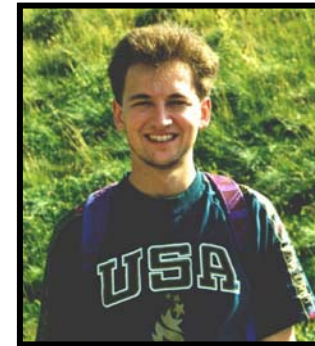


# GMA08 – Riunione Gruppo Materiali AIMETA

Genova, 29 Febbraio - 1 Marzo 2008

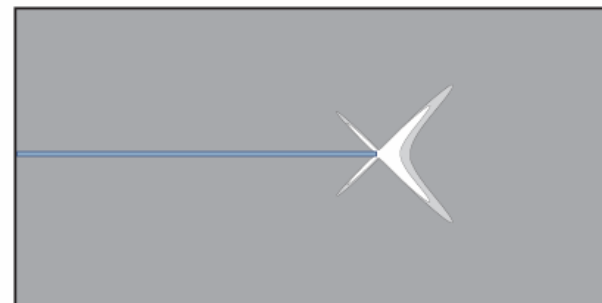
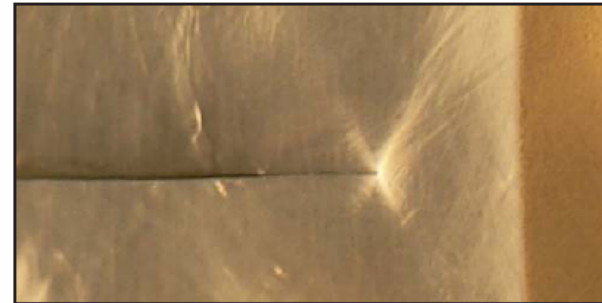
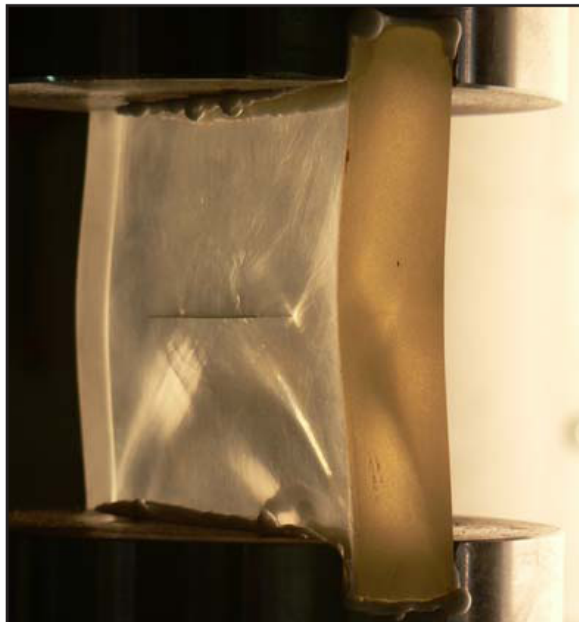
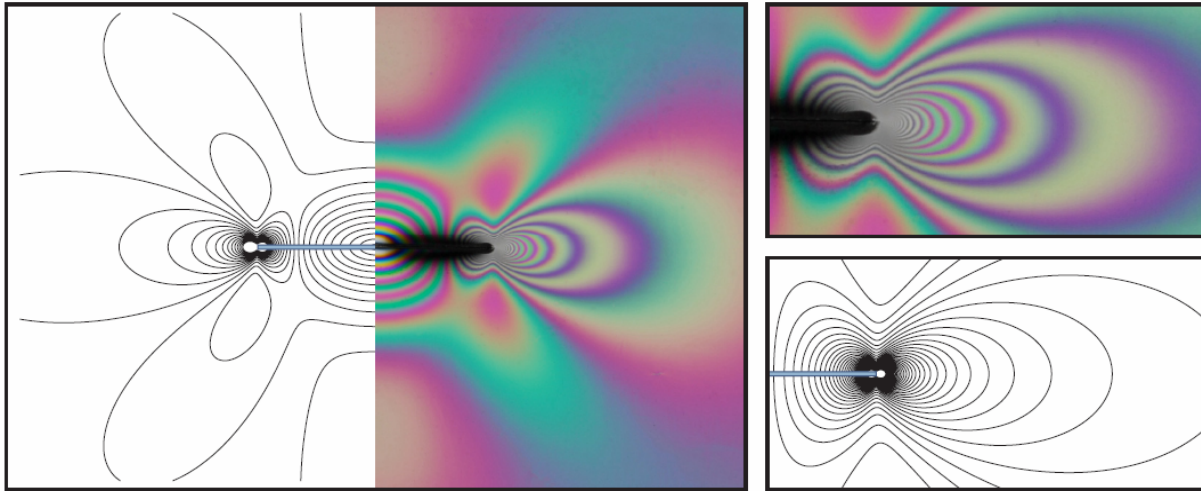
## Shear Bands Emergence at the Tip of a Rigid Line Inclusion

Francesco Dal Corso, Davide Bigoni and Massimiliano Gei

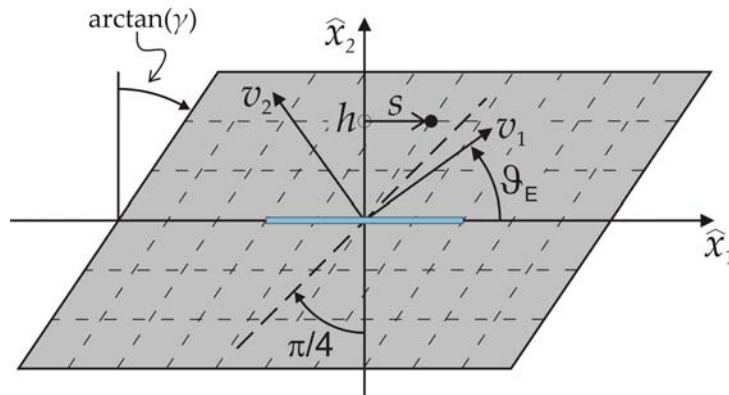


*Department of Mechanical and Structural Engineering  
University of Trento, Italy*

# EXPERIMENTAL EVIDENCE

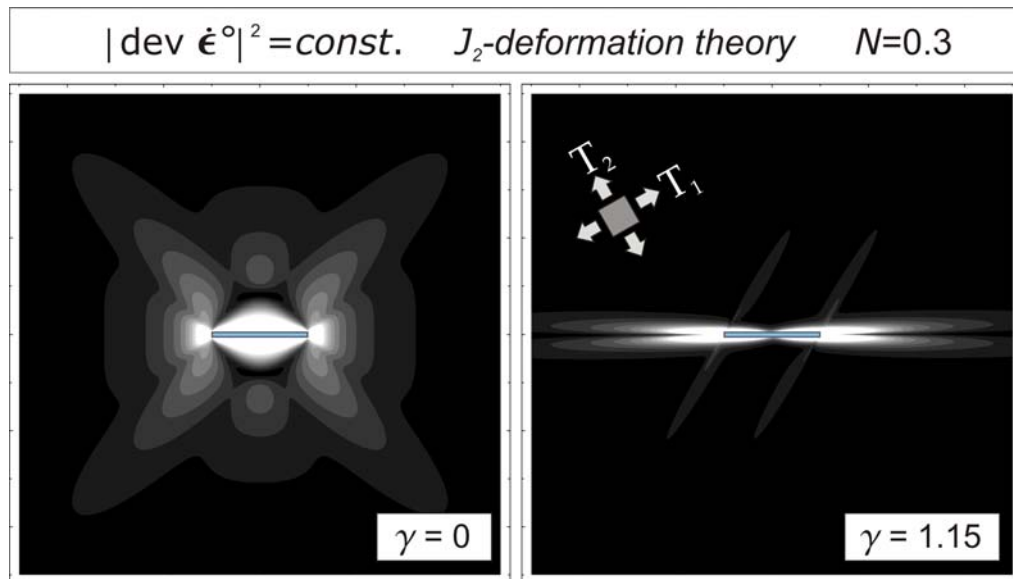


# INCREMENTAL MODE I PERTURBATION SUPERIMPOSED TO SHEAR

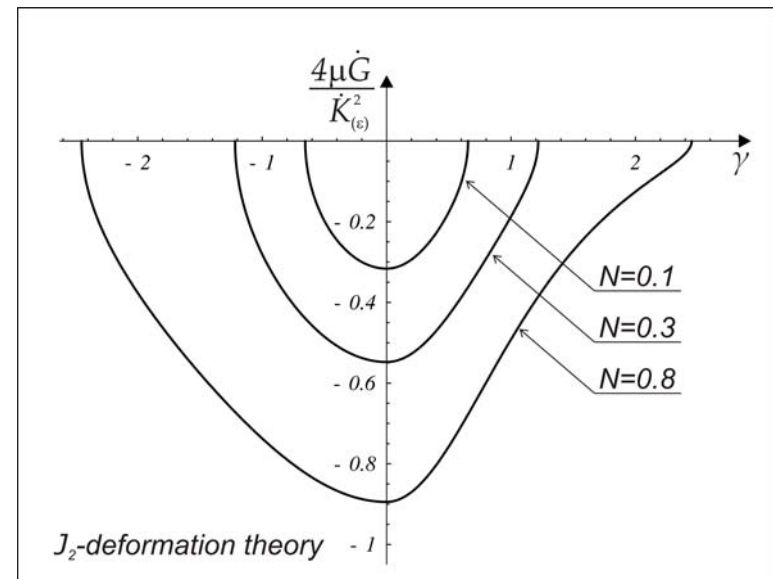


Under a simple shear, stiffener does not perturb the homogeneous state of stress

The principal axes of prestress are inclined w.r.t. the stiffener line



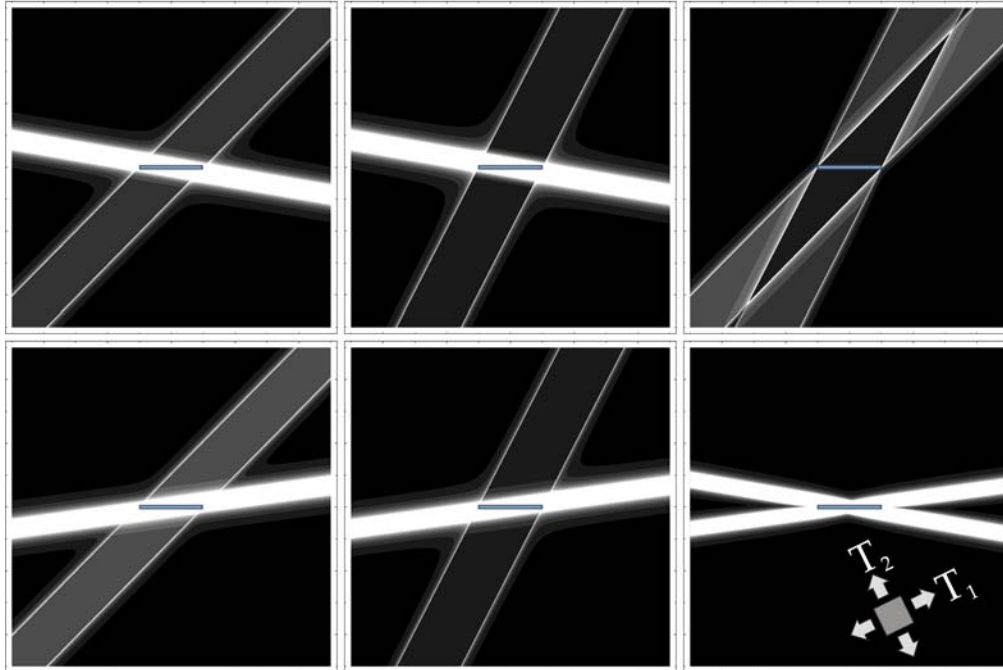
SHEAR BAND CLOSEST TO THE STIFFENER ARE PRIVILEGED



STIFFENER REDUCTION IS INHIBITED AT THE ELLIPTICITY LOSS

# SOLUTIONS OUTSIDE THE ELLIPTIC REGIME

$|\text{dev } \dot{\epsilon}^\circ|^2 = \text{const.}$   $J_2$ -deformation theory  $N=0.3$   $\gamma = 1.50$



## FUTURE DEVELOPMENTS: SHEAR BAND GROWTH

