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Streamwise asymptotics of spatially localized solutions in plane Poiseuille flow ROMAN GRIGORIEV, JOSHUA BARNETT, Georgia Institute of Technology — Numerical advances of recent years have enabled us to find localized solutions in various canonical shear flows, for instance, relative periodic orbits in plane and pipe Poiseuille flow. These solutions have interesting properties such as the exponential decay of the leading and trailing fronts which appear to also shape the fronts of "turbulent puffs" that are found during intermittent turbulence. While arguably quite important, these exponential asymptotics are not well understood theoretically. This talk will discuss how they can be derived, or at least constrained, analytically using wave propagation theory.

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