1116-14-2800   **Anton Dzhamay*** (`adzham@unco.edu`), School of Mathematical Sciences, University of Northern Colorado, Campus Box 12, 501 20th Street, Greeley, CO 80639, and **Tomoyuki Takenawa**, Faculty of Marine Technology, Tokyo Univ. of Marine Science and Technology, 2-1-6 Etchu-jima, Koto-ku, Tokyo, 135-8533, Japan. *On the Geometry of Difference Painlevé Equations.*

Essentially by definition, a discrete Painlevé equation is just a translation element in the extended affine Weyl symmetry group of some algebraic surface that is called the Okamoto space of initial conditions of the equation. Such elements can be represented as compositions of elementary reflections and Dynkin diagram automorphisms. In this talk we will discuss how to use such decompositions and the corresponding elementary birational transformations of the underlying Okamoto surface to compare different equations (directions), to find explicit identification between them, and to obtain good coordinate representations of these equations. This study is motivated by our attempts to understand the structure of difference Painlevé equations that appear as reductions of elementary Schlesinger transformations of Fuchsian systems. (Received September 22, 2015)