New stability results for sequences of metric measure spaces with uniform Ricci bounds from below

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In this talk we introduce several stability results with respect to the measured Gromov-Hausdorff convergence under assuming uniform lower bounds on Ricci curvature. In particular we prove stability of Sobolev/BV functions, Hessians, and generalized Bakry-Emery conditions.

Applications include a suspension theorem for positively Ricci curved spaces, which is new even for smooth manifolds. More recent works are also discussed if there is sufficient time. This is a joint work with Luigi Ambrosio.