Burgess, Cliff P.
Quantum gravity in everyday life: general relativity as an effective field theory. (English)

Summary: This article is meant as a summary and introduction to the ideas of effective field theory as applied to gravitational systems, ideas which provide the theoretical foundations for the modern use of general relativity as a theory from which precise predictions are possible.

MSC:
83C45 Quantization of the gravitational field
83-02 Research exposition (monographs, survey articles) pertaining to relativity and gravitational theory

Full Text: DOI arXiv EuDML Link

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<td>DeWitt, BS; DeWitt, BS (ed.); Stora, R. (ed.), The spacetime approach to quantum field theory, Les Houches Summer School Proceedings, Amsterdam</td>
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Georgi, H., Weak Interactions and Modern Particle Theory, (Benjamin/Cummings, Menlo Park, CA, USA, 1984).


Gupta, SN; Radford, SF, Quantum field-theoretical electromagnetic and gravitational two-particle potentials, Phys. Rev. D, 9, 2213-2225, (1974)


