charged Lepton Flavour Violation: An Experimental and Theoretical Introduction," Riv. Nuovo Cim. **41** (2018) no.2, 1, [arXiv:1709.00294 [hep-ph]]. Invited review article, 110p.

6. L. Calibbi, F. Goertz, D. Redigolo, R. Ziegler and J. Zupan, "Minimal axion model from flavor," Phys. Rev. D **95** (2017) no.9, 095009 [arXiv:1612.08040 [hep-ph]].

7. L. Calibbi, A. Crivellin and T. Ota, "Effective field theory approach to $b \to s\ell\ell^{(\prime)}$, $B \to K^{(*)}\nu\bar{\nu}$ and $B \to D^{(*)}\tau\nu$ with third generation couplings," Phys. Rev. Lett. **115** (2015) 18, 181801 [arXiv:1506.02661 [hep-ph]].

8. L. Calibbi, A. Mariotti and P. Tziveloglou, "Singlet-Doublet Model: Dark matter searches and LHC constraints," JHEP **1510** (2015) 116 [arXiv:1505.03867 [hep-ph]].

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10. L. Calibbi, J. M. Lindert, T. Ota and Y. Takanishi, "Cornering light Neutralino Dark Matter at the LHC," JHEP **1310** (2013) 132 [arXiv:1307.4119 [hep-ph]].

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25. F. Capozzi and G. Raffelt, "Axion and neutrino bounds improved with new calibrations of the tip of the red-giant branch using geometric distance determinations," Phys. Rev. D **102** (2020) no.8, 083007

24. F. Capozzi, E. Lisi and A. Marrone, "Mapping reactor neutrino spectra from TAO to JUNO," Phys. Rev. D **102** (2020) no.5, 056001

23. F. Capozzi, M. Chakraborty, S. Chakraborty and M. Sen, "Fast flavor conversions in supernovae: the rise of mu-tau neutrinos," [arXiv:2005.14204 [hep-ph]], accettato per pubblicazione su Physical Review Letters

22. F. Capozzi, E. Di Valentino, E. Lisi, A. Marrone, A. Melchiorri and A. Palazzo, "Addendum to: Global constraints on absolute neutrino masses and their ordering," Phys. Rev. D **101** (2020) no.11, 116013

21. R. Glas, H. T. Janka, F. Capozzi, M. Sen, B. Dasgupta, A. Mirizzi and G. Sigl, "Fast Neutrino Flavor Instability in the Neutron-star Convection Layer of Three-dimensional Supernova Models," Phys. Rev. D **101** (2020) no.6, 063001

20. F. Capozzi, S. S. Chatterjee and A. Palazzo, "Neutrino Mass Ordering Obscured by Nonstandard Interactions," Phys. Rev. Lett. **124** (2020) no.11, 111801

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18. F. Capozzi, S. W. Li, G. Zhu and J. F. Beacom, "DUNE as the Next-Generation Solar Neutrino Experiment," Phys. Rev. Lett. **123** (2019) no.13, 131803

17. S. Airen, F. Capozzi, S. Chakraborty, B. Dasgupta, G. Raffelt and T. Stirner, "Normal-mode Analysis for Collective Neutrino Oscillations," JCAP **1812** (2018) no.12, 019

16. F. Capozzi, B. Dasgupta and A. Mirizzi, "Model-independent diagnostic of self-induced spectral equalization versus ordinary matter effects in supernova neutrinos," Phys. Rev. D **98** (2018) no.6, 063013

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14. F. Capozzi, E. Lisi, A. Marrone and A. Palazzo, "Current unknowns in the three neutrino framework," Prog. Part. Nucl. Phys. **102** (2018) 48

13. F. Capozzi, I. M. Shoemaker and L. Vecchi, "Neutrino Oscillations in Dark Backgrounds," JCAP **1807** (2018) no.07, 004

12. F. Capozzi, E. Lisi and A. Marrone, "Probing the neutrino mass ordering with KM3NeT-ORCA: Analysis and perspectives," J. Phys. G **45** (2018) no.2, 024003

11. F. Capozzi, B. Dasgupta, E. Lisi, A. Marrone and A. Mirizzi, "Fast flavor conversions of supernova neutrinos: Classifying instabilities via dispersion relations," Phys. Rev. D **96** (2017) no.4, 043016

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8. S. M. Bilenky, F. Capozzi and S. T. Petcov, "An alternative method of determining the neutrino mass ordering in reactor neutrino experiments," Phys. Lett. B **772** (2017), 179-183 [erratum: Phys. Lett. B **809** (2020), 135765] doi:10.1016/j.physletb.2017.06.044

7. F. Capozzi, C. Giunti, M. Laveder and A. Palazzo, "Joint short- and long-baseline constraints on light sterile neutrinos," Phys. Rev. D **95** (2017) no.3, 033006

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29 Novembre 2020

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1) A. Cavaglià, D. Grabner, N. Gromov and A. Sever, "Large N Twist Operators I: Spectrum and Wave Functions", Journal of High Energy Physics 06 (2020) 092.

2) A. Cavaglià, N. Gromov and F. Levkovich-Maslyuk, "Separation of variables and scalar products at any rank," Journal of High Energy Physics 09 (2019) 052 .

3) D. Bombardelli, A. Cavaglià, R. Conti and R. Tateo, "Exploring the spectrum of AdS_4/CFT_3 at finite coupling", Journal of High Energy Physics 04 (2018) 117.

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5) D. Bombardelli, A. Cavaglià, D. Fioravanti, N. Gromov and R. Tateo, "The full Quantum Spectral Curve for AdS_4/CFT_3", Journal of High Energy Physics 09 (2017) 140.

6) A. Cavaglià, S. Negro, I. Szecsenyi and R. Tateo, "$T\bar{T}$-deformed 2D quantum field theories", Journal of High Energy Physics 10 (2016) 112.

7) A. Cavaglià, N. Gromov and F. Levkovich-Maslyuk, "On the Exact Interpolating Function of ABJ Theory", Journal of High Energy Physics 12 (2016) 086.

8) L. Anselmetti, D. Bombardelli, A. Cavaglià and R. Tateo, "12 loops and triple wrapping in ABJM theory from integrability", Journal of High Energy Physics 10 (2015) 117.

9) A. Cavaglià, M. Cornagliotto, M. Mattelliano and R. Tateo, "A Riemann-Hilbert formulation for the finite temperature Hubbard model", Journal of High Energy Physics 06 (2015) 015.

10) A. Cavaglià, D. Fioravanti, N. Gromov and R. Tateo, "Quantum Spectral Curve of the $\mathcal{N} = 6$ Supersymmetric Chern-Simons Theory", Physics Review Letters 113 (2014) 2, 021601.

11) A. Cavaglià, D. Fioravanti and R. Tateo, "Discontinuity relations for the AdS_4/CFT_3 correspondence," Nuclear Physics B 877 (2013) 852 .

12) A. Cavaglià, D. Fioravanti and R. Tateo, "Extended Y-system for the AdS_5/CFT_4 correspondence", Nuclear Physics B 843, 302 (2011).

Tesi di dottorato

A. Cavaglià, "Nonsemilinear one-dimensional PDEs: analysis of PT deformed models and numerical study of compactons", available at URL: http://openaccess.city.ac.uk/13074/.

Elenco delle pubblicazioni e certificati da presentare

Marco Cè

2 dicembre 2020

Pubblicazioni

1. M. Cè, C. Consonni, G. P. Engel, and L. Giusti,
   Non-Gaussianities in the topological charge distribution of the SU(3) *Yang–Mills theory*,
   Phys. Rev. D **92** (2015) 074502 doi:10.1103/physrevd.92.074502 [arXiv:1506.06052].

2. M. Cè, M. García Vera, L. Giusti, and S. Schaefer,
   The topological susceptibility in the large-N limit of SU(N) *Yang–Mills theory*,
   Phys. Lett. B **762** (2016) 232-236 doi:10.1016/j.physletb.2016.09.029 [arXiv:1607.05939].

3. M. Cè, L. Giusti, and S. Schaefer,
   Domain decomposition, multilevel integration, and exponential noise reduction in lattice QCD,
   Phys. Rev. D **93** (2016) 094507 doi:10.1103/physrevd.93.094507 [arXiv:1601.04587].

4. M. Cè, L. Giusti, and S. Schaefer,
   Local factorization of the fermion determinant in lattice QCD,
   Phys. Rev. D **95** (2017) 034503 doi:10.1103/physrevd.95.034503 [arXiv:1609.02419].

5. M. Cè,
   Locality and multi-level sampling with fermions,
   EPJ Plus **134** (2019) 299 doi:10.1140/epjp/i2019-12655-5.

6. A. Gérarding, M. Cè, G. von Hippel, B. Hörz, H. B. Meyer, D. Mohler, K. Ottnad, J. Wilhelm, and H. Wittig,
   The leading hadronic contribution to $(g-2)_\mu$ *from lattice QCD with* $N_\mathrm{f} = 2+1$ *flavours of* $\mathcal{O}(a)$ *improved Wilson quarks*,
   Phys. Rev. D **100** (2019) 014510 doi:10.1103/PhysRevD.100.014510 [arXiv:1904.03120].

7. M. Cè, T. San José, A. Gérardin, H. B. Meyer, K. Miura, K. Ottnad, A. Risch, J. Wilhelm, and H. Wittig,
   The hadronic contribution to the running of the electromagnetic coupling and the electroweak mixing angle,
   PoS(**LATTICE2019**)010 doi:10.22323/1.363.0010 [arXiv:1910.09525].

8. M. Cè, T. Harris, H. B. Meyer, A. Steinberg, and A. Toniato,
   The rate of photon production in the quark-gluon plasma from lattice QCD,
   Phys. Rev. D **102** (2020) 091501(R) doi:10.1103/PhysRevD.102.091501 [arXiv:2001.03368].

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M. Cè, *Solving the* $\mathrm{U}_A(1)$ *problem of QCD: new computational strategies and results*, PhD thesis (Scuola Normale Superiore di Pisa, 2017), `https://hdl.handle.net/11384/85885`.

Certificati

Al fine di certificare il possesso di almeno tre anni di contratti post-dottorali presso atenei esteri, allego:

- attestato riguardante il postdoc presso l'Helmholtz-Institut Mainz della Johannes Gutenberg-Universität Mainz, sotto contratto con GSI, Darmstadt, per 3 anni dal 01/11/2016 al 31/10/2019.
- attestato riguardante la posizione da Senior Fellow al CERN, Ginevra, per 13 mesi dal 01/11/2019 ad oggi.

ELENCO PUBBLICAZIONI PRESENTATE

Giovanni Antonio Chirilli

1. High-energy amplitudes in gauge theories in the next-to-leading-order
   Ph.D. Thesis

2. Sub-eikonal corrections to scattering amplitudes at high energy,
   autore: Giovanni A. Chirilli,
   JHEP **1901**, 118 (2019) [arXiv:1807.11435 [hep-ph]] da pag. 1 a pag. 47
   doi:10.1007/JHEP01(2019)118.
   24 citations counted in INSPIRES as of 2 Dec 2020;

3. Next-to-leading order evolution of color dipoles,
   autori: I. Balitsky, G. A. Chirilli,
   Physical Review D **77** (2008) da pag. 014019-1 a pag. 014019-43,
   DOI: 10.1103/PhysRevD.77.014019.
   309 citations counted in INSPIRE as of 2 Dec 2020;

4. Inclusive Hadron Productions in pA Collisions,
   autori: Giovanni A. Chirilli, Bo-Wen Xiao and Feng Yuan,
   Phys. Rev. D **86** (2012) 054005 [arXiv: 1203.6139 [hep-ph]] da pag. 054005-1
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   DOI: 10.1103/PhysRevD.86.054005.
   137 citations counted in INSPIRE as of 2 Dec 2020;

5. One-loop Factorization for Inclusive Hadron Production in pA Collision in the
   Saturation Formalism,
   autori: Giovanni A. Chirilli, Bo-Wen Xiao and Feng Yuan,
   Phys. Rev. Lett. **108**, 122301 (2012) [arXiv: 1112.1061 [hep-ph]] da pag.
   122301-1 a pag. 122301-5,
   DOI: 10.1103/PhysRevLett.108.122301.
   123 citations counted in INSPIRE as of 2 Dec 2020;

6. NLO evolution of color dipoles in $\mathcal{N}$=4 SYM,
   autori: I. Balitsky, G. A. Chirilli,
   Nuclear Physics **B** 822 (2009) da pag. 45 a pag. 87,
   DOI:10.1016/j.nuclphysb.2009.07.003.
   86 citations counted in INSPIRE as of 2 Dec 2020;

7. Photon impact factor in the next-to-leading order,
   autori: I. Balitsky and G. A. Chirilli,
   Phys. Rev. D**83** *(Rapid Communications)*, (2011) 031502 [arXiv:1009.4729
   [hep-ph]] da pag. 031502-1 a pag 031502-5,
   DOI: 10.1103/PhysRevD.83.031502.
   93 citations counted in INSPIRE as of 2 Dec 2020;

8. Rapidity evolution of Wilson lines at the next-to-leading order,
   autori: I. Balitsky and G. A. Chirilli,
   Phys. Rev. D**88** *(Rapid Communications)*, (2013) 111501 [arXiv:1309.7644 [hep-ph]] da pag. 111501-1 a pag 111501-6,
   DOI: 10.1103/PhysRevD.88.111501.
   95 citations counted in INSPIRE as of 2 Dec 2020;

9. Photon impact factor and k_T-factorization for DIS in the next-to-leading order,
   autori: I. Balitsky and G. A. Chirilli
   Phys. Rev. D **87**, (2013) 014013 [arXiv: 1207.3844[hep-ph]] da pag. 014013-1 a pag. 014013-15,
   DOI: 10.1103/PhysRevD.87.014013.
   78 citations counted in INSPIRE as of 2 Dec 2020;

10. High-energy amplitudes in $\mathcal{N}$=4 SYM in the next-to-leading order,
    autori: I. Balitsky, G. A. Chirilli,
    Physics Letters **B** 687 (2010) da pag. 204 a pag. 213,
    DOI:10.1016/j.physletb.2010.02.084.
    43 citations counted in INSPIRE as of 2 Dec 2020;

11. Conformal kernel for NLO BFKL equation in $N = 4$ SYM,
    autori: I. Balitsky, G. A. Chirilli,
    Phys. Rev. D **79**, (2009) da pag. 031502-1 a pag. 031502-5,
    DOI: 10.1103/PhysRevD.79.031502
    30 citations counted in INSPIRE as of 2 Dec 2020;

12. Solution of the NLO BFKL Equation and the Strategy for Solving the All-Order BFKL Equation,
    autori: Giovanni A. Chirilli and Yuri V. Kovchegov,
    JHEP **1306**, 055 (2013) da pag. 1 a pag 27,
    DOI:10.1007/JHEP06(2013)055.
    28 citations counted in INSPIRE as of 2 Dec 2020;

13. $\gamma^*\gamma^*$ Cross Section at NLO and Properties of the BFKL Evolution at Higher Orders
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    JHEP **1504**, 099 (2014) da pag. 1 a pag. 42,
    DOI: 10.1007/JHEP05(2014)099.
    23 citations counted in INSPIRE as of 2 Dec 2020.

Elenco delle pubblicazioni e della tesi di dottorato presentate

Marco Crisostomi

L'ordine degli autori è sempre alfabetico, eccetto che in [3].

[1] **Self-accelerating universe in scalar-tensor theories after GW170817**
M. C. and K. Koyama
Phys. Rev. D **97**, no. 8, 084004 (2018) [arXiv:1712.06556] [INSPIRE]

[2] **Vainshtein mechanism after GW170817**
M. C. and K. Koyama
Phys. Rev. D **97**, no. 2, 021301 (2018) [arXiv:1711.06661] [INSPIRE]

[3] **Beyond Lovelock gravity: Higher derivative metric theories**
M. C., K. Noui, C. Charmousis and D. Langlois
Phys. Rev. D **97**, no. 4, 044034 (2018) [arXiv:1710.04531] [INSPIRE]

[4] **Higher Derivative Field Theories: Degeneracy Conditions and Classes**
M. C., R. Klein and D. Roest
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[5] **Degenerate higher order scalar-tensor theories beyond Horndeski up to cubic order**
J. Ben Achour, M. C., K. Koyama, D. Langlois, K. Noui and G. Tasinato
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[6] **Extended Scalar-Tensor Theories of Gravity**
M. C., K. Koyama and G. Tasinato
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[7] **Horndeski: beyond, or not beyond?**
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[8] **FRW Cosmological Perturbations in Massive Bigravity**
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[9] **Degrees of Freedom in Massive Gravity**
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[10] **Perturbations in Massive Gravity Cosmology**
D. Comelli, M. C. and L. Pilo
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[11] **FRW cosmology in ghost free massive gravity from bigravity**
D. Comelli, M. C., F. Nesti and L. Pilo
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[12] **Spherically Symmetric Solutions in Ghost-Free Massive Gravity**
D. Comelli, M. C., F. Nesti and L. Pilo
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Tesi: Massive Gravity Discussa il 2 Aprile 2014 [Link to Fulltext]

Trieste, December 2, 2020

Elenco pubblicazioni e tesi di dottorato

Pubblicazioni:

1) L. Delle Rose, G. Panico, M. Redi, A. Tesi
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2) S. De Curtis, L. Delle Rose, G. Panico,
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JHEP 1802 (2018) 109, [arXiv:1708.03650 [hep-ph]]

5) E. Accomando, L. Delle Rose, S. Moretti, E. Olaiya, C.H. Shepherd-Themistocleous,
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7) E. Accomando, C. Corianò, L. Delle Rose, J. Fiaschi, C. Marzo, S. Moretti,
Z', Higgses and heavy neutrinos in U(1)' models: from the LHC to the GUT scale,
JHEP 1607 (2016) 086, [arXiv:1605.02910 [hep-ph]]

8) L. Delle Rose, C. Marzo, A. Urbano,
On the fate of the Standard Model at finite temperature,
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9) L. Delle Rose, C. Marzo, A. Urbano,
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10) C. Corianò, L. Delle Rose, C. Marzo,
Vacuum stability in U(1)' extensions of the Standard Model with TeV scale right-handed neutrinos,
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12) R. Armillis, C. Corianò, L. Delle Rose,
Conformal Anomalies and the Gravitational Effective Action: The TJJ Correlator for a Dirac Fermion,
Phys.Rev. D81 (2010) 085001, [arXiv:0910.3381 [hep-ph]]

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The Standard Model in a Weak Gravitational Background. Dilatons, Scale Anomalies and Conformal Methods, [arXiv:1308.0124 [hep-ph]]

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Pietro Dona, Simone Speziale
Asymptotics of lowest unitary SL(2,C) invariants on graphs,
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Pietro Dona, Francesco Gozzini, Giorgio Sarno
Numerical analysis of spin foam dynamics and the flatness problem,
Phys.Rev.D 102 (2020) 10, 106003, arXiv:2004.12911

Pietro Dona, Francesco Gozzini, Giorgio Sarno
Searching for classical geometries in spin foam amplitudes: a numerical method,
Class. Quant. Grav. 37 (2020) no.9, 094002 arXiv:1909.07832

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Typical entanglement entropy in the presence of a center: Page curve and its variance,
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Numerical study of the Lorentzian Engle-Pereira-Rovelli-Livine spin foam amplitude,
Phys. Rev. D100 (2019), 106003, arXiv:1903.12624

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GERG-D-18-00291.1, arXiv:1807.03066

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Class.Quant.Grav. 35 (2018) no.17, 175019, arXiv:1803.00835

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SU(2) graph invariants, Regge actions and polytopes,
Class. Quant. Grav. **35** (2018) no.4, 045011, arXiv:1708.01727

Pietro Dona, Stefano Giaccari, Leonardo Modesto, Leslaw Rachwal, Yiwei Zhu
Scattering amplitudes in super-renormalizable gravity,
JHEP **1508** (2015) 038, arXiv:1506.04589

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PhD thesis

Pietro Dona
Matter fields, gravity and Asymptotic Safety
under the supervision of Prof. Roberto Percacci

Publications

Thesis

Title: *Baryon number violation at the TeV scale*,
Advisors: Jean-Marc Gérard and Fabio Maltoni
Committee: Giacomo Bruno, Christophe Grojean, Jernej F. Kamenik

Papers

1 *Constructing massive on-shell contact terms*, GD, T. Kitahara, C. Machado, Y. Shadmi, Y. Weiss, accepted in JHEP, [2008.09652]

2 *Enumerating higher-dimensional operators with on-shell amplitudes*, GD, C. Machado, Phys.Rev. D101 (2020) 095021, [1912.08827]

3 *The electroweak effective field theory from on-shell amplitudes*, GD, T. Kitahara, Y. Shadmi, Y. Weiss, JHEP 01 (2020) 119, [1909.10551]

4 *On the future of Higgs, electroweak and diboson measurements at lepton colliders*, J. de Blas, GD, C. Grojean, J. Gu, A. Paul, JHEP 12 (2019) 117, [1907.04311]

5 *Probing top-quark couplings indirectly at Higgs factories*, GD, J. Gu, E. Vryonidou, C. Zhang, Chin.Phys. C42 (2018) 123107, [1809.03520]

6 *The top-quark window on compositeness at future lepton colliders*, GD, O. Matsedonskyi, JHEP 01 (2019) 072, [1807.10273]

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9 *The leptonic future of the Higgs*, GD, C. Grojean, J. Gu, K. Wang, JHEP 09 (2017) 014, [1704.02333]

10 *Probing CP violation systematically in differential distributions*, GD, Y. Grossman, Phys.Rev. D92 (2015) 076013, [1508.03054]

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12 *Baryon number violation at the LHC: the top option*, Z. Dong, GD, J.-M. Gérard, T. Han, F. Maltoni, Phys.Rev. D85 (2012) 016006, [1107.3805]

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Elenco delle 12 pubblicazioni e tesi di dottorato

Candidato: Matteo Fael

Tesi di Dottorato

- M. Fael, *"Electromagnetic dipole moments of fermions,"* Ph.D. thesis, University of Padova, Italy & University of Zurich, Switzerland, 2014, opac.nebis.ch/ediss/20142170.pdf.

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1. M. Fael, K. Schönwald, M. Steinhasuer, *Exact results for $Z_m^{\rm OS}$ and $Z_2^{\rm OS}$ with two mass scales and up to three loops,* JHEP 2010 (2020) 087 [arXiv: 2008.01102 [hep-ph]].
2. M. Fael, K. Schönwald, M. Steinhasuer, *Kinetic Heavy Quark Mass to Three Loops,* Phys. Rev. Lett. 125 (2020) 052003 [arXiv: 2005.06487 [hep-ph]].
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5. M. Fael, T. Mannel, K. K. Vos, *"V_{cb} determination from inclusive $b \to c$ decays: an alternative method,"* JHEP 1902 (2019) 177 [arXiv:1812.07472 [hep-ph]].
6. M. Fael, *"Hadronic corrections to μ-e scattering at NNLO with space-like data,"* JHEP 1902 (2019) 027 [arXiv:1808.08233 [hep-ph]].

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10. J. Aebischer, A. Crivellin, M. Fael and C. Greub, *"Matching of gauge invariant dimension-six operators for $b \to s$ and $b \to c$ transitions,"* JHEP 1605 (2016) 037 [arXiv:1512.02830 [hep-ph]].

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Karlsruhe — 01/12/2020 Matteo Fael

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[2] *Relating amplitude and PDF factorisation through Wilson-line geometries*,
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[3] *The heavy quark form factors at two loops*,
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[4] *Five-loop renormalisation of QCD in covariant gauges*,
K. G. Chetyrkin, G. Falcioni, F. Herzog, J. A. M. Vermaseren,
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[5] *Asymptotic 3-loop heavy flavor corrections to the charged current structure function* $F_L^{W^+-W^-}(x,Q^2)$ *and* $F_2^{W^+-W^-}(x,Q^2)$,
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[7] *The complete* $\mathcal{O}(\alpha_s^2)$ *Non-Singlet heavy flavour corrections to the structure functions* $g_1^{ep}(x,Q^2)$ *and* $F_{1,2,3}^{\nu\,(\overline{\nu})\,p}(x,Q^2)$ *and the associated sum rules*,
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[2] E. Dimastrogiovanni, M. Fasiello and T. Fujita, "Primordial Gravitational Waves from Axion-Gauge Fields Dynamics", **JCAP** 01 (2017) 019, [arXiv:1608.04216].

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DARIO FRANCIA

ELENCO PUBBLICAZIONI PRESENTATE

- Free geometric theory for higher-spin fields
D. Francia — Ph. D. Thesis; Roma Tre U, A.Y. 2004-2005

- Two-Form Asymptotic Symmetries and Scalar Soft Theorems.
D. Francia (E. Fermi Ctr & INFN & Roma Tre U), C. Heissenberg (SNS & INFN)
Phys. Rev. D 98 no.10 (2018); *arXiv:1810.05634 [hep-th]*

- On higher-spin supertranslations and superrotations.
A. Campoleoni (ULB Brussels), D. Francia (SNS & INFN), C. Heissenberg (SNS & INFN)
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- Cubic interactions of Maxwell-like higher spins.
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- Maxwell-like Lagrangians for higher spins.
A. Campoleoni (MPI Grav. Phys., Potsdam), D. Francia (Enrico Fermi Ctr., Rome, SNS & INFN)
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- String theory triplets and higher-spin curvatures.
D. Francia (APC, Paris)
Phys.Lett. B690 (2010); *arXiv:1001.5003 [hep-th]*

- On the Relation between Local and Geometric Lagrangians for Higher spins.
D. Francia (APC, Paris)
J. Phys. Conf. Ser. 222 (2010) 012002; *arXiv: 1001.3854 [hep-th]*

- Unconstrained Higher Spins of Mixed Symmetry. I. Bose Fields.
A. Campoleoni (SNS & INFN & APC, Paris & E. Polytechnique, CPHT), D. Francia (Chalmers U. Tech. & APC, Paris), J. Mourad (APC, Paris),A. Sagnotti (SNS & INFN & APC, Paris & E. Polytechnique, CPHT)}
Nucl.Phys. B 815 (2009) 289-367; *arXiv: 0810.4350 [hep-th]*

- Geometric Lagrangians for massive higher-spin fields.
D. Francia (Goteborg, ITP)
Nucl.Phys. B 796 (2008) 77-122; *arXiv: 0710.5378 [hep-th]*

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D. Francia (Goteborg, ITP), J. Mourad (APC, Paris), A. Sagnotti (SNS & INFN)
Nucl. Phys. B 773 (2007) 203-237; *arXiv: hep-th/0701163*

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D. Francia, A. Sagnotti (Rome U.,Tor Vergata & INFN)
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D. Francia, A. Sagnotti (Rome U.,Tor Vergata & INFN)
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Data: 02/12/2020

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Daniele Gaggero

[12] Kavanagh, B.J.; Nichols, D.; Bertone, G.; **Gaggero, D.**, *"Detecting Dark Matter around Black Holes with Gravitational Waves: Effects of dark-matter dynamics on the gravitational waveform", Physical Review D, Volume 102 (2020), id. 083006*

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PIER PAOLO GIARDINO
PUBBLICAZIONI PRESENTATE

1. **Electroweak and QCD Corrections to Z and W pole observables in the SMEFT**,
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   Phys. Rev. D **101**, no. 1, 013001 (2020),
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   R. Bonciani, G. Degrassi, P. P. Giardino and R. Gröber,
   Comput. Phys. Commun. **241** (2019) 122,
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13. Tesi di dottorato.

01/12/2020

List of 12 publications and doctoral thesis presented

Christian Gross

1.) *D. Buttazzo, L. Di Luzio, P. Ghorbani, C. Gross, G. Landini, A. Strumia, D. Teresi and J. W. Wang*
Scalar gauge dynamics and Dark Matter
JHEP **01** (2020), 130
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2.) *J. M. Cline, C. Gross and W. Xue*
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Phys. Rev. D **98** (2018) no.6, 063005
20 citations counted in INSPIRE as of 03 Dec 2020

5.) *C. Gross, O. Lebedev and T. Toma*
A cancellation mechanism for dark matter-nucleon interaction
Phys. Rev. Lett. **119** (2017) no.19, 191801;
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De Sitter vacua in no-scale supergravities and Calabi-Yau string models
JHEP **0806**, 057 (2008
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PhD thesis: *C. Gross*
De Sitter vacua and inflation in no-scale string models
Report number: DESY-THESIS-2009-029; doi:10.3204/DESY-THESIS-2009-029

List of Publications

Andrea L. Guerrieri

Thesis Title: "Soft theorems: from strings to conformal quantum fields",
Universitá di Roma Tor Vergata,
Advisor: Prof. Massimo Bianchi.

1. A. L. Guerrieri, A. Homrich and P. Vieira, "Dual S-matrix Bootstrap I: 2D Theory", JHEP **11** (2020), 084, [arXiv:2011.02802 [hep-th]].

2. J. Elias Miro, A. L. Guerrieri, A. Hebbar, J. Penedones and P. Vieira, "Flux Tube S-matrix Bootstrap," Phys. Rev. Lett. **123**, no. 22, 221602 (2019), [arXiv:1906.08098 [hep-th]].

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Il sottoscritto Marco Alberto Javarone NATO a Omissis il Omissis presenta le seguenti n. 12 pubblicazioni scientifiche oltre la tesi di Dottorato in Matematica:

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2. Articolo. Heterogeneity in evolutionary games: an analysis of the risk perception, M.A. Amaral and Marco A. Javarone, Proceedings of the Royal Society A, 476(2237), 2020

3. Articolo. Heterogeneous update mechanisms in evolutionary games: mixing innovative and imitative dynamics. Marco A. Amaral and Marco A. Javarone. Physical Review E 97, 2018

4. Articolo. The Role of Noise in the Spatial Public Goods Game. Marco A. Javarone and Federico Battiston. Journal of Statistical Mechanics: Theory and Experiment P073404, 2016

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13. *"Symmetry and Dynamics: Mathematical Topics in 5-Dimensional Deformed Relativity"*, **Ph.D. Thesis**, defended at University of Rome "Roma Tre", Rome, Italy. Date: March 3, 2005.

Oleksii Matsedonskyi
List of 12 selected publications and a PhD thesis

1. "The top-quark window on compositeness at future lepton colliders,"
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   [arXiv:1807.10273 [hep-ph]].

2. "Electroweak Phase Transition and Baryogenesis in Composite Higgs Models,"
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3. "Baryon Asymmetry from a Composite Higgs Boson,"
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4. "Minimally extended SILH,"
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   JHEP **1706**, 088 (2017); doi:10.1007/JHEP06(2017)088;
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5. "Top Partners Searches and Composite Higgs Models,"
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6. "Mirror Cosmological Relaxation of the Electroweak Scale,"
   O. Matsedonskyi,
   JHEP **1601**, 063 (2016); doi:10.1007/JHEP01(2016)063;
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7. "On Flavour and Naturalness of Composite Higgs Models,"
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   JHEP **1502**, 154 (2015); doi:10.1007/JHEP02(2015)154;
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8. "On the Interpretation of Top Partners Searches,"
O. Matsedonskyi, G. Panico and A. Wulzer,
JHEP **1412**, 097 (2014); doi:10.1007/JHEP12(2014)097;
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9. "Composite Charge 8/3 Resonances at the LHC,"
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10. "Light top partners and precision physics,"
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11. "A First Top Partner Hunter's Guide,"
A. De Simone, O. Matsedonskyi, R. Rattazzi and A. Wulzer,
JHEP **1304**, 004 (2013); doi:10.1007/JHEP04(2013)004;
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12. "Light Top Partners for a Light Composite Higgs,"
O. Matsedonskyi, G. Panico and A. Wulzer,
JHEP **1301**, 164 (2013); doi:10.1007/JHEP01(2013)164;
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13. "Composite Higgs, Top Partners and the LHC," O. Matsedonskyi, PhD thesis
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01/12/2020

To date, in addition to my Ph.D. thesis, I have total of **33 publications** which include 23 articles in leading peer-review international journals in cosmology and astrophysics, **2 publications under review in a journal** (already on arXiv repository), **one conference proceeding**, and **7 proposals and science white papers**. I have a **total of 559 citations**, with **average of 20 citations per-paper** and the **h-index of 14**.

All publications listed below (except for snowmass letters of interests) can be freely accessed on **arXiv** repository at `https://arxiv.org` by searching the arXiv number provided for each article. A full list of my publications, as well as my author profile can be found on **inspirehep** website at `http://inspirehep.net/author/profile/A.Moradinezhad.Dizgah.1`

A. JOURNAL ARTICLES

Starred publications have alphabetical author-list, while the rest are ordered by contribution

1. **Azadeh Moradinezhad Dizgah**, Matteo Biagetti, Emiliano Sefusatti, Vincent Desjacques, Jorge Noreña,
   Primordial non-Gaussianity from Biased Tracers:
   Likelihood Analysis of Real-Space Power Spectrum and Bispectrum
   Submitted to JCAP [arXiv:2010.14523]

2. Marcel Schmittfull and **Azadeh Moradinezhad Dizgah**,
   Skew spectra in redshift-space
   Submitted to JCAP [arXiv:2010.14267]

3. Emanuele Castorina and **Azadeh Moradinezhad Dizgah**,
   Local Primordial Non-Gaussianities and Super-Sample Variance
   JCAP 10 (2020) 007 [arXiv:2005.14677]

4. **Azadeh Moradinezhad Dizgah**, Hayden Lee, Marcel Schmittfull, Cora Dvorkin,
   Capturing Non-Gaussianity of the Large-Scale Structure with Weighted Skew-Spectra
   JCAP 04 (2020) 011 [arXiv:1911.05763]

5. Benjamin Bose, Joyce Byun, Fabien Lacasa, **Azadeh Moradinezhad Dizgah**, Lucas Lombriser,
   Modelling the non-linear bispectrum in modified gravity
   JCAP 02 (2020) 025 [arXiv:1909.02504]

6. **Azadeh Moradinezhad Dizgah**, Gabriele Franciolini, Antonio Riotto,
   Primordial Black Holes from Broad Spectra: Abundance and Clustering
   JCAP 11 (2019) 001 [arXiv:1906.08978]

7. **Azadeh Moradinezhad Dizgah**, Garrett Keating,
   Line intensity mapping with [CII] and CO(1-0) as probes of primordial non-Gaussianity
   APJ 872 (2019) no.2, 126 [arXiv:1805.10247]

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   Constraints on long-lived, higher-spin particles from galaxy bispectrum
   Phys. Rev. D 98 (2018) no.6, 063520 [arXiv:1805.10247]

9. **Azadeh Moradinezhad Dizgah**, Garrett Keating, Anastasia Fialkov,
   Probing Cosmic Origins with CO and [CII] Emission Lines
   APJ Letters 870 (2019) no.1, L4 [arXiv:1801.10178]

10. **Azadeh Moradinezhad Dizgah**, Hayden Lee, Julian B. Munõz, Cora Dvorkin,
    Galaxy Bispectrum from Massive Spinning Particles
    JCAP 05 (2018) 013 [arXiv:1801.07265]

11. Kwan Chuen Chan, **Azadeh Moradinezhad Dizgah**, Jorge Noreña,
Bispectrum Supersample Covariance
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12. **Azadeh Moradinezhad Dizgah**, Cora Dvorkin,
Scale-Dependent Galaxy Bias from Massive Particles with Spin during Inflation
JCAP 01 (2018) 010 [arXiv:1709.02473]

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Azadeh Moradinezhad Dizgah, Jorge Noreña, Antonio Riotto,
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B. CONFERENCE PRECEEDINGS

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   Inflation, Or What? C12-03-10.2, p.179-184
   Conference Proceedings: 47th Rencontres de Moriond on Cosmology,

C. WHITE PAPERS AND PROPOSALS

1. Pete Barry, Clarence Chang, Abigail Crites, Kirit S. Karkare, Garrett K. Keating, Jeff McMahon, **Azadeh Moradinezhad Dizgah**, Erik Shirokoff *et al.*,
   Cosmology with Millimeter-Wave Line Intensity Mapping, Snowmass2021 Letter of Interest
   `https://www.snowmass21.org/docs/files/summaries/CF/SNOWMASS21-CF4_CF5_Karkare-242.pdf`

2. Pete Barry, Clarence Chang, Abigail Crites, Kirit S. Karkare, Garrett K. Keating, Jeff McMahon, **Azadeh Moradinezhad Dizgah**, Erik Shirokoff *et al.*, *Primordial Non-Gaussianity with Millimeter-Wave Line Intensity Mapping*, Snowmass2021 Letter of Interest
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   Synergies between Millimeter-Wave Line Intensity Mapping with Radio, Optical and Microwave Observations, Snowmass2021 Letter of Interest
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   Microwave spectro-polarimetry of matter and radiation across space and time
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   Primordial non-Gaussianity,
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D. PH.D. THESIS

TITLE: Cosmological perturbations and the physics of the early universe:
Model-independent studies of viable scenarios
ADVISOR: Professor William Kinney

ENRICO MORGANTE

ELENCO DELLE PUBBLICAZIONI PRESENTATE

Tesi di dottorato

Titolo: Aspects of WIMP Dark Matter searches at colliders and other probes
Relatore: prof. Antonio Riotto (Università di Ginevra)
Tesi difesa il 20 Settembre 2016
Descrizione: La tesi discute le ricerche di Materia Oscura di tipo WIMP ed i problemi legati alla loro interpretazione teorica, con particolare riferimento alle ricerche a LHC.
Riconoscimenti: La tesi è stata selezionata dall'Università di Ginevra e dall'editore Springer per la pubblicazione nella collana "Springer theses".
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Pubblicazioni in rivista

1. N. Fonseca, E. Morgante, R. Sato, and G. Servant
   "Relaxion Fluctuations (Self-stopping Relaxion) and Overview of Relaxion Stopping Mechanisms"
   Journal of High Energy Physics 05 (2020), p. 080
   DOI: 10.1007/JHEP05(2020)080

2. N. Fonseca, E. Morgante, R. Sato, and G. Servant
   "Axion fragmentation"
   Journal of High Energy Physics 04 (2020), p. 010
   DOI: 10.1007/JHEP04(2020)010

3. V. Domcke, B. von Harling, E. Morgante, and K. Mukaida
   "Baryogenesis from axion inflation"
   Journal of Cosmology and Astroparticle Physics 10 (2019), p. 032
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4. N. Fonseca and E. Morgante
   "Relaxion Dark Matter"
   Physical Review D 100.5 (2019), p. 055010
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5. N. Fonseca, E. Morgante, and G. Servant
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"Making the Most of the Relic Density for Dark Matter Searches at the LHC 14 TeV Run"
Journal of Cosmology and Astroparticle Physics 03 (2015), p. 022
DOI: 10.1088/1475-7516/2015/03/022

8. V. Pettorino, G. Busoni, A. De Simone, E. Morgante, A. Riotto, and W. Xue
"Can AMS-02 discriminate the origin of an anti-proton signal?"
Journal of Cosmology and Astroparticle Physics 10 (2014), p. 078
DOI: 10.1088/1475-7516/2014/10/078

9. G. Busoni, A. De Simone, T. Jacques, E. Morgante and A. Riotto
"On the Validity of the Effective Field Theory for Dark Matter Searches at the LHC Part III: Analysis for the *t*-channel"
Journal of Cosmology and Astroparticle Physics 09 (2014), 022
DOI:10.1088/1475-7516/2014/09/022

10. G. Busoni, A. De Simone, J. Gramling, E. Morgante, and A. Riotto
"On the Validity of the Effective Field Theory for Dark Matter Searches at the LHC, Part II: Complete Analysis for the s-channel"
Journal of Cosmology and Astroparticle Physics 06 (2014), p. 060
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11. G. Busoni, A. De Simone, E. Morgante, and A. Riotto
"On the Validity of the Effective Field Theory for Dark Matter Searches at the LHC"
Physics Letters B 728 (2014), pp. 412–421
DOI: 10.1016/j.physletb.2013.11.069

12. M. Biagetti, A. Kehagias, E. Morgante, H. Perrier and A. Riotto
"Symmetries of Vector Perturbations during the de Sitter Epoch"
Journal of Cosmology and Astroparticle Physics 07 (2013), 030
DOI:10.1088/1475-7516/2013/07/030

DANIELE ORITI

I. DOCUMENTI ALLEGATI RELATIVI A TITOLI

- certificato ottenimento del PhD (University of Cambridge) nel 2004
- conferma assegnazione Sofja Kovalevskaja Prize (A. von Humboldt Foundation) nel 2008
- conferma impiego come Senior Researcher presso il Max Planck Institute for Gravitational Physics dal 2009
- conferma inquadramento presso il Max Planck Institute for Gravitational Physics, come Group Leader a livello W2 (Associate Professor)
- certificato di appartenenza all'Editorial Board della rivista internazionale 'Universe', MDPI

Pubblicazioni presentate (+ tesi di dottorato)

1. S. Gielen, D. Oriti, L. Sindoni, Cosmology from group field theory formalism for quantum gravity, Phys. Rev. Lett. 111 (2013) 031301, arXiv:1303.3576 [gr-qc]
2. S. Gielen, D. Oriti, L. Sindoni, Homogeneous cosmologies as group field theory condensates, JHEP 1406 (2014) 013, arXiv:1311.1238 [gr-qc]
3. D. Benedetti, J. Ben Geloun, D. Oriti, Functional Renormalisation Group Approach for Tensorial Group Field Theory: a Rank-3 Model, JHEP 1503 (2015) 084, arXiv:1411.3180 [hep-th]
4. G. Calcagni, D. Oriti, J. Thürigen, Dimensional flow in discrete quantum geometries, Phys.Rev. D91 (2015) 8, 084047, arXiv:1412.8390 [hep-th]
5. V. Lahoche, D. Oriti, V. Rivasseau, Renormalization of an abelian Tensorial Group Field Theory: solution at leading order, JHEP 1504 (2015) 095, arXiv:1501.02086 [hep-th]
6. D. Oriti, D. Pranzetti, L. Sindoni, Horizon entropy from quantum gravity condensates, Phys. Rev. Lett. 116 (2016), 211301, arXiv:1510.06991 [gr-qc]
7. D. Oriti, L. Sindoni, E. Wilson-Ewing, Emergent Friedmann dynamics with a quantum bounce from quantum gravity condensates, Class.Quant.Grav. 33 (2016) no.22, 224001, arXiv:1602.05881 [gr-qc]
8. G. Chirco, D. Oriti, M. Zhang, Group field theory and tensor networks: towards a Ryu-Takanayagi formula in full quantum gravity, Class.Quant.Grav. 35 (2018) no.11, 115011, arXiv:1701.01383 [gr-qc]
9. S. Carrozza, V. Lahoche, D. Oriti, Renormalizable Group Field Theory beyond melons: an example in rank four, Phys.Rev. D96 (2017) no.6, 066007, arXiv:1703.06729 [gr-qc]
10. M. De Cesare, D. Oriti, A. Pithis, M. Sakellariadou, Dynamics of anisotropies close to a cosmological bounce in quantum gravity, Class. Quantum Grav. 35 (2018), 015014 (selected for CQG+), arXiv:1709.00994 [gr-qc]
11. D. Oriti, D. Pranzetti, L. Sindoni, Black holes as quantum gravity condensates, Phys.Rev. D97 (2018) no.6, 066017, arXiv:1801.01479 [gr-qc]
12. G. Chirco, A. Goessmann, D. Oriti, M. Zhang, Group field theory and holographic tensor networks: dynamical corrections to the Ryu-Takanayagi formula, Class.Quant.Grav. 37 (2020) 9, 095011, arXiv:1903.07344 [hep-th]
13. D. Oriti, Spin Foam models of quantum spacetime, PhD thesis, University of Cambridge (2004)

PhD Thesis and selected publications

PhD Thesis: *On the detection of Galaxy Clusters*, Heidelberg University, 2007

Publications

1. Frusciante, N. & **Pace, F.**
   2020, PDU, 30, 100686
   Growth of structures and spherical collapse in the Galileon Ghost Condensate model

2. **Pace, F.**; Schimd, C.; Mota, D. F.; Del Popolo, A.
   2019, JCAP, 09, 060
   Halo collapse: virialization by shear and rotation in dynamical dark-energy models. Effects on weak-lensing peaks

3. **Pace, F.**; Battye, R.; Bolliet, B.; Trinh, D.
   2019, JCAP, 09, 018
   Dark sector evolution in Horndeski models

4. Battye, R. A.; **Pace, F.**; Trinh, D.
   2018, Phys. Rev. D, 98, 023504
   Gravitational wave constraints on dark sector models

5. Battye, R. A.; Bolliet, B.; **Pace, F.**
   2018, Phys. Rev. D, 97, 104070
   Do cosmological data rule out $f(\mathcal{R})$ with $w \neq -1$?

6. Battye, R. A.; **Pace, F.**; Trinh, D.
   2017, Phys. Rev. D, 96, 064041
   Cosmological perturbation theory in generalized Einstein-Aether models

7. Battye, R. A.; **Pace, F.**
   2016, Phys. Rev. D, 94, 063513
   Approximation of the potential in scalar field dark energy models

8. **Pace, F.**; Baldi, M.; Moscardini, L; Crittenden, R.; Bacon, D.
   2015, MNRAS, 447, 858
   Ray-tracing simulations of coupled dark energy models

9. **Pace, F.**; Moscardini L.; Crittenden, R.; Bartelmann, M.; Pettorino, V.
   2014, MNRAS, 437, 547
   A comparison of structure formation in minimally and non-minimally coupled quintessence models

10. Batista, R. C.; **Pace, F.**
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    Structure formation in inhomogeneous Early Dark Energy models

11. Meyer, S.; **Pace, F.**; Bartelmann, M.
    2012, Phys. Rev. D, 86, 103002
    Relativistic virialization in the spherical collapse model for Einstein-de Sitter and ΛCDM cosmologies

12. **Pace, F.**; Waizmann, J.-C.; Bartelmann, M.
    2010, MNRAS, 406, 1865
    Spherical collapse model in dark energy cosmologies

Elenco delle pubblicazioni selezionate

Carlo Pagani

Laboratoire de Physique et Modélisation des Milieux Condensés
Univ. Grenoble Alpes and CNRS, Grenoble 38000 (Francia)

Di seguito è riportato l'elenco delle pubblicazioni selezionate ai fini della procedura.

Tesi di dottorato

C. Pagani, "*Applications of the functional renormalization group in curved spacetime*", settembre 2014.

Articoli

1. C. Pagani e H. Sonoda,
   "*Operator product expansion coefficients in the exact renormalization group formalism*",
   Phys. Rev. D 101 (2020) 105007, arXiv:2001.07015.

2. M. Becker, C. Pagani e O. Zanusso,
   "*Fractal Geometry of Higher Derivative Gravity*",
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3. M. Becker e C. Pagani,
   "*Geometric Operators in the asymptotic safety scenario for quantum gravity*",
   Phys. Rev. D 99 (2019) 066002, arXiv:1810.11816.

4. M. Tarpin, L. Canet, C. Pagani e N. Wschebor,
   "*Stationary, isotropic and homogeneous two-dimensional turbulence: a first non-perturbative renormalization group approach*",
   J. Phys. A 52 (2019) 085501, arXiv:1809.00909.

5. C. Pagani e M. Reuter,
   "*Finite Entanglement Entropy in Asymptotically Safe Quantum Gravity*",
   JHEP 1807 (2018) 039, arXiv:1804.02162.

6. C. Pagani e H. Sonoda,
   "*Geometry of the theory space in the exact renormalization group formalism*",
   Phys. Rev. D 97 (2018) 025015, arXiv:1710.10409.

7 C. Pagani e M. Reuter,
   "*Composite operators in Asymptotic Safety*",
   Phys. Rev. D 95 (2017) 066002, arXiv:1611.06522.

8. C. Pagani and R. Percacci,
"*Quantum gravity with torsion and non-metricity*",
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9. C. Pagani,
"*Functional Renormalization Group approach to the Kraichnan model*",
Phys. Rev. E 92 (2015) 033016, Add.: Phys. Rev. E 97 (2018) 049902, arXiv:1505.01293.

10. A. Codello, G. D'Odorico e C. Pagani,
"*A functional RG equation for the c-function*",
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"*The Renormalization Group and Weyl-invariance*",
Class. Quant. Grav. 30 (2013) 115015, arXiv:1210.3284.

Elenco delle pubblicazioni allegate

Luca Panizzi

Tesi di dottorato dal titolo: *"One-Loop Electroweak Analysis for Third Family Scalar Quarks Production at LHC"*.

L'elenco completo delle mie pubblicazioni è documentato nel CV. Il seguente elenco delle pubblicazioni il cui testo è allegato alla domanda è in ordine cronologico.

1. G. Cacciapaglia, A. Deandrea, N. Gaur, D. Harada, Y. Okada and L. Panizzi, "Heavy Vector-like Top Partners at the LHC and flavour constraints," JHEP **1203** (2012) 070, DOI: 10.1007/JHEP03(2012)070. arXiv:1108.6329 [hep-ph], https://arxiv.org/abs/1108.6239
2. Y. Okada and L. Panizzi, "LHC signatures of vector-like quarks," Adv. High Energy Phys. **2013** (2013) 364936, DOI: 10.1155/2013/364936. arXiv:1207.5607 [hep-ph], https://arxiv.org/abs/1207.5607
3. G. Cacciapaglia, A. Deandrea, J. Ellis, J. Marrouche and L. Panizzi, "LHC Missing-Transverse-Energy Constraints on Models with Universal Extra Dimensions," Phys. Rev. D **87** (2013) 075006, DOI: 10.1103/PhysRevD.87.075006. arXiv:1302.4750 [hep-ph], https://arxiv.org/abs/1302.4750
4. M. Buchkremer, G. Cacciapaglia, A. Deandrea and L. Panizzi, "Model Independent Framework for Searches of Top Partners," Nucl. Phys. B **876** (2013) 376, DOI: 10.1016/j.nuclphysb.2013.08.010. arXiv:1305.4172 [hep-ph], https://arxiv.org/abs/1305.4172
5. D. Barducci, S. Belyaev, M. Buchkremer, G. Cacciapaglia, A. Deandrea, S. De Curtis, J. Marrouche, S. Moretti and L. Panizzi, "Framework for Model Independent Analyses of Multiple Extra Quark Scenarios," JHEP **1412** (2014) 080, DOI: 10.1007/JHEP12(2014)080. arXiv:1405.0737 [hep-ph], https://arxiv.org/abs/1405.0737
6. S. F. King, A. Merle and L. Panizzi, "Effective theory of a doubly charged singlet scalar: complementarity of neutrino physics and the LHC," JHEP **1411** (2014) 124, DOI: 10.1007/JHEP11(2014)124. arXiv:1406.4137 [hep-ph], https://arxiv.org/abs/1406.4137
7. G. Cacciapaglia, A. Deandrea, N. Gaur, D. Harada, Y. Okada and L. Panizzi, "Interplay of vector-like top partner multiplets in a realistic mixing set-up," JHEP **1509** (2015) 012, DOI: 10.1007/JHEP09(2015)012. arXiv:1502.00370 [hep-ph], https://arxiv.org/abs/1502.00370
8. S. Kraml, U. Laa, L. Panizzi and H. Prager, "Scalar versus fermionic top partner interpretations of $t\bar{t} + E_T^{\rm miss}$ searches at the LHC," JHEP **1611** (2016) 107, DOI: 10.1007/JHEP11(2016)107. arXiv:1607.02050 [hep-ph], https://arxiv.org/abs/1607.02050
9. A. Belyaev, L. Panizzi, A. Pukhov and M. Thomas, "Dark Matter characterization at the LHC in the Effective Field Theory approach," JHEP **1704** (2017) 110, DOI:10.1007/JHEP04(2017)110. arXiv:1610.07545 [hep-ph], https://arxiv.org/abs/1610.07545
10. S. Moretti, D. O'Brien, L. Panizzi and H. Prager, "Production of extra quarks at the Large Hadron Collider beyond the Narrow Width Approximation," Phys. Rev. D **96** (2017) no.7, 075035, DOI:10.1103/PhysRevD.96.075035. arXiv:1603.09237 [hep-ph], https://arxiv.org/abs/1603.09237
11. G. Cacciapaglia, A. Carvalho, A. Deandrea, T. Flacke, B. Fuks, D. Majumder, L. Panizzi and H. S. Shao, "Next-to-leading-order predictions for single vector-like quark production at the LHC," Phys. Lett. B **793** (2019) 206, DOI:10.1016/j.physletb.2019.04.056. arXiv:1811.05055 [hep-ph], https://arxiv.org/abs/1907.05929
12. R. Benbrik, E.Bergeaas Kuutmann, D. Buarque Franzosi, V. Ellajosyula, R. Enberg, G. Ferretti, M. Isacson, Yao-Bei Liu, T. Mandal, T. Mathisen, S. Moretti and L. Panizzi, "Signatures of vector-like top partners decaying into new neutral scalar or pseudoscalar bosons," JHEP **05** (2020), 028, DOI:10.1007/JHEP05(2020)028. arXiv:1907.05929 [hep-ph], https://arxiv.org/abs/1907.05929

Alessandro Pilloni

Lista scelta di pubblicazioni

[1] C. Fernández-Ramírez, A. Pilloni, M. Albaladejo, A. Jackura, V. Mathieu, M. Mikhasenko, J. Silva-Castro, and A. Szczepaniak, *Interpretation of the LHCb $P_c(4312)$ Signal*, *Phys.Rev.Lett.* **123** (2019), 092001 [arXiv:1904.10021].

[2] A. Rodas, A. Pilloni, M. Albaladejo, C. Fernández-Ramírez, A. Jackura, V. Mathieu, M. Mikhasenko, J. Nys, V. Pauk, B. Ketzer, and A. P. Szczepaniak, *Determination of the pole position of the lightest hybrid meson candidate*, *Phys.Rev.Lett.* **122** (2019), 042002 [arXiv:1810.04171].

[3] A. Jackura, C. Fernández-Ramírez, M. Mikhasenko, V. Mathieu, J. Nys, A. Pilloni, K. Saldaña, N. Sherrill, and A. P. Szczepaniak, *Phenomenology of Relativistic $\mathbf{3} \to \mathbf{3}$ Reaction Amplitudes within the Isobar Approximation*, *Eur.Phys.J.* **C79** (2019), 56 [arXiv:1809.10523].

[4] A. Pilloni, C. Fernández-Ramírez, A. Jackura, V. Mathieu, M. Mikhasenko, J. Nys, and A. P. Szczepaniak, *Amplitude analysis and the nature of the $Z_c(3900)$*, *Phys.Lett.* **B772** (2017), 200–209 [arXiv:1612.06490].

[5] A. Esposito, A. Pilloni, and A. Polosa, *Multiquark Resonances*, *Phys.Rept.* **668** (2017), 1–97 [arXiv:1611.07920].

[6] A. N. Hiller Blin, C. Fernández-Ramírez, A. Jackura, V. Mathieu, V. I. Mokeev, A. Pilloni, and A. P. Szczepaniak, *Studying the $P_c(4450)$ resonance in J/ψ photoproduction off protons*, *Phys.Rev.* **D94** (2016), 034002 [arXiv:1606.08912].

[7] A. Esposito, A. Pilloni, and A. D. Polosa, *Hybridized Tetraquarks*, *Phys.Lett.* **B758** (2016), 292–295 [arXiv:1603.07667].

[8] A. Esposito, A. Guerrieri, L. Maiani, F. Piccinini, A. Pilloni, A. Polosa, and V. Riquer, *Observation of light nuclei at ALICE and the $X(3872)$ conundrum*, *Phys.Rev.* **D92** (2015), 034028 [arXiv:1508.00295].

[9] A. Esposito, A. Guerrieri, and A. Pilloni, *Probing the nature of $Z_c^{(\prime)}$ states via the $\eta_c\,\rho$ decay*, *Phys.Lett.* **B746** (2015), 194–201 [arXiv:1409.3551].

[10] A. Guerrieri, F. Piccinini, A. Pilloni, and A. Polosa, *Production of Tetraquarks at the LHC*, *Phys.Rev.* **D90** (2014), 034003 [arXiv:1405.7929].

[11] A. Esposito, M. Papinutto, A. Pilloni, A. Polosa, and N. Tantalo, *Doubly Charmed Tetraquarks in B_c and Ξ_{bc} Decays*, *Phys.Rev.* **D88** (2013), 054029 [arXiv:1307.2873].

[12] R. Faccini, L. Maiani, F. Piccinini, A. Pilloni, A. Polosa, and V. Riquer, *$J^{PG} = 1^{++}$ charged resonance in the $Y(4260)$ to $\pi^+\pi^- J/\psi$ decay?*, *Phys.Rev.* **D87** (2013), 111102 [arXiv:1303.6857].

Elecno Pubblicazioni e Tesi

1. L. Freidel, M. Geiller and D. Pranzetti, **"Edge modes of gravity - I: Corner potentials and charges"**, JHEP **11** (2020), 026, e–print: hep-th/2006.12527.

2. L. Freidel, E. R. Livine and D. Pranzetti, **"Gravitational edge modes: From Kac-Moody charges to Poincaré networks"**, Class. Quant. Grav. **36**, no. 19, 195014 (2019), e–print: hep-th/1906.07876.

3. E. Alesci, S. Bahrami and D. Pranzetti, **"Quantum gravity predictions for black hole interior geometry"**, Phys. Lett. B **797**, 134908 (2019), e–print: gr-qc/1904.12412.
4. L. Freidel, A. Perez and D. Pranzetti, **"Loop gravity string"**, Phys. Rev. D **95**, no. 10, 106002 (2017), e–print: gr-qc/1611.03668.

5. D. Oriti, D. Pranzetti and L. Sindoni, **"Horizon entropy from quantum gravity condensates"**, Phys. Rev. Lett. **116**, 211301 (2016), e–print: gr-qc/1510.06991.

6. D. Oriti, D. Pranzetti, J. P. Ryan and L. Sindoni, **"Generalized quantum gravity condensates for homogeneous geometries and cosmology"**, Class. Quant. Grav. **32**, no. 23, 235016 (2015), e–print: gr-qc/1501.00936.

7. A. Ghosh, D. Pranzetti, **"CFT/Gravity Correspondence on the Isolated Horizon"**, Nucl. Phys. B **889**, 1 (2014), e–print: gr-qc/1405.7056.

8. D. Pranzetti, **"Turaev-Viro amplitudes from 2+1 Loop Quantum Gravity"**, Phys. Rev. D **89** (2014) 8, 084058, e–print: gr-qc/1305.6714.

9. D. Pranzetti, **"Geometric temperature and entropy of quantum isolated horizon"**, Phys. Rev. D **89**, 104046 (2014), e–print: gr-qc/1305.6714.

10. D. Pranzetti, **"Radiation from quantum weakly dynamical horizons in Loop Quantum Gravity"**, Phys. Rev. Lett. **109**, 011301 (2012), e–print: gr-qc/1204.0702.

11. J. Engle, K. Noui, A. Perez and D. Pranzetti, **"The SU(2) Black Hole entropy revisited"**, JHEP **1105** (2011) 016, e–print: gr-qc/1103.2723.

12. J. Engle, K. Noui, A. Perez, D. Pranzetti, **"Black hole entropy from an SU(2)-invariant formulation of Type I isolated horizons"**, Phys. Rev. D **82** (2010) 044050, e–print: gr-qc/1006.0634.

Tesi

- D. Pranzetti, **"TQFT and Loop Quantum Gravity: 2+1 theory and Black Hole Entropy"**, PhD Thesis, Université de Provence, 2011, http://www.theses.fr/2011AIX10032.

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LISTA DI TESI E PUBBLICAZIONI PRESENTATE

12 Pubblicazioni

[1] J. Huang, A. Madden, D. Racco e M. Reig, *Maximal axion misalignment from a minimal model*. In: *JHEP* 10 (2020), p. 143. arXiv: 2006.07379 [hep-ph].

[2] A. Hook, J. Huang e D. Racco, *Minimal signatures of the Standard Model in non-Gaussianities*. In: *Phys. Rev. D* 101.2 (2020), p. 023519. arXiv: 1908.00019 [hep-ph].

[3] A. Hook, J. Huang e D. Racco, *Searches for other vacua. Part II. A new Higgstory at the cosmological collider*. In: *JHEP* 01 (2020), p. 105. arXiv: 1907.10624 [hep-ph].

[4] G. Franciolini, G. Giudice, D. Racco e A. Riotto, *Implications of the detection of primordial gravitational waves for the Standard Model*. In: *JCAP* 05 (2019), p. 022. arXiv: 1811.08118 [hep-ph].

[5] N. Bartolo, V. De Luca, G. Franciolini, M. Peloso, D. Racco e A. Riotto, *Testing primordial black holes as dark matter with LISA*. In: *Phys. Rev. D* 99.10 (2019), p. 103521. arXiv: 1810.12224 [astro-ph.CO].

[6] J. R. Espinosa, D. Racco e A. Riotto, *A Cosmological Signature of the SM Higgs Instability: Gravitational Waves*. In: *JCAP* 09 (2018), p. 012. arXiv: 1804.07732 [hep-ph].

[7] J. Espinosa, D. Racco e A. Riotto, *Cosmological Signature of the Standard Model Higgs Vacuum Instability: Primordial Black Holes as Dark Matter*. In: *Phys. Rev. Lett.* 120.12 (2018), p. 121301. arXiv: 1710.11196 [hep-ph].

[8] A. Ismail, A. Katz e D. Racco, *On Dark Matter Interactions with the Standard Model through an Anomalous Z'*. In: *JHEP* 10 (2017), p. 165. arXiv: 1707.00709 [hep-ph].

[9] F. Farakos, A. Kehagias, D. Racco e A. Riotto, *Scanning of the Supersymmetry Breaking Scale and the Gravitino Mass in Supergravity*. In: *JHEP* 06 (2016), p. 120. arXiv: 1605.07631 [hep-th].

[10] D. Abercrombie et al., *Dark Matter Benchmark Models for Early LHC Run-2 Searches: Report of the ATLAS/CMS Dark Matter Forum*. In: *Phys. Dark Univ.* 27 (2020). A cura di A. Boveia, C. Doglioni, S. Lowette, S. Malik e S. Mrenna, p. 100371. arXiv: 1507.00966 [hep-ex].

[11] J. Abdallah et al., *Simplified Models for Dark Matter Searches at the LHC*. In: *Phys. Dark Univ.* 9-10 (2015), pp. 8–23. arXiv: 1506.03116 [hep-ph].

[12] D. Racco, A. Wulzer e F. Zwirner, *Robust collider limits on heavy-mediator Dark Matter*. In: *JHEP* 05 (2015), p. 009. arXiv: 1502.04701 [hep-ph].

Tesi di Dottorato

[13] D. Racco, "*Theoretical models for Dark Matter: from WIMPs to Primordial Black Holes*". Tesi di dott. University of Geneva, set. 2018.

Lista pubblicazioni valide per la procedura di selezione

Gli autori sono elencati in ordine alfabetico come consueto nella comunità scientifica di riferimento.

1. A. Riello
   Soft charges from the geometry of field space.
   JHEP 05 (2020) 125
   doi: 10.1007/JHEP05(2020)125

2. L. Freidel, F. Hopfmüller, A. Riello
   Asymptotic Renormalization in Flat Space: Symplectic Potential and Charges of Electromagnetism.
   JHEP 10 (2019) 126
   doi: 10.1007/JHEP10(2019)126

3. H. Gomes, F. Hopfüller, A. Riello
   A unified geometric framework for boundary charges and dressings: non-Abelian theory and matter.
   Nucl.Phys.B 941 (2019), 249-315
   doi: 10.1016/j.nuclphysb.2019.02.020

4. A. Riello
   Quantum edge modes in 3d gravity and 2+1d topological phases of matter.
   Phys.Rev.D 98 (2018) 106002
   doi: 10.1103/PhysRevD.98.106002

5. B. Dittrich, C. Goeller, E. Livine, A. Riello
   Quasi-local holographic dualities in non-perturbative 3d quantum gravity.
   Classical Quant.Grav. 35 13LT01 (2018)
   doi: 10.1088/1361-6382/aac606

6. C. Delcamp, B. Dittrich, A. Riello
   On entanglement entropy in non-Abelian lattice gauge theory and 3D quantum gravity.
   JHEP 11 (2016) 102
   doi: 10.1007/JHEP11(2016)102

7. C. Delcamp, B. Dittrich, A. Riello
   Fusion basis for lattice gauge theory and loop quantum gravity.
   JHEP 02 (2017) 061
   doi: 10.1007/JHEP02(2017)061

8. A. Riello
   Self-dual phase space for 3+1 lattice Yang–Mills theory.
   Phys.Rev.D 97 (2018) 025003
   doi: 10.1103/PhysRevD.97.025003

9. M. Han, H. Haggard, W. Kamiński, A. Riello
SL(2,C) Chern-Simons theory, a non-planar graph operator, and 4D loop quantum gravity with a cosmological constant: semiclassical geometry.
Nucl.Phys.B 900 (2015), 1–79
doi: 10.1016/j.nuclphysb.2015.08.023

10. M. Han, H. Haggard, A. Riello
Encoding curved tetrahedra in face holonomies: a phase space of shapes from group-valued moment maps.
Ann.Henri Poincaré 17 (2016), 2001–2048
doi: 10.1007/s00023-015-0455-4

11. AR. Self-energy of the Lorentzian Engle-Pereira-Rovelli-Livine and Freidel-Krasnov model of quantum gravity.
Phys.Rev.D 88 (2013), 024011
doi: 10.1103/PhysRevD.88.024011

12. V. Bonzom, R. Gurau, A. Rriello, V. Rivasseau
Critical behavior of colored tensor models in the large N limit.
Nucl.Phys.B 853 (2011), 174–195
doi: 10.1016/j.nuclphysb.2011.07.022

Tesi di dottorato

(PhD) A. Riello
Radiative Corrections in Spinfoam Quantum Gravity
Université de Aix-Marseille, July 2014
www.theses.fr/2014AIXM4028

Fabrizio Rompineve Sorbello

Elenco delle pubblicazioni presentate

(in ordine cronologico)

1 G. Ballesteros, A. Notari and F. Rompineve, *The H_0 tension: ΔG_N vs. ΔN_{eff}*, JCAP **2011** (2020), 024, *arXiv:2004.05049*.

2 M. Gonzalez, M. Hertzberg and F. Rompineve, *Ultralight Scalar Decay and the Hubble Tension*, JCAP **2010** (2020) 028, *arXiv:2006.13959*.

3 B. von Harling, A. Pomarol, O. Pujolàs and F. Rompineve, *Peccei-Quinn Phase Transition at LIGO*, JHEP **2004** (2020) 195, *arXiv:1912.01638*.

4 J. Ollé, O. Pujolàs and F. Rompineve *Oscillons and Dark Matter*, JCAP **2002** (2020) no.02, 006, *arXiv:1906.06352*.

5 P. Baratella, A. Pomarol and F. Rompineve, *The Supercooled Universe*, JHEP **1903** (2019) 100, *arXiv:1812.06996*.

6 F. Ferrer, E. Masso, G. Panico, O. Pujolas and F. Rompineve, *Primordial Black Holes from the QCD axion*, Phys.Rev.Lett. **122** (2019) no.10, 101301, *arXiv:1807.01707*.

7 M. Farina, D. Pappadopulo, F. Rompineve and A. Tesi, *The photo-philic QCD axion*, JHEP **1701** (2017) 095, *arXiv:1611.09855*.

8 A. Hebecker, F. Rompineve and A. Westphal, *Axion Monodromy and the Weak Gravity Conjecture*, JHEP **1604** (2016) 157, *arXiv:1512.03768*.

9 A. Hebecker, P. Mangat, F. Rompineve and L. T. Witkowski, *Winding out of the Swamp: Evading the Weak Gravity Conjecture with F-term Winding Inflation?*, Phys. Lett. B **748** (2015) 455, *arXiv:1503.07912*.

10 A. Hebecker, P. Mangat, F. Rompineve and L. T. Witkowski, *Tuning and Backreaction in F-term Axion Monodromy Inflation*, Nucl. Phys. B **894** (2015) 456, *arXiv:1411.2032*.

11 A. Hebecker, P. Mangat, F. Rompineve and L. T. Witkowski, *Dark Radiation predictions from general Large Volume Scenarios*, JHEP **1409** (2014) 140, *arXiv:1403.6810*.

12 F. Rompineve, *Weak Scale Baryogenesis in a Supersymmetric Scenario with R-parity violation*, JHEP **1408** (2014) 014, *arXiv:1310.0840*.

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- F. Rompineve, *Imprints of Quantum Gravity on Large Field Inflation and Reheating*, April 18, 2017, University of Heidelberg (Germany), doi: 10.11588/heidok.00022904.

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1. CAPONE, MONICA, RUGGIERO, MATTEO LUCA (2010). Jumping from Higher-Order to Scalar-Tensor Theories and the relations between their PPN parameters. CLASSICAL AND QUANTUM GRAVITY, vol. 27, ISSN: 0264-9381, doi: 10.1088/0264-9381/27/12/125006

2. G Farrugia, J. Levi Said, Ruggiero M (2016). Solar System tests in f(T) gravity . PHYSICAL REVIEW D, vol. 93, 104034, ISSN: 2470-0010, doi: 10.1103/PhysRevD.93.104034

3. ALLEMANDI G., FRANCAVIGLIA M., RUGGIERO, MATTEO LUCA, TARTAGLIA, Angelo (2005). Post-Newtonian Parameters from Alternative Theories of Gravity. GENERAL RELATIVITY AND GRAVITATION, vol. 37, p. 1891-1900, ISSN: 0001-7701

4. E. Battista, A. Tartaglia, G. Esposito, D. Lucchesi, Ruggiero M, P. Valko, S. D. Agnello, L. Di Fiore, J. Simo, and A. Grado (2017). Quantum time delay in the gravitational field of a rotating mass. CLASSICAL AND QUANTUM GRAVITY, vol. 34, 165008, ISSN: 0264-9381, doi: 10.1088/1361-6382/aa7f11

5. Iorio L, Radicella N, Ruggiero M (2015). Constraining f(T) gravity in the Solar System. JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS, vol. 2015, ISSN: 1475-7516, doi: 10.1088/1475-7516/2015/08/021

6. RUGGIERO, MATTEO LUCA, TARTAGLIA, Angelo (2002). Gravitomagnetic effects. IL NUOVO CIMENTO DELLA SOCIETÀ ITALIANA DI FISICA. B, GENERAL PHYSICS, RELATIVITY, ASTRONOMY AND MATHEMATICAL PHYSICS AND METHODS, vol. 117, p. 743-767, ISSN: 1594-9982

7. Bosi F., Cella G., Di Virgilio A., Ortolan A., Porzio A., Solimeno S., Cerdonio M., Zendri J. P., Allegrini M., Belfi J., Beverini N., Bouhadef B., Carelli G., Ferrante I., Maccioni E., Passaquieti R., Stefani F., RUGGIERO, MATTEO LUCA, TARTAGLIA, Angelo, Schreiber K. U., Gebauer A., Wells J. P. R. (2011). Measuring gravito-magnetic effects by multi ring-laser gyroscope. PHYSICAL REVIEW D, PARTICLES, FIELDS, GRAVITATION, AND COSMOLOGY, vol. 84, p. 122002-1-122002-23, ISSN: 1550-7998, doi: 10.1103/PhysRevD.84.122002

8 .Iorio L, Ruggiero M (2018). Constraining some r?n extra-potentials in modified gravity models with LAGEOS-type laser-ranged geodetic satellites. JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS, vol. 1810, JCAP10(2018)021, ISSN: 1475-7516, doi: https://doi.org/10.1088/1475-7516/2018/10/021

9. Ruggiero M, Radicella N (2015). Weak-Field Spherically Symmetric Solutions in $f(T)$ gravity. PHYSICAL REVIEW D, PARTICLES, FIELDS, GRAVITATION, AND COSMOLOGY, vol. D91, 104014, ISSN: 1550-7998, doi: 10.1103/PhysRevD.91.

10. Iorio L, RUGGIERO, MATTEO LUCA, Lichtenegger H. I. M., Corda C. (2011). Phenomenology of the Lense-Thirring effect in the Solar System. ASTROPHYSICS AND SPACE SCIENCE, vol. 331, p. 351-395, ISSN: 0004-640X, doi: 10.1007/s10509-010-0489-5

11. Matteo Luca Ruggiero and Antonello Ortolan. (2020) Gravitomagnetic resonance in the field of a gravitational wave.
Published in Phys.Rev. D120 (2020) 101501 (R) (APS, Ridge, NY, USA)
DOI: 10.1103/PhysRevD.102.101501

12. Matteo Luca Ruggiero, Antonello Ortolan. Gravito-electromagnetic approach for the space-time of a plane gravitational wave
Published in J. Phys. Commun. 4 055013 (IOP, London)

DOI: 10.1088/2399-6528/ab9320

Elenco delle pubblicazioni presentate (12 oltre la tesi di dottorato) **Ennio Salvioni**

In ordine cronologico:

1. E. Salvioni, G. Villadoro and F. Zwirner
   Minimal Z' models: present bounds and early LHC reach
   JHEP 11 (2009) 068, arXiv:0909.1320 [hep-ph]. Citazioni: 141.

2. M. Gillioz, R. Gröber, C. Grojean, M. Mühlleitner and E. Salvioni
   Higgs Low-Energy Theorem (and its corrections) in Composite Models
   JHEP 10 (2012) 004, arXiv:1206.7120 [hep-ph]. Citazioni: 148.

3. M. Farina, C. Grojean, F. Maltoni, E. Salvioni and A. Thamm
   Lifting degeneracies in Higgs couplings using single top production in association with a Higgs boson
   JHEP 05 (2013) 022, arXiv:1211.3736 [hep-ph]. Citazioni: 145.

4. M. Montull, F. Riva, E. Salvioni and R. Torre
   Higgs Couplings in Composite Models
   PRD 88 (2013) 095006, arXiv:1308.0559 [hep-ph]. Citazioni: 59.

5. C. Grojean, E. Salvioni, M. Schlaffer and A. Weiler
   Very boosted Higgs in gluon fusion
   JHEP 05 (2014) 022, arXiv:1312.3317 [hep-ph]. Citazioni: 150.

6. A. Azatov, C. Grojean, A. Paul and E. Salvioni
   Taming the off-shell Higgs boson
   ZhETF 147 (2015) 410 [JETP 120 (2015) 354] (special issue in honor of the 60^{th} birthday of V. Rubakov), arXiv:1406.6338 [hep-ph]. Citazioni: 83.

7. J. Dror, M. Farina, E. Salvioni and J. Serra
   Strong tW scattering at the LHC
   JHEP 01 (2016) 071, arXiv:1511.03674 [hep-ph]. Citazioni: 40.

8. H.-C. Cheng, S. Jung, E. Salvioni and Y. Tsai
   Exotic quarks in Twin Higgs models
   JHEP 03 (2016) 074, arXiv:1512.02647 [hep-ph]. Citazioni: 48.

9. R. Balkin, M. Ruhdorfer, E. Salvioni and A. Weiler
   Charged composite scalar dark matter
   JHEP 11 (2017) 094, arXiv:1707.07685 [hep-ph]. Citazioni: 28.

10. H.-C. Cheng, L. Li, E. Salvioni and C. Verhaaren
    Singlet scalar top partners from accidental supersymmetry
    JHEP 05 (2018) 057, arXiv:1803.03651 [hep-ph]. Citazioni: 32.

11. R. Balkin, M. Ruhdorfer, E. Salvioni and A. Weiler
    Dark matter shifts away from direct detection
    JCAP 11 (2018) 050, arXiv:1809.09106 [hep-ph]. Citazioni: 25.

12. M. Ruhdorfer, E. Salvioni and A. Weiler
    A global view of the off-shell Higgs portal
    SciPost Physics 8 (2020) 027, arXiv:1910.04170 [hep-ph]. Citazioni: 13.

- Tesi di dottorato: *Phenomenology of Compositeness at the LHC*, Università di Padova, 07/2013.

Ginevra, 1 dicembre 2020

ELENCO PUPPLICAZIONI DA PRESENTARE

1) Johannes Noller, Luca Santoni, Enrico Trincherini, Leonardo G. Trombetta. *Black Hole Ringdown as a Probe for Dark Energy*. Phys. Rev. D 101 (2020) 084049, arXiv:1911.11671 [gr-qc].

2) Lam Hui, Daniel Kabat, Xinyu Li, Luca Santoni, Sam S.C. Wong. *Black Hole Hair from Scalar Dark Matter*. JCAP 06 (2019) 038, arXiv:1904.12803 [gr-qc].

3) Gabriele Franciolini, Lam Hui, Riccardo Penco, Luca Santoni, Enrico Trincherini. *Stable wormholes in scalar-tensor theories* . JHEP 01 (2019) 221, arXiv:1811.05481 [hep-th].

4) Gabriele Franciolini, Lam Hui, Riccardo Penco, Luca Santoni, Enrico Trincherini. *Effective Field Theory of Black Hole Quasinormal Modes in Scalar-Tensor Theories*. JHEP 02 (2019) 127, arXiv: 1810.07706 [hep-th].

5) Luca Santoni, Enrico Trincherini, Leonardo G. Trombetta. *Behind Horndeski: structurally robust higher derivative EFTs*. JHEP 08 (2018) 118, arXiv:1806.10073 [hep-th].

6) Bernardo Finelli, Garrett Goon, Enrico Pajer and Luca Santoni. *The Effective Theory of Shift-Symmetric Cosmologies*. JCAP 05 (2018) 060, arXiv:1802.01580 [hep-th].

7) Bernardo Finelli, Garrett Goon, Enrico Pajer and Luca Santoni. *Soft Theorems For Shift- Symmetric Cosmologies*. Phys. Rev. D 97 (2018) 063531, arXiv:1711.03737 [hep-th].

8) Paolo Creminelli, David Pirtskhalava, Luca Santoni and Enrico Trincherini. *Stability of Geodesically Complete Cosmologies*. JCAP 11 (2016) 047, arXiv:1610.04207 [hep-th].

9) David Pirtskhalava, Luca Santoni and Enrico Trincherini. *Constraints on Single-Field Inflation*. JCAP 06 (2016) 051, arXiv:1511.01817 [hep-th].

10) David Pirtskhalava, Luca Santoni, Enrico Trincherini and Filippo Vernizzi. *Large Non- Gaussianity in Slow-Roll Inflation*. JHEP 04 (2016) 117, arXiv:1506.06750 [hep-th].

11) David Pirtskhalava, Luca Santoni, Enrico Trincherini and Filippo Vernizzi. *Weakly Broken Galileon Symmetry*. JCAP 09 (2015) 007, arXiv:1505.00007 [hep-th].

12) David Pirtskhalava, Luca Santoni, Enrico Trincherini and Patipan Uttayarat. *Inflation from Minkowski Space*. JHEP 12 (2014) 151, arXiv:1410.0882 [hep-th].

TESI DI DOTTORATO: Luca Santoni, *Weakly Broken Galileon Symmetry in Cosmology. arXiv: 1612.01154 [hep-th]*.

LUCA SANTONI 28 NOVEMBRE 2020

Allegato C

Il sottoscritto **SEBASTIANI LORENZO** CODICE FISCALE Omissis

consapevole che le dichiarazioni mendaci sono punite ai sensi del Codice penale e delle leggi speciali in materia

DICHIARA:

che le seguenti pubblicazioni allegate alla domanda sono conformi all'originale:

1. A. Casalino, M. Rinaldi, L. Sebastiani and S. Vagnozzi, Class. Quant. Grav. 36, no. 1, 017001 (2019) [arXiv: 1811.06830 [gr-qc]];

2. A. Casalino, M. Rinaldi, L. Sebastiani and S. Vagnozzi, Phys. Dark Univ. 22, 108 (2018) [arXiv:1803.02620 [gr-qc]];

3. L.Sebastiani,L.VanzoandS.Zerbini,Phys.Rev.D97(2018)no.4,044009[arXiv:1710.05686 [hep-th]];

4. S. D. Odintsov, V. K. Oikonomou and L. Sebastiani, Nucl. Phys. B 923 (2017) 608 [arXiv:1708.08346 [gr-qc]];

5. L. Sebastiani, S. Vagnozzi and R. Myrzakulov, Adv. High Energy Phys. 2017, 3156915 (2017) [arXiv: 1612.08661 [gr-qc]];

6. G. Cognola, R. Myrzakulov, L. Sebastiani, S. Vagnozzi and S. Zerbini, Class. Quant. Grav. 33, no. 22, 225014 (2016) [arXiv:1601.00102 [gr-qc]];

7. R. Myrzakulov, L. Sebastiani, S. Vagnozzi and S. Zerbini, Class. Quant. Grav. 33, 12 (2016) [arXiv: 1510.02284 [gr-qc]];

8. L. Sebastiani and R. Myrzakulov, Int. J. Geom. Meth. Mod. Phys. 12, no. 09, 1530003 (2015) [arXiv: 1506.05330 [gr-qc]];

9. R.Myrzakulov,L.SebastianiandS.Vagnozzi,Eur.Phys.J.C75,444(2015)[arXiv:1504.07984 [gr-qc]];

10. R. Myrzakulov, S. Odintsov and L. Sebastiani, Phys. Rev. D 91 (2015) no.8, 083529 [arXiv:1412.1073 [gr-qc]];

11. L. Sebastiani, G. Cognola, R. Myrzakulov, S. D. Odintsov and S. Zerbini, Phys. Rev. D 89, 023518 (2014) [arXiv:1311.0744 [gr-qc]];

12. L. Sebastiani, D. Momeni, R. Myrzakulov and S. D. Odintsov, Phys. Rev. D. 88 104022 (2013) arXiv: 1305.4231 [gr-qc];

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Daniele Teresi

1. A. Strumia and D. Teresi, "Relaxing the Higgs mass and its vacuum energy by living at the top of the potential," Phys. Rev. D 101 (2020) no.11, 1150021 [arXiv:2002.02463 [hep-ph]].

2. D. Buttazzo, L. Di Luzio, G. Landini, A. Strumia and D. Teresi, "Dark Matter from self-dual gauge/Higgs dynamics," JHEP 10 (2019), 067 [arXiv:1907.11228 [hep-ph]].

3. L. Di Luzio, M. Redi, A. Strumia and D. Teresi, "Coset Cosmology," JHEP 06 (2019), 110 [arXiv:1902.05933 [hep-ph]].

4. J. Heeck and D. Teresi, "Pati-Salam explanations of the B-meson anomalies," JHEP 1812 (2018) 103 [arXiv:1808.07492 [hep-ph]].

5. T. Hambye, A. Strumia and D. Teresi, "Super-cool Dark Matter," JHEP 1808 (2018) 188 [arXiv:1805.01473 [hep-ph]].

6. D. Teresi, "Clockwork without supersymmetry," Phys. Lett. B 783 (2018) 1 [arXiv:1802.01591 [hep-ph]].

7. J. Heeck and D. Teresi, "Cold keV dark matter from decays and scatterings," Phys. Rev. D 96 (2017) no.3, 035018 [arXiv:1706.09909 [hep-ph]].

8. T. Hambye, D. Teresi and M. H. G. Tytgat, "A Clockwork WIMP," JHEP 1707 (2017) 047. arXiv:1612.06411 [hep-ph].

9. T. Hambye and D. Teresi, "Higgs doublet decay as the origin of the baryon asymmetry," Phys. Rev. Lett. 117 (2016) 091801. arXiv:1606.00017 [hep-ph].

10. P. S. Bhupal Dev, P. Millington, A. Pilaftsis and D. Teresi, "Kadanoff-Baym approach to flavour mixing and oscillations in resonant leptogenesis," Nucl. Phys. B 891 (2015) 128. arXiv:1410.6434 [hep-ph].

11. P. S. Bhupal Dev, P. Millington, A. Pilaftsis and D. Teresi, "Flavour Covariant Transport Equations: an Application to Resonant Leptogenesis," Nucl. Phys. B 886 (2014) 569. arXiv:1404.1003 [hep-ph].

12. A. Pilaftsis and D. Teresi, "Symmetry Improved CJT Effective Action," Nucl. Phys. B 874 (2013) 594. arXiv:1305.3221 [hep-ph].

13. Tesi di dottorato: "Quantum Field Theory for the Early Universe"

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Arsenii Titov

1 December 2020

Journal Articles

12. M. Chala and A. Titov, *One-loop running of dimension-six Higgs-neutrino operators and implications of a large neutrino dipole moment*, *JHEP* **09** (2020) 188 [arXiv:2006.14596].

11. M. Blennow, M. Ghosh, T. Ohlsson and A. Titov, *Probing Lepton Flavor Models at Future Neutrino Experiments*, *Phys. Rev. D* **102** (2020) 115004 [arXiv:2005.12277].

10. M. Chala and A. Titov, *One-loop matching in the SMEFT extended with a sterile neutrino*, *JHEP* **05** (2020) 139 [arXiv:2001.07732].

9. J. M. Butterworth, M. Chala, C. Englert, M. Spannowsky and A. Titov, *Higgs Phenomenology as a Probe of Sterile Neutrinos*, *Phys. Rev. D* **100** (2019) 115019 [arXiv:1909.04665].

8. P. P. Novichkov, J. T. Penedo, S. T. Petcov and A. V. Titov, *Generalised CP Symmetry in Modular-Invariant Models of Flavour*, *JHEP* **07** (2019) 165 [arXiv:1905.11970].

7. J. Alcaide, S. Banerjee, M. Chala and A. Titov, *Probes of the Standard Model Effective Field Theory Extended with a Right-Handed Neutrino*, *JHEP* **08** (2019) 031 [arXiv:1905.11375].

6. M. Blennow, E. Fernandez-Martinez, A. Olivares-Del Campo, S. Pascoli, S. Rosauro-Alcaraz and A. V. Titov, *Neutrino Portals to Dark Matter*, *Eur. Phys. J. C* **79** (2019) 555 [arXiv:1903.00006].

5. P. P. Novichkov, J. T. Penedo, S. T. Petcov and A. V. Titov, *Modular A_5 Symmetry for Flavour Model Building*, *JHEP* **04** (2019) 174 [arXiv:1812.02158].

4. P. P. Novichkov, J. T. Penedo, S. T. Petcov and A. V. Titov, *Modular S_4 Models of Lepton Masses and Mixing*, *JHEP* **04** (2019) 005 [arXiv:1811.04933].

3. S. T. Petcov and A. V. Titov, *Assessing the Viability of A_4, S_4 and A_5 Flavour Symmetries for Description of Neutrino Mixing*, *Phys. Rev. D* **97** (2018) 115045 [arXiv:1804.00182].

2. I. Girardi, S. T. Petcov, A. J. Stuart and A. V. Titov, *Leptonic Dirac CP Violation Predictions from Residual Discrete Symmetries*, *Nucl. Phys. B* **902** (2016) 1 [arXiv:1509.02502].

1. I. Girardi, S. T. Petcov and A. V. Titov, *Determining the Dirac CP Violation Phase in the Neutrino Mixing Matrix from Sum Rules*, *Nucl. Phys. B* **894** (2015) 733 [arXiv:1410.8056].

PhD Thesis

1. A. V. Titov, *Phenomenology of the Discrete Symmetry Approach to Neutrino Mixing and Leptonic CP Violation*, SISSA, 2017, http://hdl.handle.net/20.500.11767/57146.

[1] Only publications presented for evaluation are included.

Tesi di dottorato

"Lights in the dark", Lorenzo Ubaldi, Marzo 2011, University of California, Santa Cruz

Elenco delle 12 pubblicazioni allegate

[1] T. Kobayashi and L. Ubaldi, "Inflaxion Dark Matter," JHEP **08**, 147 (2019) doi:10.1007/JHEP08(2019)147 [arXiv:1907.00984 [hep-ph]].

[2] L. Di Luzio, E. Nardi and L. Ubaldi, "Accidental Peccei-Quinn symmetry protected to arbitrary order," Phys. Rev. Lett. **119**, no. 1, 011801 (2017) doi:10.1103/PhysRevLett.119.011801 [arXiv:1704.01122 [hep-ph]].

[3] R. S. Gupta, Z. Komargodski, G. Perez and L. Ubaldi, "Is the Relaxion an Axion?," JHEP **1602**, 166 (2016) doi:10.1007/JHEP02(2016)166 [arXiv:1509.00047 [hep-ph]].

[4] S. Colucci, H. K. Dreiner, F. Staub and L. Ubaldi, "Heavy concerns about the light axino explanation of the 3.5 keV X-ray line," Phys. Lett. B **750**, 107 (2015) doi:10.1016/j.physletb.2015.09.009 [arXiv:1507.06200 [hep-ph]].

[5] L. Feng, S. Profumo and L. Ubaldi, "Closing in on singlet scalar dark matter: LUX, invisible Higgs decays and gamma-ray lines," JHEP **1503**, 045 (2015) [arXiv:1412.1105 [hep-ph]].

[6] H. K. Dreiner, J. F. Fortin, C. Hanhart and L. Ubaldi, "Supernova Constraints on MeV Dark Sectors from e+ e- Annihilations," Phys. Rev. D **89**, 105015 (2014) [arXiv:1310.3826 [hep-ph]].

[7] H. K. Dreiner, J.-F. Fortin, J. Isern and L. Ubaldi, "White Dwarfs constrain Dark Forces," Phys. Rev. D **88**, 043517 (2013) [arXiv:1303.7232 [hep-ph]].

[8] N. Bernal, F.-X. Josse-Michaux and L. Ubaldi, "Phenomenology of WIMPy baryogenesis models," JCAP **1301**, 034 (2013) [arXiv:1210.0094 [hep-ph]].

[9] S. Profumo, L. Ubaldi, C. Wainwright, "Singlet Scalar Dark Matter: monochromatic gamma rays and metastable vacua," Phys. Rev. **D82**, 123514 (2010). [arXiv:1009.5377 [hep-ph]].

[10] M. Gorchtein, S. Profumo and L. Ubaldi, "Probing Dark Matter with AGN Jets," Phys. Rev. D **82**, 083514 (2010) [Erratum-ibid. D **84**, 069903 (2011)] [arXiv:1008.2230 [astro-ph.HE]].

[11] S. Profumo, K. Sigurdson, L. Ubaldi, "Can we discover dual-component thermal WIMP dark matter?," JCAP **0912**, 016 (2009). [arXiv:0907.4374 [hep-ph]].

[12] L. Ubaldi, "Effects of theta on the deuteron binding energy and the triple-alpha process," Phys. Rev. **D81**, 025011 (2010). [arXiv:0811.1599 [hep-ph]].

Elenco pubblicazioni presentate – Sunny Vagnozzi

A corredo della mia domanda di partecipazione alla procedura pubblica di selezione per il reclutamento di 1 ricercatore a tempo determinato ai sensi dell'art. 24 comma 3 lettera b) della Legge n. 240/2010 presso l'Università degli Studi Roma Tre, presento le seguenti 12 pubblicazioni (si veda anche la relativa dichiarazione sostitutiva di certificazione e dichiarazione sostitutiva dell'atto di notorietà depositata nella stessa cartella)

1. R. Foot & **S. Vagnozzi**, "*Dissipative hidden sector dark matter*", Phys. Rev. D **91** (2015) no. 02, 023512
2. R. Foot & **S. Vagnozzi**, "*Diurnal modulation signal from dissipative hidden sector dark matter*", Phys. Lett. B **748** (2015) 61-66
3. G. Cognola, R. Myrzakulov, L. Sebastiani, **S. Vagnozzi** & S. Zerbini "*Covariant Hořava-like and mimetic Horndeski gravity: cosmological solutions and perturbations*", Class. Quant. Grav. **33** (2016) no. 22, 225014
4. R. Foot & **S. Vagnozzi**, "*Solving the small-scale structure puzzles with dissipative dark matter*", JCAP no. **07** (2016) 013
5. **S. Vagnozzi**, E. Giusarma, O. Mena, K. Freese, M. Gerbino, S. Ho & M. Lattanzi, "*Unveiling ν secrets with cosmological data: neutrino masses and mass hierarchy*", Phys. Rev. D **96** (2017) no. 12, 123503
6. **S. Vagnozzi**, "*Recovering a MOND-like acceleration law in mimetic gravity*", Class. Quant. Grav. **34** (2017) no. 18, 185006
7. **S. Vagnozzi**, S. Dhawan, M. Gerbino, K. Freese, A. Goobar & O. Mena "*Constraints on the sum of the neutrino masses in dynamical dark energy models with $w(z) \geq -1$ are tighter than those obtained in ΛCDM*", Phys. Rev. D **98** (2018) no. 08, 083501
8. W. H. Kinney, **S. Vagnozzi** & L. Visinelli, "*The zoo plot meets the swampland: mutual (in)consistency of single-field inflation, string conjectures, and cosmological data*, Class. Quant. Grav. **36** (2019) no. 11, 117001
9. **S. Vagnozzi** & L. Visinelli, "*Hunting for extra dimensions in the shadow of M87**", Phys. Rev. D **100** (2019) no. 02, 024020
10. **S. Vagnozzi**, "*New physics in light of the H_0 tension: an alternative view*", Phys. Rev. D **102** (2020) no. 02, 023518
11. E. Di Valentino, A. Melchiorri, O. Mena & **S. Vagnozzi**, "*Nonminimal dark sector physics and cosmological tensions*", Phys. Rev. D **101** (2020) no. 06, 063502
12. **S. Vagnozzi**, L. Visinelli, O. Mena & D. F. Mota, "*Do we have any hope of detecting scattering between dark energy and baryons through cosmology?*", Mon. Not. Roy. Astron. Soc. **493** (2020) no. 01, 1139-1152

Presento inoltre la mia Tesi di Dottorato per il titolo di Doctor of Philosophy (Ph.D.) in Theoretical Physics, come depositata presso la Stockholm University Library (ISBN 978-91-7797-727-8 e 978-91-7797-729-2), e pubblicata nella serie Springer Theses (ISBN 978-3-030-53502-5 e 978-3-030-53501-8) in riconoscimento dello Springer Thesis Award da me vinto, dal titolo: "*Weigh them all! - Cosmological searches for the neutrino mass scale and mass ordering*"

Dr. **Mauro Valli**

ELENCO DELLE PUBBLICAZIONI PRESENTATE

1) *"Gamma-ray sky points to radial gradients in cosmic-ray transport"*,
D.Gaggero, A.Urbano, M.Valli and P.Ullio,
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ELENCO PUBBLICAZIONI

Ai sensi degli artt. 46 e 47 del D.P.R. 28/12/2000, n. 445 e s.m.i , consapevole che le dichiarazioni mendaci sono punite ai sensi del codice penale e delle leggi speciali in materia, secondo quanto previsto dall'art. 76 del D.P.R. 28/12/2000, n. 445 e s.m.i

IL SOTTOSCRITTO

COGNOME: **VISINELLI** NOME: **LUCA** CODICE FISCALE: **Omissis**

avendo presentato domanda per la Procedura di selezione per il reclutamento di n. 1 ricercatore a tempo determinato, con impegno orario a tempo pieno, di durata triennale, ai sensi dell'art. 24 comma 3 lettera b) della Legge 240/2010, per il Settore Concorsuale **02/A2** SSD Fis/02 presso il Dipartimento di Matematica e Fisica, bandita con decreto rettorale disponibile sul sito pubblico http://www.albopretorionline.it/uniroma/alboente.aspx ed il cui avviso è pubblicato sulla Gazzetta Ufficiale n. 86 del 03/11/2020

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_ Di aver presentato la dissertazione prodotta per il titolo di Doctor of Philosophy (Ph.D.) in Physics, come depositata presso The University of Utah Library, dal titolo: *Axions in Cold Dark Matter and Inflation Models*

_ Che le copie delle pubblicazioni presentate in formato .pdf sono conformi all'originale nel caso in cui non vengano prodotte pubblicazioni in originale oppure che le pubblicazioni inviate sono "native digitali" e che i relativi files presentati sono da considerarsi duplicati informatici conformi all'originale pubblicato dalla corrispettiva rivista e disponibile online ai sensi dell'art. 23-bis, comma 1 del D.Lgs 82/2005.

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