Contribution Title:

Authors: Presenting author: Affilation: E-mail: Invited speaker: YRS seminar:

THE MATHEMATICAL STRUCTURE OF DYSON SCHWINGER EQUATIONS D. Kreimer Kreimer D. IHES kreimer@ihes.fr Topical session NO

Dyson Schwinger equations are the equations of motion for a quantum field theory. We investigate their mathematical structure starting from the Hochschild cohomology of the Hopf algebra structure underlying a perturbative expansion. this largely restricts the possible form of perturbative solutions. We present results for QED, QCD and quantum gravity.