

Publications List

Dr. Savvas Nesseris

(Dated: September 25, 2020)

1. **“Euclid: Forecast constraints on the cosmic distance duality relation with complementary external probes”**
M. Martinelli *et al.* [EUCLID],
arXiv:2007.16153 [astro-ph.CO] HEP entry
2. **“Constraints on the distance duality relation with standard sirens”**
N. B. Hogg, M. Martinelli and S. Nesseris,
arXiv:2007.14335 [astro-ph.CO] HEP entry
3. **“The clustering dynamics of primordial black holes in N -body simulations”**
M. Trashorras, J. Garcia-Bellido and S. Nesseris,
arXiv:2006.15018 [astro-ph.CO] HEP entry
4. **“Is there any measurable redshift dependence on the SN Ia absolute magnitude?”**
D. Sapone, S. Nesseris and C. A. Bengaly,
arXiv:2006.05461 [astro-ph.CO] HEP entry
5. **“Cosmological constraints on non-adiabatic dark energy perturbations”**
R. Arjona, J. Garcia-Bellido and S. Nesseris,
arXiv:2006.01762 [astro-ph.CO] HEP entry
6. **“Hints of dark energy anisotropic stress using Machine Learning”**
R. Arjona and S. Nesseris.
arXiv:2001.11420 [astro-ph.CO] HEP entry
7. **“What can Machine Learning tell us about the background expansion of the Universe?”**
R. Arjona and S. Nesseris.
arXiv:1910.01529 [astro-ph.CO]
Phys. Rev. D **101**, 123525 (2020) HEP entry
8. **“Lensing convergence and anisotropic dark energy in galaxy redshift surveys”**
W. Cardona, R. Arjona and S. Nesseris.
arXiv:1907.10130 [astro-ph.CO] HEP entry
9. **“Evaporating primordial black holes as varying dark energy”**
S. Nesseris, D. Sapone and S. Sypsas.
arXiv:1907.05608 [astro-ph.CO]
Phys. Dark Univ. **27**, 100413 (2020) HEP entry
10. **“Analytic expressions for the background evolution of massive neutrinos and dark matter particles”**
R. Arjona, W. Cardona and S. Nesseris.
arXiv:1906.03160 [astro-ph.CO]
JCAP **1910**, no. 10, 060 (2019) HEP entry
11. **“Designing Horndeski and the effective fluid approach”**
R. Arjona, W. Cardona and S. Nesseris.
arXiv:1904.06294 [astro-ph.CO]
Phys. Rev. D **100**, no. 6, 063526 (2019) HEP entry
12. **“Electromagnetic probes of primordial black holes as dark matter”**
A. Kashlinsky *et al.*.
arXiv:1903.04424 [astro-ph.CO]
FERMILAB-PUB-19-111-CD HEP entry
13. **“Can the homogeneity scale be used as a standard ruler?”**
S. Nesseris and M. Trashorras.
arXiv:1901.02400 [astro-ph.CO]
Phys. Rev. D **99**, 063539 (2019) HEP entry

14. **“Unraveling the effective fluid approach for $f(R)$ models in the subhorizon approximation”**
R. Arjona, W. Cardona and S. Nesseris.
arXiv:1811.02469 [astro-ph.CO]
Phys. Rev. D **99**, no. 4, 043516 (2019) HEP entry
15. **“Internal Robustness of Growth Rate data”**
B. Sagredo, S. Nesseris and D. Sapone.
arXiv:1806.10822 [astro-ph.CO]
Phys. Rev. D **98**, 083543 (2018) HEP entry
16. **“Cosmological constraints on γ -gravity models”**
C. Luna, S. Basilakos and S. Nesseris.
arXiv:1805.02926 [astro-ph.CO]
Phys. Rev. D **98**, 023516 (2018) HEP entry
17. **“Updated constraints on $f(T)$ models using direct and indirect measurements of the Hubble parameter”**
S. Basilakos, S. Nesseris, F. K. Anagnostopoulos and E. N. Saridakis.
arXiv:1803.09278 [astro-ph.CO]
JCAP **1808**, no. 08, 008 (2018) HEP entry
18. **“Gravitational wave energy emission and detection rates of Primordial Black Hole hyperbolic encounters”**
J. Garcia-Bellido and S. Nesseris.
arXiv:1711.09702 [astro-ph.HE]
Phys. Dark Univ. **21**, 61-69 (2018) HEP entry
19. **“Cosmological constraints and comparison of viable $f(R)$ models”**
J. Pérez-Romero and S. Nesseris.
arXiv:1710.05634 [astro-ph.CO]
Phys. Rev. D **97**, no. 2, 023525 (2018) HEP entry
20. **“Gravitational wave bursts from Primordial Black Hole hyperbolic encounters”**
J. Garcia-Bellido and S. Nesseris.
arXiv:1706.02111 [astro-ph.CO]
Phys. Dark Univ. **18**, 123 (2017) HEP entry
21. **“Conjoined constraints on modified gravity from the expansion history and cosmic growth”**
S. Basilakos and S. Nesseris.
arXiv:1705.08797 [astro-ph.CO]
Phys. Rev. D **96**, no. 6, 063517 (2017) HEP entry
22. **“Tension and constraints on modified gravity parametrizations of $G_{\text{eff}}(z)$ from growth rate and Planck data”**
S. Nesseris, G. Pantazis and L. Perivolaropoulos.
arXiv:1703.10538 [astro-ph.CO]
Phys. Rev. D **96**, no. 2, 023542 (2017) HEP entry
23. **“Testing Einstein’s gravity and dark energy with growth of matter perturbations: Indications for new physics?”**
S. Basilakos and S. Nesseris.
arXiv:1610.00160 [astro-ph.CO]
Phys. Rev. D **94**, no. 12, 123525 (2016) HEP entry
24. **“Cosmological Constraints on Higgs-Dilaton Inflation”**
M. Trashorras, S. Nesseris and J. Garcia-Bellido.
arXiv:1604.06760 [astro-ph.CO]
Phys. Rev. D **94**, 063511 (2016) HEP entry
25. **“Constraints on dark-matter properties from large-scale structure”**
M. Kunz, S. Nesseris and I. Sawicki.
arXiv:1604.05701 [astro-ph.CO]
Phys. Rev. D **94**, no. 2, 023510 (2016) HEP entry

26. **“Gravitational wave source counts at high redshift and in models with extra dimensions”**
J. Garcia-Bellido, S. Nesseris and M. Trashorras.
arXiv:1603.05616 [astro-ph.CO]
JCAP **1607**, no. 07, 021 (2016) HEP entry
27. **“Comparison of thawing and freezing dark energy parametrizations”**
G. Pantazis, S. Nesseris and L. Perivolaropoulos.
arXiv:1603.02164 [astro-ph.CO]
Phys. Rev. D **93**, no. 10, 103503 (2016) HEP entry
28. **“Using dark energy to suppress power at small scales”**
M. Kunz, S. Nesseris and I. Sawicki.
arXiv:1507.01486 [astro-ph.CO]
Phys. Rev. D **92**, no. 6, 063006 (2015) HEP entry
29. **“Accuracy of the growth index in the presence of dark energy perturbations”**
S. Nesseris and D. Sapone.
arXiv:1505.06601 [astro-ph.CO]
Phys. Rev. D **92**, 023013 (2015) HEP entry
30. **“Reconstruction of the null-test for the matter density perturbations”**
S. Nesseris, D. Sapone and J. Garcia-Bellido.
arXiv:1410.0338 [astro-ph.CO]
Phys. Rev. D **91**, 023004 (2015) HEP entry
31. **“A novel null test for the Λ CDM model with growth-rate data”**
S. Nesseris and D. Sapone.
arXiv:1409.3697 [astro-ph.CO]
Int. J. Mod. Phys. D **24**, 0045 (2015) HEP entry
32. **“Comparison of piecewise-constant methods for dark energy”**
S. Nesseris and D. Sapone.
arXiv:1405.4769 [astro-ph.CO]
Phys. Rev. D **90**, 063006 (2014) HEP entry
33. **“Cosmological perturbations and observational constraints on non-local massive gravity”**
S. Nesseris and S. Tsujikawa.
arXiv:1402.4613 [astro-ph.CO]
Phys. Rev. D **90**, 024070 (2014) HEP entry
34. **“Curvature vs Distances: testing the Copernican Principle”**
D. Sapone, E. Majerotto and S. Nesseris.
arXiv:1402.2236 [astro-ph.CO]
Phys. Rev. D **90**, 023012 (2014) HEP entry
35. **“Can the degeneracies in the gravity sector be broken?”**
S. Nesseris.
arXiv:1309.1055 [astro-ph.CO]
Phys. Rev. D **88**, 123003 (2013) HEP entry
36. **“Viable $f(T)$ models are practically indistinguishable from Λ CDM”**
S. Nesseris, S. Basilakos, E. N. Saridakis and L. Perivolaropoulos.
arXiv:1308.6142 [astro-ph.CO]
Phys. Rev. D **88**, 103010 (2013) HEP entry
37. **“Comparative analysis of model-independent methods for exploring the nature of dark energy”**
S. Nesseris and J. Garcia-Bellido.
arXiv:1306.4885 [astro-ph.CO]
Phys. Rev. D **88**, 063521 (2013) HEP entry
38. **“Observational constraints on viable $f(R)$ parametrizations with geometrical and dynamical probes”**
S. Basilakos, S. Nesseris and L. Perivolaropoulos.
arXiv:1302.6051 [astro-ph.CO]
Phys. Rev. D **87**, 123529 (2013) HEP entry

39. **“Is the Jeffreys’ scale a reliable tool for Bayesian model comparison in cosmology?”**
S. Nesseris and J. Garcia-Bellido.
arXiv:1210.7652 [astro-ph.CO]
JCAP **08** 036 (2013) HEP entry
40. **“A new perspective on Dark Energy modeling via Genetic Algorithms”**
S. Nesseris and J. Garcia-Bellido.
arXiv:1205.0364 [astro-ph.CO]
JCAP **1211**, 033 (2012) HEP entry
41. **“Observational constraints on dark energy with a fast varying equation of state”**
A. De Felice, S. Nesseris and S. Tsujikawa.
arXiv:1203.6760 [astro-ph.CO]
JCAP **1205**, 029 (2012) HEP entry
42. **“The WiggleZ Dark Energy Survey: constraining the evolution of Newton’s constant using the growth rate of structure”**
S. Nesseris, C. Blake, T. Davis and D. Parkinson.
arXiv:1107.3659 [astro-ph.CO]
JCAP **1107**, 037 (2011) HEP entry
43. **“Observational constraints on Galileon cosmology”**
S. Nesseris, A. De Felice and S. Tsujikawa.
arXiv:1010.0407 [astro-ph.CO]
Phys. Rev. D **82**, 124054 (2010) HEP entry
44. **“A model independent null test on the cosmological constant”**
S. Nesseris and A. Shafieloo.
arXiv:1004.0960 [astro-ph.CO]
Mon. Not. Roy. Astron. Soc. **408**, 1879 (2010) HEP entry
45. **“Massive, massless and ghost modes of gravitational waves from higher-order gravity”**
C. Bogdanos, S. Capozziello, M. De Laurentis and S. Nesseris.
arXiv:0911.3094 [gr-qc]
Astropart. Phys. **34**, 236 (2010) HEP entry
46. **“The universe is accelerating. Do we need a new mass scale?”**
S. Nesseris, F. Piazza and S. Tsujikawa.
arXiv:0910.3949 [astro-ph.CO]
Phys. Lett. B **689**, 122 (2010) HEP entry
47. **“Comparison of Recent SNIa datasets”**
J. C. B. Sanchez, S. Nesseris and L. Perivolaropoulos.
arXiv:0908.2636 [astro-ph.CO]
JCAP **0911**, 029 (2009) HEP entry
48. **“Genetic Algorithms and Supernovae Type Ia Analysis”**
C. Bogdanos and S. Nesseris.
arXiv:0903.2805 [astro-ph.CO]
JCAP **0905**, 006 (2009) HEP entry
49. **“Newton’s constant in $f(R, R_{\mu\nu}R^{\mu\nu}, \square R)$ theories of gravity and constraints from BBN”**
S. Nesseris and A. Mazumdar.
arXiv:0902.1185 [astro-ph.CO]
Phys. Rev. D **79**, 104006 (2009) HEP entry
50. **“Matter density perturbations in modified gravity models with arbitrary coupling between matter and geometry”**
S. Nesseris.
arXiv:0811.4292 [astro-ph]
Phys. Rev. D **79**, 044015 (2009) HEP entry
51. **“Is the CMB shift parameter connected with the growth of cosmological perturbations?”**
S. Basilakos, S. Nesseris and L. Perivolaropoulos.
arXiv:0804.1631 [astro-ph]
Mon. Not. Roy. Astron. Soc. **387**, 1126 (2008) HEP entry

52. **“Comparison of Standard Ruler and Standard Candle constraints on Dark Energy Models”**
R. Lazkoz, S. Nesseris and L. Perivolaropoulos.
arXiv:0712.1232 [astro-ph]
JCAP **0807**, 012 (2008) HEP entry
53. **“Testing Lambda CDM with the Growth Function $\delta(a)$: Current Constraints”**
S. Nesseris and L. Perivolaropoulos.
arXiv:0710.1092 [astro-ph]
Phys. Rev. D **77**, 023504 (2008) HEP entry
54. **“Reconstruction of the Scalar-Tensor Lagrangian from a LCDM Background and Noether Symmetry”**
S. Capozziello, S. Nesseris and L. Perivolaropoulos.
arXiv:0705.3586 [astro-ph]
JCAP **0712**, 009 (2007) HEP entry
55. **“Cosmic Acceleration Data and Bulk-Brane Energy Exchange”**
C. Bogdanos, S. Nesseris, L. Perivolaropoulos and K. Tamvakis.
arXiv:0705.3181 [hep-ph]
Phys. Rev. D **76**, 083514 (2007) HEP entry
56. **“Can $f(R)$ Modified Gravity Theories Mimic a LCDM Cosmology?”**
S. Fay, S. Nesseris and L. Perivolaropoulos.
gr-qc/0703006 [GR-QC]
Phys. Rev. D **76**, 063504 (2007) HEP entry
57. **“Tension and Systematics in the Gold06 SnIa Dataset”**
S. Nesseris and L. Perivolaropoulos.
astro-ph/0612653
JCAP **0702**, 025 (2007) HEP entry
58. **“The Limits of Extended Quintessence”**
S. Nesseris and L. Perivolaropoulos.
astro-ph/0611238
Phys. Rev. D **75**, 023517 (2007) HEP entry
59. **“Crossing the Phantom Divide: Theoretical Implications and Observational Status”**
S. Nesseris and L. Perivolaropoulos.
astro-ph/0610092
JCAP **0701**, 018 (2007) HEP entry
60. **“Evolving newton’s constant, extended gravity theories and snia data analysis”**
S. Nesseris and L. Perivolaropoulos.
astro-ph/0602053
Phys. Rev. D **73**, 103511 (2006) HEP entry
61. **“Comparison of the legacy and gold snia dataset constraints on dark energy models”**
S. Nesseris and L. Perivolaropoulos.
astro-ph/0511040
Phys. Rev. D **72**, 123519 (2005) HEP entry
62. **“Exploring Cosmological Expansion Parametrizations with the Gold SnIa Dataset”**
R. Lazkoz, S. Nesseris and L. Perivolaropoulos.
astro-ph/0503230
JCAP **0511**, 010 (2005) HEP entry
63. **“The Fate of bound systems in phantom and quintessence cosmologies”**
S. Nesseris and L. Perivolaropoulos.
astro-ph/0410309
Phys. Rev. D **70**, 123529 (2004) HEP entry
64. **“A Comparison of cosmological models using recent supernova data”**
S. Nesseris and L. Perivolaropoulos.
astro-ph/0401556
Phys. Rev. D **70**, 043531 (2004) HEP entry

Publications at Conference Proceedings:

65. **“Genetic algorithms and the analysis of SnIa data”**
S. Nesseris.
arXiv:1011.1859 [astro-ph.CO]
J. Phys. Conf. Ser. **283**, 012025 (2011) IOP entry
66. **“Evolving Newton’s constant in higher derivative theories”**
S. Nesseris.
Proceedings of the 12th Marcel Grossmann Meeting on General Relativity: C09-07-12 HEP entry
67. **“Genetic Algorithms and Supernovae Type Ia Analysis, Constraints on Dark Energy”**
C. Bogdanos and S. Nesseris
AIP Conf. Proc. 1241, 200 (2010), DOI:10.1063/1.3462635 AIP entry
68. **“Constraints on dark energy models from the Legacy and Gold SnIa datasets”**
S. Nesseris
J. Phys. Conf. Ser. **68**, 012056 (2007) IOP entry

Scientific impact and citations of publications:

h-index=**28**

Total number of citations= **3,261**

Average citations per paper (published only)= **57.3**

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