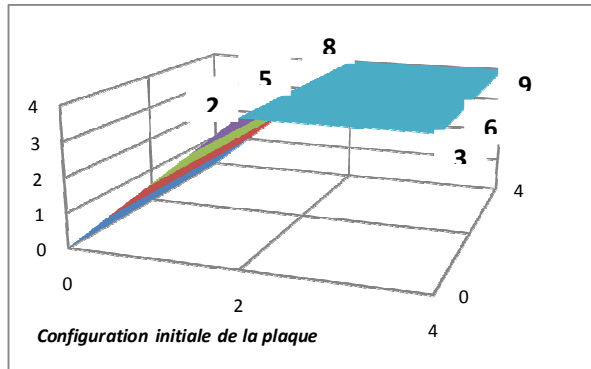




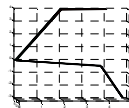
## Simulation Numérique d'une plaque en géométrie non linéaire (cas statique) Domaine élastique et domaine plastique

Caractéristiques de la plaque en acier :

$E = 2,1 \cdot 10^{11} \text{ N/m}^2$  ;  $\nu = 0,3$  ;  $\mu = 0,808$  ;  $\lambda = 1,212$  ;  $\sigma_{\text{ext}} = 5 \cdot 10^{11} \text{ N/m}^2$  ; Section =  $8 \cdot 10^{-5} \text{ m}^2$  ;  $F_{\text{ext}} = 4 \cdot 10^7 \text{ N}$ .



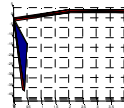
$F_{\text{ext}}$



40 itérations

Erreur : 69,94 %

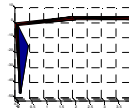
$F_{\text{int}} = 1,20 \cdot 10^7 \text{ N}$



140 itérations

Erreur : 4,04 %

$F_{\text{int}} = 3,83 \cdot 10^7 \text{ N}$

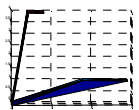


193 itérations

Erreur : 0,99 %

$F_{\text{int}} = 3,96 \cdot 10^7 \text{ N}$

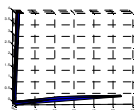
$F_{\text{ext}}$



40 itérations

Erreur : 55,44 %

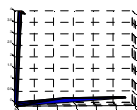
$F_{\text{int}} = 1,78 \cdot 10^7 \text{ N}$



140 itérations

Erreur : 1,08 %

$F_{\text{int}} = 3,95 \cdot 10^7 \text{ N}$

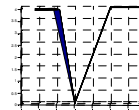
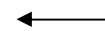


144 itérations

Erreur : 0,99 %

$F_{\text{int}} = 3,96 \cdot 10^7 \text{ N}$

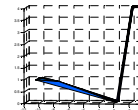
$F_{\text{ext}}$



40 itérations

Erreur : 81,26 %

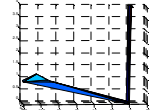
$F_{\text{int}} = 7,49 \cdot 10^6 \text{ N}$



140 itérations

Erreur : 66,10 %

$F_{\text{int}} = 1,35 \cdot 10^7 \text{ N}$

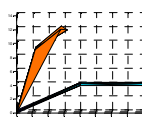


538 itérations

Erreur : 0,99 %

$F_{\text{int}} = 3,96 \cdot 10^7 \text{ N}$

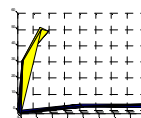
$F_{\text{ext}}$



40 itérations

Erreur : 67,26 %

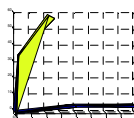
$F_{\text{int}} = 1,30 \cdot 10^7 \text{ N}$



140 itérations

Erreur : 2,84 %

$F_{\text{int}} = 3,88 \cdot 10^7 \text{ N}$



196 itérations

Erreur : 0,98 %

$F_{\text{int}} = 3,96 \cdot 10^7 \text{ N}$