

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

1006-53-21 **Andreia F. Mahler-Beilis*** (andreia.mahler@ipayx.com), 4604 Skelly Rd, Toledo, OH 43623.
New and Old Applications of Bianchi-Bäcklund Transformations.

We show how the classical Bianchi-Bäcklund transformations can be extended in the case of constant mean curvature surfaces with umbilics where the classical constructions fail to apply. A simple dressing transformation can be associated to classical Bianchi-Bäcklund transformations away from umbilic points. Our results allow us to extend this equivalence to surfaces with umbilics. In addition, we present examples of new surfaces. (Received December 20, 2004)