

Main Results and Current Progress within the Scale Invariant Vacuum Paradigm

A review of the Scale Invariant Vacuum (SIV) idea will be presented as related to Weyl Integrable Geometry [1]. The main results related to SIV and inflation [2], the growth of the density fluctuations [3], and the application of the SIV to scale-invariant dynamics of Galaxies, MOND, Dark Matter, and the Dwarf Spheroidals [4] will be highlighted.

[1] Gueorguiev, V. G., Maeder, A., The Scale Invariant Vacuum Paradigm: Main Results and Current Progress. *Universe* 2022, 8 (4) 213; DOI:10.3390/universe8040213 [gr-qc/2202.08412].

[2] Maeder, A., Gueorguiev, V. G., Scale invariance, horizons, and inflation. *MNRAS* 504, 4005 (2021) [gr-qc/2104.09314].

[3] Maeder, A., Gueorguiev, V., G., The growth of the density fluctuations in the scale-invariant vacuum theory. *Phys. Dark Univ.* 25, 100315 (2019) [astro-ph.CO/1811.03495]

[4] Maeder, A.; Gueorguiev, V.G. Scale-invariant dynamics of galaxies, MOND, dark matter, and the dwarf spheroidals. *MNRAS* 492, 2698 (2019) [gr-qc/2001.04978]

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