1147-76-625 **James P Kelliher*** (`kelliher@math.ucr.edu`) and **Elaine Cozzi**. *Non-Decaying Solutions to the 2D Euler Equations.*

The pioneering work on bounded vorticity solutions to the 2D Euler equations was done by Yudovich in the early 1960s, working in a bounded domain. He proved existence and uniqueness of such solutions. Yudovich's theory extends easily to the full plane, as long as the velocity is assumed to decay sufficiently rapidly at infinity that the Biot-Savart law holds. In 1995, Ph. Serfati established the existence and uniqueness of solutions having no decay of vorticity or velocity at infinity, solutions that very much violate the Biot-Savart law. I will speak on ongoing joint work with Elaine Cozzi treating bounded vorticity solutions for which the velocity is allowed to grow at a controlled rate infinity. (Received January 27, 2019)