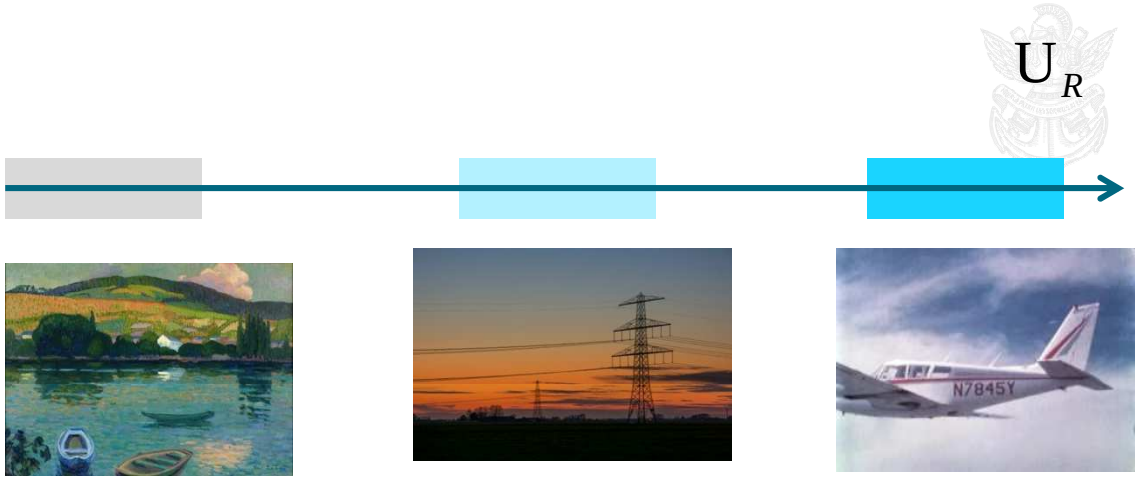
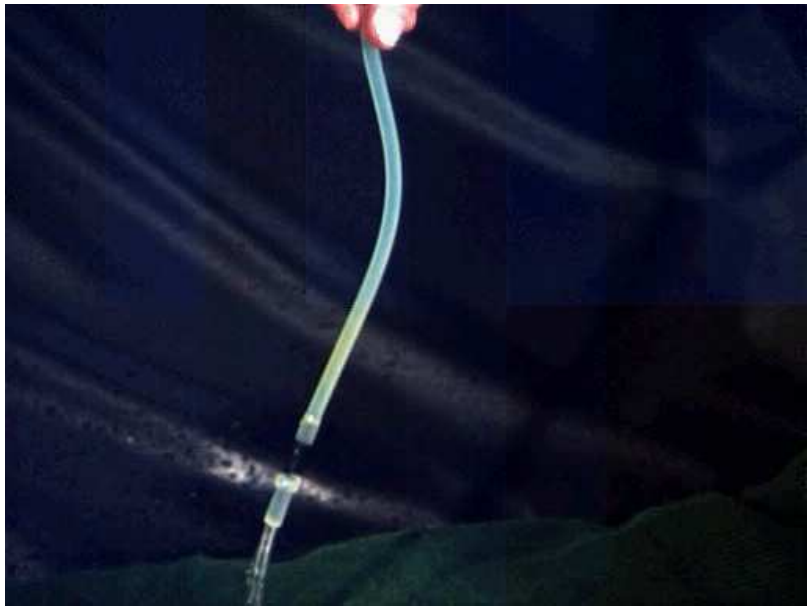
MODELS FOR FLUID SOLID INTERACTIONS

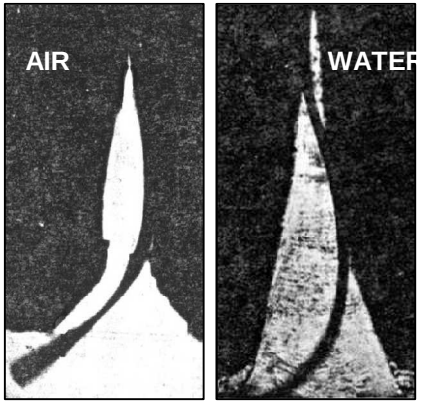


THE FLUID-CONVEYING PIPE INSTABILITY

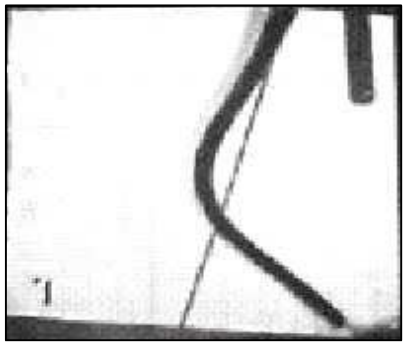
U_R



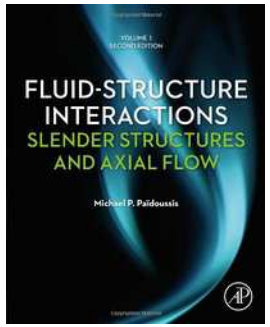
THE FLUID CONVEYING PIPE



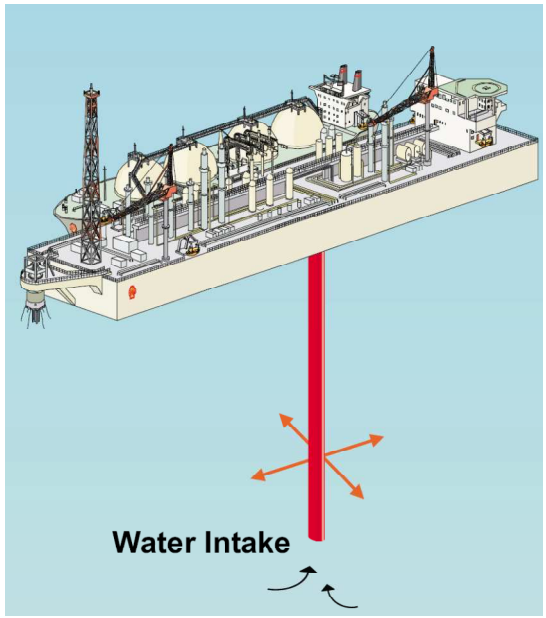
F. Bourrieres (1939)



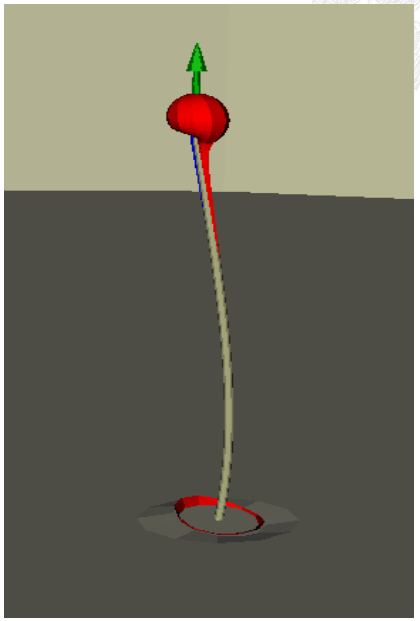
M. Païdoussis (1966)



THE FLUID CONVEYING PIPE PROBLEM : APPLICATIONS

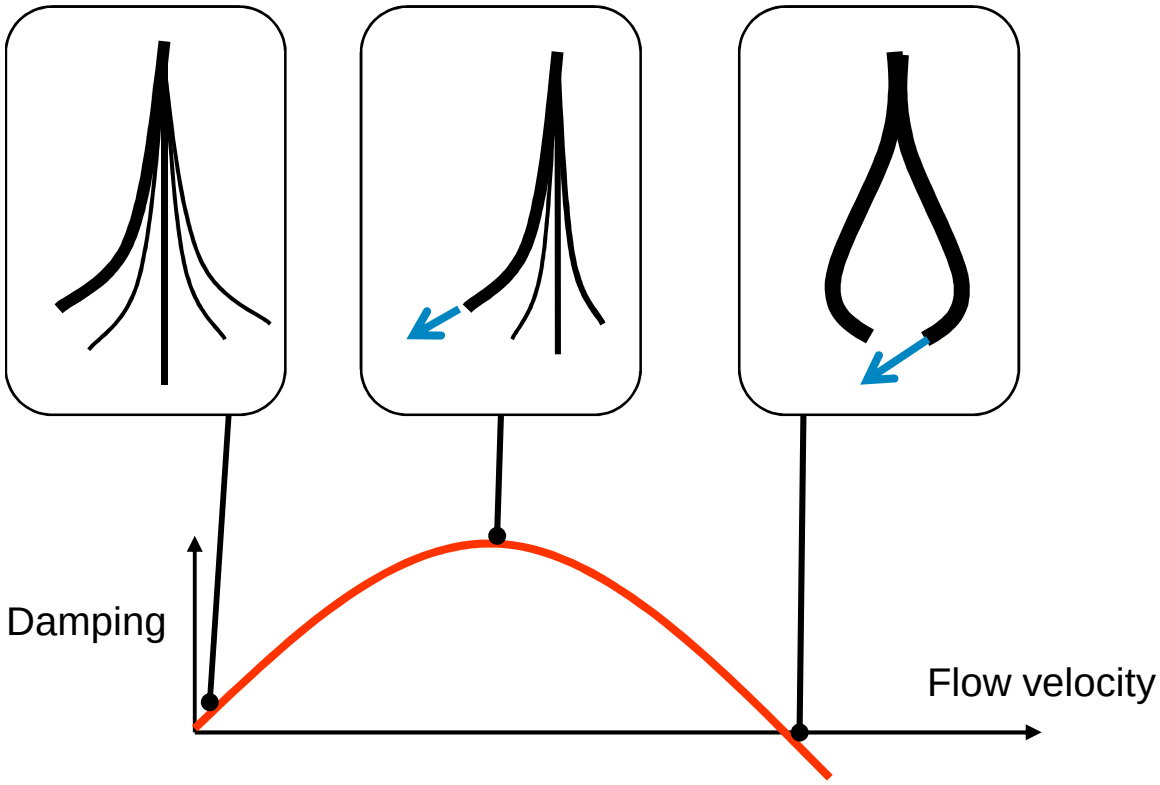


Aspirating pipe

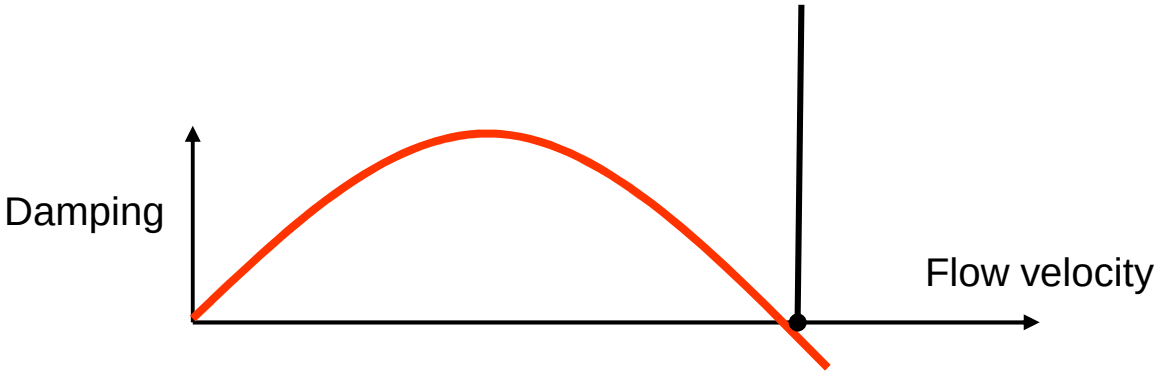


Simulation of a nanowire instability with field emission

THE FLUID CONVEYING PIPE

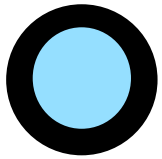


THE FLUID CONVEYING PIPE



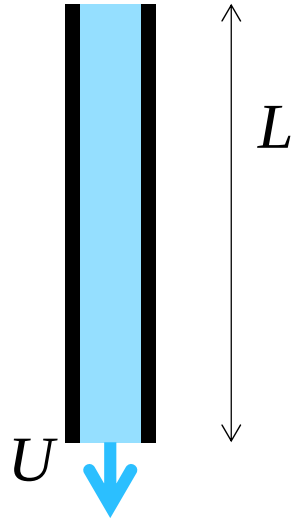
DIMENSIONLESS PARAMETERS

$$M = \frac{\rho S}{m}$$

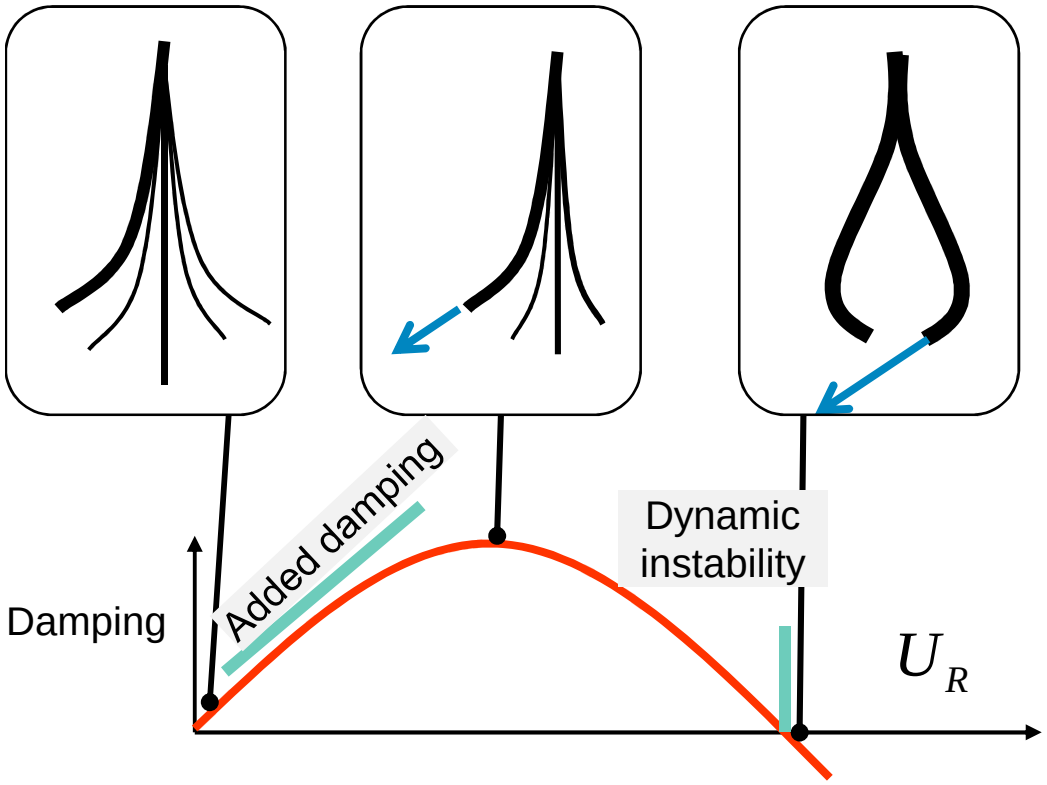


$$U_R = \frac{T_{solid}}{T_{fluid}}$$

$$U_R = \frac{U}{fL}$$



THE FLUID CONVEYING PIPE



DYNAMICS OF THE SOLID