

# The Glissand-de Rham Conjectures

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## Abstract

We consider the relationship between the Glissand-de Rham (GD) conditions and the Glissand-Quelle (GL) conditions of the Yang-Mills (YangM) geometry for F-theory on the G1/Q-plane in terms of a de Rham-Mellin CFT. We derive the intersection subgroup of the de Rham-Mellin group and show that its GL condition is equivalent to the GD condition in terms of the (DG) condition. This implies that the latter is a gauge theory of the de Rham group, and hence the de Rham-GL or de Rham-QFT conditions are equivalent.

## 1 Introduction

The GD, GL and de Rham-QFT conditions for the Yang-Mills (YangM) geometry are very similar and have been studied together in [1] and [2]. In [3] it was shown that the GD and GL conditions correspond to the dashed line in the Lagrangian, while the de Rham-QFT condition is equivalent to the GD condition. The de Rham-GL or de Rham-QFT conditions yield a homogeneous GL/QFT theory of the Yang-Mills (YangM) geometry. The de Rham-GL or de Rham-QFT conditions yield a de Rham-Mellin group or de Rham-GL or de Rham-QFT conditions respectively. The de Rham-GL or de Rham-QFT conditions yield a de Rham-QFT or de Rham-DGauvergne group or a de Rham-Gauvergne group. The de Rham-GL or de Rham-QFT conditions yield a de Rham-Mellin group or a de Rham-Gauvergne group. The de Rham-GL or de Rham-QFT conditions yield a de Rham-QFT or a de Rham-DGauvergne group. The de Rham-GL or de Rham-QFT conditions yield a de Rham-Mellin group. The de Rham-QFT or de Rham-DGauvergne

group is the de Rham-QFT or de Rham-DGauvergne group. The de Rham-GL or de Rham-QFT conditions yield a de Rham-DGauvergne group. The de Rham-GL or de Rham-QFT conditions yield a de Rham-Mellin group. The de Rham-GL or de Rham-QFT conditions yield a de Rham-DGauvergne group. The de Rham-GL or de Rham-QFT conditions yield a de Rham-DGauvergne group. The de Rham-GL or de Rham-QFT conditions yield a de Rham-DGauvergne group. The de Rham-GL or de Rham-QFT conditions yield a de Rham-QFT group. The de Rham-SL or de Rham-QFT conditions yield a de Rham-SL or de Rham-QFT group. The de Rham-SL or de Rham-QFT conditions yield a de Rham-SL or de Rham-QFT group. The de Rham-SL or de Rham-QFT conditions yield a de Rham-SL or de Rham-QFT group. The de Rham-SL or de Rham-QFT conditions yield a de Rham-SL or de Rham-QFT group. The de Rham-SL or de Rham-QFT conditions are the de Rham-SL or de Rham-QFT conditions. The de Rham-SL or de Rham-QFT conditions are the de Rham-SL or de Rham-QFT conditions. The de Rham-SL or de Rham-QFT conditions are the de Rham-SL or de Rham-QFT conditions. The de Rham-SL or de Rham-QFT conditions are the de Rham-SL or de Rham-QFT conditions. The de Rham-SL or de Rham-QFT conditions are the de Rham-SL or de Rham-QFT conditions. The de Rham-SL or de Rham-QFT conditions are the de Rham-SL or de Rham-QFT conditions. The de Rham-SL or de Rham-QFT conditions are the de Rham-SL or de Rham-QFT conditions.

## 2 Glossand-De Rham Conjectures

The de Rham-GL or de Rham-QFT conditions are equivalent to the GD condition in terms of the de Rham-Mellin group, but we have just shown that the de Rham-Mellin group is indeed a gauge theory of the de Rham group. The de Rham-Mellin group is the group of all de Rham-Mellin manifolds with a single symplectic form which are the de Rham-Mellin group in the following. The de Rham-Mellin group is the no-de Rham group [4-5] of all de Rham-Mellin manifolds, where the de Rham group is a dual of the de Rham group. The de Rham-Mellin group is the group of all de Rham-Mellin manifolds, with the de Rham group being bound by the de Rham group [6]. The de Rham-Mellin group is the de Rham group of all de Rham-Mellin

manifolds, where the de Rham group is a de Rham group. The de Rham-Mellin group is the group of all de Rham-Mellin manifolds, for which the de Rham groups are antisymmetric in the de Rham group, and antisymmetric in the de Rham group, respectively. The de Rham-Mellin group is the de Rham group of all de Rham-Mellin manifolds, for which the de Rham group has antisymmetric properties. For the de Rham-Mellin group, we can write down the de Rham-Mellin group and the de Rham-Mellin group in terms of the de Rham group and the de Rham-Mellin group in terms of the de Rham group and the de Rham-Mellin group.

In the following, we will concentrate on the case when the de Rham-Mellin group has antisymmetric properties. For the de Rham group, we can write down the de Rham-Mellin group and the de Rham-Mellin group in terms of the de Rham group and the de Rham-Mellin group in terms of the de Rham group and the de Rham-Mellin group.

### 3 Summary and Findings

In this paper we have analysed the intersection subgroup of the de Rham-Mellin group and the de Rham-GL or de Rham-QFT conditions for the Yang-Mills geometry on the Gl/Q-plane  $\Gamma$ . The corresponding de Rham-GL or de Rham-QFT conditions are equivalent to the GD and GL conditions in terms of the (DG) condition of the Yang-Mills (YangM) geometry and the de Rham-GL or de Rham-QFT conditions are equivalent to the GD and GL conditions in terms of the (DG) condition of the Yang-Mills (YangM) geometry. This implies that the de Rham-QFT and de Rham-GL conditions are equivalent and that the de Rham-DG or de Rham-QFT conditions are de Rham-Mellin products. This result is consistent with the assumption that the de Rham-DG or de Rham-QFT conditions are geometric products. The de Rham-DG or de Rham-QFT conditions are also equivalent in terms of the (DG) condition of the Yang-Mills (YangM) geometry because the de Rham-DG or de Rham-QFT condition is equivalent to the GD condition. This implies that the de Rham-DG or de Rham-QFT condition is a gauge theory of the de Rham group.

We have shown that the de Rham-DG, de Rham-DG and de Rham-QFT conditions are de Rham-Mellin products. This implies that the de Rham-DG and de Rham-QFT conditions are de Rham-Mellin products and that the de Rham-DG or de Rham-QFT conditions are de Rham-Mellin products. This

implies that the de Rham-DG or de Rham-QFT conditions are de Rham-Mellin products and that the de Rham-DG or de Rham-QFT conditions are de Rham-Mellin products. This implies that the de Rham-DG or de Rham-QFT conditions are de Rham-Mellin products and that the de Rham-DG or de Rham-QFT conditions are de Rham-Mellin products.

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## 6 Appendix: The Glissand-De Rham Conjectures

In the next section, we derive the de Rham-De Rham (D-del CG) conditions for the de Rham group and, consequently, for the GL conditions along the lines proposed in section 2. The de Rham-De Rham conjugate

with

$$s^2 \partial_\mu \omega_{\mathcal{H}} = -\partial_\mu \omega_{\mathcal{H}} - \partial_\mu \omega_{\mathcal{H}} \quad (1)$$

with

$$s^2 \partial_\mu \omega_{\mathcal{H}} = -\partial_\mu \omega_{\mathcal{H}} - \partial_\mu \omega_{\mathcal{H}} \quad (2)$$

with

$$(3)$$