

On the geometry of quiver gauge theories (Stacking exceptional collections)

Christopher P. Herzog¹ and Robert L. Karp²

¹Physics Department, Princeton University, Princeton, NJ 08540
cpherzog@princeton.edu

²Department of Systems Biology, Harvard Medical School,
200 Longwood Avenue, Boston, MA 02115
Robert_Karp@hms.harvard.edu

Abstract

In this paper we advance the program of using exceptional collections to understand the gauge theory description of a D-brane probing a Calabi–Yau singularity. To this end, we strengthen the connection between strong exceptional collections and fractional branes. To demonstrate our ideas, we derive a strong exceptional collection for every $Y^{p,q}$ singularity, and also prove that this collection is simple.

CONTENTS

1	Introduction	600
2	Preliminary ideas	602