



## Kolloquium über Reine Mathematik

Einladung zu einem Vortrag

**Dienstag, 14. Mai 2019**

17 Uhr s.t., Geom H4

Prof. Dr. Christopher Ira Brav  
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### ***Non-commutative geometry and the moduli space of objects in a dg category***

#### Abstract:

Given a nice differential graded category  $C$ , thought of as a category of sheaves on a non-commutative space, we explain how algebra structures defined for  $C$  give rise to geometric structures on  $M_C$ , the ‘moduli space of objects’ in  $C$ . In particular, we describe how cyclic chains give rise to functions on  $M_C$ , negative cyclic chains give rise to closed differential forms, and so-called Calabi-Yau structures on  $C$  give shifted symplectic structures on  $M_C$ . Finally, we describe an algebraic version of the Chas-Sullivan string bracket on cyclic chains compatible with shifted Poisson bracket on functions on  $M_C$ . This is based on two joint projects, one with T. Dyckerhoff and another with N. Rozenblyum.

Vor dem Vortrag (ab 16.30 Uhr) stehen im Raum 327 Kaffee und Tee bereit.