Did Bernoulli discover Bernoulli’s equation? Preliminary report.

Named for Daniel Bernoulli (1700-1782), the Bernoulli equation for fluid flow provides an inverse relationship between the pressure and velocity of an inviscid fluid—as velocity increases, pressure decreases. However, the equation has an exciting and convoluted history: its modern formulation is generally credited to Leonhard Euler (1707-1783), who was himself involved in a priority dispute between Bernoulli and his father, Johann.

In this talk, we sketch the evolution of Bernoulli’s equation and examine the relationships between Euler and the two Bernoullis. Lastly, the equation will make a surprise appearance in a recently-translated paper of Euler’s that predates his other works in fluid mechanics. (Received September 23, 2012)