1176-53-165   **Andres Pedroza*** (`andres_pedroza@ucol.mx`), Bernal Diaz del Castillo No. 340, Col. Villa San Sebastian, 28045 Colima, Colima, Mexico. *Loops of symplectic diffeomorphisms on the one-point blow up of the complex projective space.*

The complex projective space admits a circle action that preserves the standard symplectic structure. It is know that such loop of diffeomorphisms has finite order in the fundamental group of the group of symplectic diffeomorphisms of the complex projective space.

In the talk we will see how this loop of symplectic diffeomorphisms induces a loop of symplectic diffeomorphisms on the one-point blow up of the complex projective space. Moreover such loop will have infinite order in the fundamental group of the group of symplectic diffeomorphisms.

In particular we will show that the rank of the fundamental group of the group of Hamiltonian diffeomorphisms can be made as large has possible by closed 4-symplectic manifolds. (Received January 21, 2022)