1120-54-10 Sümeyra Sakallı* (sakal008@umn.edu), 127 Vincent Hall, 206 Church St. SE, Minneapolis, MN 55455. On the geography of simply connected, nonspin, symplectic 4-manifolds with nonnegative signature.

We will construct infinitely many irreducible symplectic and non-symplectic 4-manifolds that are homeomorphic but not diffeomorphic to $(2n-1)\mathbb{CP}^2 \# (2n-1)\overline{\mathbb{CP}^2}$ for each integer $n \ge 12$, and the families of simply connected irreducible nonspin symplectic 4-manifolds that have the smallest Euler characteristics among the all known simply connected 4manifolds with positive signature and with more than one smooth structure. Our construction uses the complex surfaces of Hirzebruch and Bauer-Catanese on Bogomolov-Miyaoka-Yau line with $c_1^2 = 9\chi_h = 45$. This is a joint work with A. Akhmedov. (Received December 31, 2015)