**Codimension Two Branes: Examples** NELSON ZAMORANO, CE-
SAR ARIAS, Universidad de Chile — We study a six dimensional cosmological
model with co-dimension two. The starting point is a general 6d metric ansatz in
normal coordinates: $ds^2 = d\rho^2 + e^{2B(\rho)}d\sigma^2 + e^{2W(\rho)}g_{\mu\nu}(x)dx^\mu dx^\nu$, where the sub-
manifold defined by the 4d metric $g_{\mu\,\nu}$ represents our observable universe. One of
the solutions display a conical singularity at $\rho = 0$, opening the possibility that a
four dimensional brane may be embedded there, following the the work of Bostok et
al. [1]. Here we concentrate in the solution where $B(\rho) = \ln\left[A\sin\left(\sqrt{\Lambda/10}\,\rho\right)\right] \approx$
$\ln\left(\sqrt{\Lambda/10}\,\rho\right)$, which generates a conical singularity at $\rho = 0$. The presence of
this $\delta(\rho)$ in the Einstein equations induces a cosmological constant on the brane. It
is also possible to introduce a Gauss-Bonnet term in this solution. A future work
considers a scalar field in the bulk and perturbations on the brane to generate other
cosmological models.

[1] P. Bostock, R. Gregory, I. Navarro and J. Santiago, Phys. Rev. Letter,Vol
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