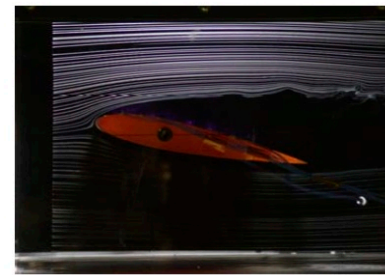


# UCLA Energy Innovation Laboratory

Prof. Richard Wirz



- Plasma actuators can be used to improve aerodynamic performance by influencing flow separation
- UCLA's Energy Innovation Laboratory is applying these benefits to large and small scale wind energy devices
- Current research efforts focus on:
  - Experimental and computational assessment of plasma actuator operation and performance
  - Advanced Blade Element modeling to assess energy system integration
  - New models developed to assess dynamic blade and rotor performance under time-varying loads



Plasma assisted flow, Roth, et al. (2006)



UCLA, low power, wind energy plasma actuator

## Blade Element Momentum Theory

