

Meeting: 1006, Lubbock, Texas, SS 2A, Special Session on Differential Geometry and Its Applications

1006-53-109 **Franz Pedit***, University of Massachusetts, Amherst, MA 01003, and **C Bohle, K Leschke** and **U Pinkall**. *Surface Geometry and Algebraically Completely Integrable Systems*. Preliminary report.

We assign to a conformal immersions of a 2-torus into 4-space an auxiliary Riemann surface, its spectral curve. We then discuss how conformal 2-tori in 4-space can be viewed as canonical flows on algebraic embeddings of the spectral curve into complex projective 3-space. These flows relate to the Davey-Stewartson flows in mathematical physics. (Received February 10, 2005)