

BIBLIOGRAPHY

- Akrami, Y., Arroja, F., Ashdown, M., Aumont, J., Baccigalupi, C., Ballardini, M., Banday, A. J., Barreiro, R., Bartolo, N., Basak, S., et al. (2020). Planck 2018 results-x. constraints on inflation. *Astronomy & Astrophysics*, 641:A10.
- Amendola, L. and Tsujikawa, S. (2010). *Dark energy: theory and observations*. Cambridge University Press.
- Amin, M., Khalil, S., and Salah, M. (2016). A viable logarithmic $f(r)$ model for inflation. *Journal of Cosmology and Astroparticle Physics*, 2016(08):043.
- Aoki, A. and Soda, J. (2017). Nonlinear resonant oscillation of gravitational potential induced by ultralight axion in $f(r)$ gravity. *Physical Review D*, 96(2):023534.
- Bassett, B. A., Tsujikawa, S., and Wands, D. (2006). Inflation dynamics and reheating. *Reviews of Modern Physics*, 78(2):537.
- Baumann, D. (2009). Tasi lectures on inflation. *arXiv preprint arXiv:0907.5424*.
- Bergström, L. (2009). Dark matter candidates. *New Journal of Physics*, 11(10):105006.
- Bertolami, O., Frazao, P., and Páramos, J. (2011). Reheating via a generalized nonminimal coupling of curvature to matter. *Physical Review D*, 83(4):044010.
- Bertone, G. and Hooper, D. (2018). History of dark matter. *Reviews of Modern Physics*, 90(4):045002.
- Bonometto, S., Gorini, V., and Moschella, U. (2001). *Modern cosmology*. CRC Press.
- Boubekeur, L. (2013). Theoretical bounds on the tensor-to-scalar ratio in the cosmic microwave background. *Physical Review D*, 87(6):061301.
- Boubekeur, L. and Lyth, D. H. (2005). Hilltop inflation. *Journal of Cosmology and Astroparticle Physics*, 2005(07):010.
- Burrage, C., Copeland, E. J., Kading, C., and Millington, P. (2019). Symmetron scalar fields: Modified gravity, dark matter, or both? *Physical Review D*, 99(4):043539.

- Cook, J. L., Dimastrogiovanni, E., Easson, D. A., and Krauss, L. M. (2015). Reheating predictions in single field inflation. *Journal of Cosmology and Astroparticle Physics*, 2015(04):047.
- Cuzinatto, R., de Melo, C., Medeiros, L., and Pompeia, P. (2016). Scalar-multi-tensorial equivalence for higher order $f(R, \nabla_\mu R, \nabla_\mu \nabla^\mu R, \dots, \nabla_\mu \nabla^\mu \nabla^\mu R, \dots, \nabla_\mu \nabla^\mu \nabla^\mu \nabla^\mu R, \dots)$ theories of gravity. *Physical Review D*, 93(12):124034.
- Cuzinatto, R., de Melo, C., Medeiros, L., and Pompeia, P. (2019). $f(R, \nabla_\mu R, \nabla_\mu \nabla^\mu R, \dots, \nabla_\mu \nabla^\mu \nabla^\mu R, \dots, \nabla_\mu \nabla^\mu \nabla^\mu \nabla^\mu R, \dots)$ theories of gravity in einstein frame: A higher order modified starobinsky inflation model in the palatini approach. *Physical Review D*, 99(8):084053.
- Dai, L., Kamionkowski, M., and Wang, J. (2014). Reheating constraints to inflationary models. *Physical review letters*, 113(4):041302.
- Easther, R., Kinney, W. H., and Powell, B. A. (2006). The lyth bound and the end of inflation. *Journal of Cosmology and Astroparticle Physics*, 2006(08):004.
- Eberl, H., Gialamas, I. D., and Spanos, V. C. (2021). Gravitino thermal production revisited. *Physical Review D*, 103(7):075025.
- Forconi, M., Giarè, W., Di Valentino, E., and Melchiorri, A. (2021). Cosmological constraints on slow roll inflation: An update. *Physical Review D*, 104(10):103528.
- Garcia-Bellido, J., Roest, D., Scalisi, M., and Zavala, I. (2014). Lyth bound of inflation with a tilt. *Physical Review D*, 90(12):123539.
- Goheer, N., Larena, J., and Dunsby, P. K. (2009). Power-law cosmic expansion in $f(R)$ gravity models. *Physical Review D*, 80(6):061301.
- Gorbunov, D. and Tokareva, A. (2013). Inflation and reheating in the starobinsky model with conformal higgsfield. *Physics of Particles and Nuclei Letters*, 10(7):633–636.
- Guth, A. H. (1981). Inflationary universe: A possible solution to the horizon and flatness problems. *Physical Review D*, 23(2):347.
- Harko, T. and Lobo, F. S. (2018). *Extensions of $f(R)$ Gravity: Curvature-Matter Couplings and Hybrid Metric-Palatini Theory*, volume 1. Cambridge University Press.

- Hobson, M. P., Efstathiou, G. P., and Lasenby, A. N. (2006). *General relativity: an introduction for physicists*. Cambridge University Press.
- Hohmann, M. (2021). Complete classification of cosmological teleparallel geometries. *International Journal of Geometric Methods in Modern Physics*, 18(supp01):2140005.
- Hu, W. and Sawicki, I. (2007). Models of $f(r)$ cosmic acceleration that evade solar system tests. *Physical Review D*, 76(6):064004.
- Huang, Q.-G. (2015). Lyth bound revisited. *Physical Review D*, 91(12):123532.
- Inagaki, T., Matsuo, Y., and Sakamoto, H. (2019). Dark matter in logarithmic $f(r)$ gravity. *International Journal of Modern Physics D*, 28(12):1950157.
- Katuragawa, T. and Matsuzaki, S. (2017). Dark matter in modified gravity? *Physical Review D*, 95(4):044040.
- Katuragawa, T. and Matsuzaki, S. (2018). Cosmic history of chameleonic dark matter in $f(r)$ gravity. *Physical Review D*, 97(6):064037.
- Khoury, J. and Weltman, A. (2004). Chameleon fields: awaiting surprises for tests of gravity in space. *Physical review letters*, 93(17):171104.
- Kohri, K., Moroi, T., and Yotsuyanagi, A. (2006). Big-bang nucleosynthesis with unstable gravitino and upper bound on the reheating temperature. *Physical Review D*, 73(12):123511.
- Liddle, A. (2003). *An Introduction to Modern Cosmology*. Wiley, 2 edition.
- Liddle, A. (2015). *An introduction to modern cosmology*. John Wiley & Sons.
- Lyth, D. H. (1997). What would we learn by detecting a gravitational wave signal in the cosmic microwave background anisotropy? *Physical Review Letters*, 78(10):1861.
- Mambrini, Y. and Olive, K. A. (2021). Gravitational production of dark matter during reheating. *Physical Review D*, 103(11):115009.
- Mathew, A. and Nandy, M. K. (2020). Primordial reheating in $f(r)$ cosmology by spontaneous decay of scalarons. *arXiv preprint arXiv:2012.13960*.

- Morison, I. (2013). *Introduction to astronomy and cosmology*. John Wiley & Sons.
- Mukhanov, V. (2005). *Physical foundations of cosmology*. Cambridge university press.
- Munoz, J. B. and Kamionkowski, M. (2015). Equation-of-state parameter for reheating. *Physical Review D*, 91(4):043521.
- Nautiyal, A. (2018). Reheating constraints on tachyon inflation. *Phys. Rev. D*, 98:103531.
- Nojiri, S., Odintsov, S., and Oikonomou, V. (2017). Modified gravity theories on a nutshell: inflation, bounce and late-time evolution. *Physics Reports*, 692:1–104.
- Nojiri, S. and Odintsov, S. D. (2008). Can $f(R)$ -gravity be a viable model: the universal unification scenario for inflation, dark energy and dark matter. *arXiv preprint arXiv:0801.4843*.
- Odintsov, S. and Oikonomou, V. (2019). Unification of inflation with dark energy in $f(R)$ gravity and axion dark matter. *Physical Review D*, 99(10):104070.
- Parbin, N. and Goswami, U. D. (2021). Scalarons mimicking dark matter in the hussawicki model of $f(R)$ gravity. *Modern Physics Letters A*, 36(37):2150265.
- Sadeghi, J., Pourhassan, B., Kubeka, A., and Rostami, M. (2016). Logarithmic corrected polynomial $f(R)$ inflation mimicking a cosmological constant. *International Journal of Modern Physics D*, 25(07):1650077.
- Saha, P., Anand, S., and Sriramkumar, L. (2020). Accounting for the time evolution of the equation of state parameter during reheating. *Physical Review D*, 102(10):103511.
- Seaborn, J. B. (1998). *Understanding the universe: an introduction to physics and astrophysics*. Springer Science & Business Media.
- Sharma, A. K. and Verma, M. M. (2022). Power-law inflation in the $f(R)$ gravity. *The Astrophysical Journal*, 926(1):29.
- Watanabe, Y. and Komatsu, E. (2007). Reheating of the universe after inflation with $f(\phi)R$ gravity. *Physical Review D*, 75(6):061301.

Yadav, B. K. and Verma, M. M. (2019). Dark matter as scalaron in $f(R)$ gravity models. *Journal of Cosmology and Astroparticle Physics*, 2019(10):052.