1093-14-28 **Tolga Karayayla*** (tkarayay@metu.edu.tr), Department of Mathematics, Middle East Technical University, Univ. Mah. Dumlupinar Bulv. No:1, 06800 Ankara, Turkey. *Automorphism Groups of Rational Elliptic Surfaces with Section and Constant J-Map.*

I will present the second leg of the classification project for the automorphism groups of rational elliptic surfaces (RES) with section which concerns those RES with constant J-Map. In the first leg of this study, it was shown that the group $Aut(B)$ of regular automorphisms (biholomorphic maps) of a relatively minimal RES B over the field $\mathbb{C}$ is the semi-direct product $MW(B) \rtimes Aut_\sigma(B)$ of its Mordell-Weil group $MW(B)$ (the group of sections) and the subgroup $Aut_\sigma(B)$ of the automorphisms preserving the zero section of the surface. $MW(B)$ has been classified by Oguiso and Shioda with respect to the configuration of singular fibers on B. $Aut_\sigma(B)$ was classified for RES with non-constant J-Map in the first leg of this study. In this talk I will discuss the results in the constant J-Map case. RES with constant J-Map have richer automorphism groups. While $Aut_\sigma(B)$ has size at most 24 in the non-constant J-Map case, it can have size 144 or can even be infinite depending on the configuration of singular fibers on B if the J-Map is constant. One reason for having more symmetry in that second case is the existence of automorphisms which act as complex multiplication of order 3,4 or 6 on every smooth elliptic curve fiber of the surface. (Received June 17, 2013)