

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

1006-58-111      **Josef F. Dorfmeister\*** (dorfm@ma.tum.de) and **Shimpei Kobayashi.** *Complex ODE's and Surfaces of Constant Mean Curvature.* Preliminary report.

We will recall briefly the generalized Weierstrass representation of surfaces of constant mean curvature (CMC) in  $\mathbb{R}^3$ , and then use it for the construction of CMC surfaces. A particularly important step in this method is to find a linear, first order complex ODE with meromorphic coefficients, which then yields, by the method mentioned above, a CMC surface with certain required properties.

We will discuss the construction of all CMC cylinders and of CMC trinoids of genus  $g = 0$  with embedded ends in some detail. (Received February 10, 2005)