**Incompressible case:**

**Velocity profile**

Michalke1_vel.emf

Dimensionless Jet velocity profile: R, jet radius where U(R) = U\_jet/2 and is the momentum boundary layer thickness (, the centerline velocity).

where .

**Temperature profile**

**Isothermal.**

**Spatial stability results for** .

Michalke1.emf

Spatial growth rate of the axisymmetric (m=0) and of the first azimuthal (m=1) disturbance vs frequency (dimensionless based on the characteristic length and the jet centerline velocity, ). Isothermal and incompressible flow.

**Michalke’s 1984**



**Compressible case:**

**Velocity profile**

**Michalkevel.emf**

**Temperature profile (from the Busemann-Crocco relation),**

**Michalketep.emf**

**Spatial stability results**

Michalke2.emf

Spatial growth rate vs. frequency for various Mach numbers: solid lines (m=0), dashed lines (m=1).

**Michalke’s 1984**



