

**Meeting:** 1007, Santa Barbara, California, SS 2A, Special Session on History of Mathematics

1007-01-116            **Harriet M Lord\*** (hlord@csupomona.edu). *Henri Lebesgue and Surface Area*. Preliminary report.

In 1869 M. Serret defined surface area for certain curved surfaces to be the limit of the surface area of inscribed polyhedra with triangular faces, and in 1880 H. A. Schwarz presented a counterexample to this definition.

It was in 1902 that Lebesgue redefined arc length and then he defined surface area so that his definition of surface area was analogous to that of arc length.

In this talk we demonstrate Schwarz's example and discuss Lebesgue's work on surface area, including the interest he had in the arc length problem since he first studied geometry. (Received February 13, 2005)