1111-55-404   **Alberto S Cattaneo*** (`alberto.cattaneo@math.uzh.ch`), Institut für Mathematik, Universität Zürich-Irchel, Winterthurerstrasse 190, 8057 Zurich, Switzerland. *Perturbative BV-BFV theories on manifolds with boundary.* Preliminary report.

Classical and quantum field theories may be thought of as appropriate functors from (some version of) the cobordism category. In this talk (based on joint work with Mnev and Reshetikhin) I will show how this can be achieved in the context of BF theories by the perturbative expansion of the BV action in the presence of a boundary. The theory associate a complex to the boundary and a cocycle (the state or partition function) to the bulk. I will show how the procedure is compatible with gluing along boundary components. This is a quantization of the classical BV-BFV theory. An outlook to the general case will be presented, time permitting. (Received February 07, 2015)