1011-94-144   **Steven Dougherty** and **Aaron Gulliver***, Dept. of Electrical and Computer Engineering, University of Victoria, P.O. Box 3055, STN CSC, Victoria, BC V8S 4W9, Canada. *Self-Dual Codes over Z_8 and Z_9.*

We study self-dual codes over the rings Z_8 and Z_9. We define various weights and weight enumerators over these rings and describe the groups of invariants for each weight enumerator over the rings. We examine the torsion codes over these rings to describe the structure of self-dual codes. Finally we classify self-dual codes of small lengths over Z_8 and Z_9. (Received August 23, 2005)