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**Hugh R. Geller\*** (hgeller@g.clemson.edu). *Toward DG-Algebra Resolutions for Fiber Products*. Preliminary report.

In 2017, Nasseh and Sather-Wagstaff proved that if  $M$  and  $N$  are finitely generated modules over a non-trivial fiber product  $R$  such that  $\mathrm{Tor}_i^R(M, N) = 0$  for  $i \gg 0$ , then  $M$  or  $N$  has finite projective dimension. Their proof uses Moore's explicit free resolution of the second syzygy of  $M$ . Recently, Avramov, Iyengar, Nasseh, and Sather-Wagstaff have proved that the same conclusion holds for other classes of rings using differential graded algebra techniques. Thus, it is natural to ask whether one can explicitly describe DG algebra resolutions of fiber products. We will present progress on this question. (Received January 28, 2019)