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## Equivalence of gravity theories in the covariant phase space

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Gravity can be described in several fashions. To name a few, we have the Einstein-Hilbert theories, the Palatini theories, and the Holst theories. In this talk, I will make a quick introduction of all of them (both in metric and tetrad variables) and prove their equivalence in the covariant phase space as well as the equivalence of the associated charges. This proof relies on the newly developed relative bicomplex formalism, which allows the inclusion of boundaries in a straightforward way.

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