Meeting: 1005, Newark, Delaware, SS 1A, Special Session on Homotopy Theory (in Honor of Donald M. Davis's and Martin Bendersky's 60th Birthdays)

1005-55-142   **Jesus Gonzalez*** (`jesus@math.cinvestav.mx`), Departamento de Matematicas, CINVESTAV, Apartado Postal 14-740, 07000 Mexico City, Mexico. *On Brown-Peterson cohomology of $B(\mathbb{Z}_{2^e} \times \mathbb{Z}_{2^e})$ and the motion planning problem for lens spaces.* Preliminary report.

The immersion problem for real projective spaces is analyzed from the topological complexity view point for lens spaces. In particular, Don Davis' strong result on the nonimmersion of projective spaces is translated in terms of the motion planning problem. We discuss how an understanding of the Brown-Peterson cohomology of the classifying space for $\mathbb{Z}_{2^e} \times \mathbb{Z}_{2^e}$ could be used in a study of the analogous problem for 2^e-torsion lens spaces. (Received February 06, 2005)