1069-14-167 **Christine Berkesch** and **Laura Felicia Matusevich***, Department of Mathematics, Texas A&M University, Mailstop 3368, College Station, TX 77843-3368. *Torus equivariant D-modules and hypergeometric systems.*

We study systems of differential equations that are equivariant under a torus action. We are particularly interested in constructing a quotient system in fewer variables, and in investigating which properties these systems have in common. Our motivation comes from a particularly important example of this situation: the classical hypergeometric systems of Gauss, Appell, Lauricella, etc., and their equivariant counterparts introduced by Gelfand, Graev, Kapranov and Zelevinsky in the 1980s. (Received January 22, 2011)