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Behaviour of cosmic strings in varying-tension background

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Cosmic superstrings are an interesting possible phenomenon in the early universe. Recently, there has been increased interest in the behaviour of these superstrings under a rolling modulus background which will cause the tension of the cosmic string to vary. We explore some preliminary results in the behaviour of cosmic string loops and perturbations in cosmic string networks under various rolling moduli background. Interesting behaviour arises in the case of the Nambu-Goto string, including growth of string loops under a kinating background and broad nonlinear resonances under an oscillating modulus background.

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