

1077-01-1416 **Robert E Bradley*** (bradley@adelphi.edu), Adelphi University, Dept. of Mathematics & Computer Science, 1 South Ave., Garden City, NY 11530. *Evolutes in the works of Huygens and Johann(I) Bernoulli.*

Christiaan Huygens (1629-1695) defined the evolute and involute of a curve in his *Horologium Oscillatorium* (1673), his mathematical work on pendulum clocks. Although he did not make use of the differential calculus *per se*, his arguments have some infinitesimal character. Later on, Johann Bernoulli (1667-1748) and his brother Jacob (1654-1705) applied the new differential calculus to the study of these curves, discovering a general formula for the radius of curvature. We present Bernoulli's results, as they appeared in L'Hospital's *Analyse* (1696), comparing and contrasting them to what Huygens was able to achieve with "precalculus" methods. (Received September 22, 2011)