## First European Physical Society Conference on Gravitation



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## How to compute the Cosmological Constant in Distorted Gravity

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We compute the Zero Point Energy (ZPE) induced by quantum fluctuations around a fixed background with the help of a reformulation of the Wheeler-DeWitt equation. A variational approach is used for the calculation with Gaussian Trial Wave Functionals. The one loop contribution of the graviton to the ZPE is extracted keeping under control the UltraViolet divergences by means of a distorted gravitational field knows as Gravity's Rainbow. The finite ZPE is here interpreted as an induced Cosmological Constant. A comparison with other methods of keeping under control ultraviolet divergences is also discussed.

**Summary** 

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