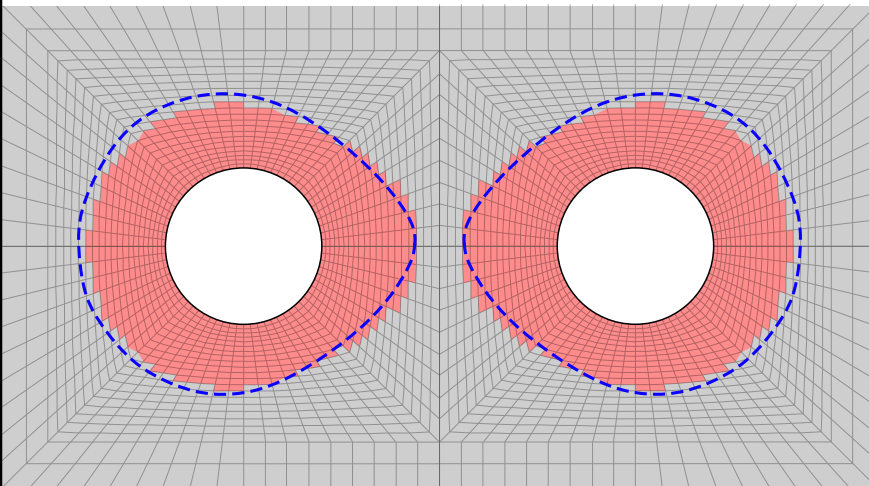
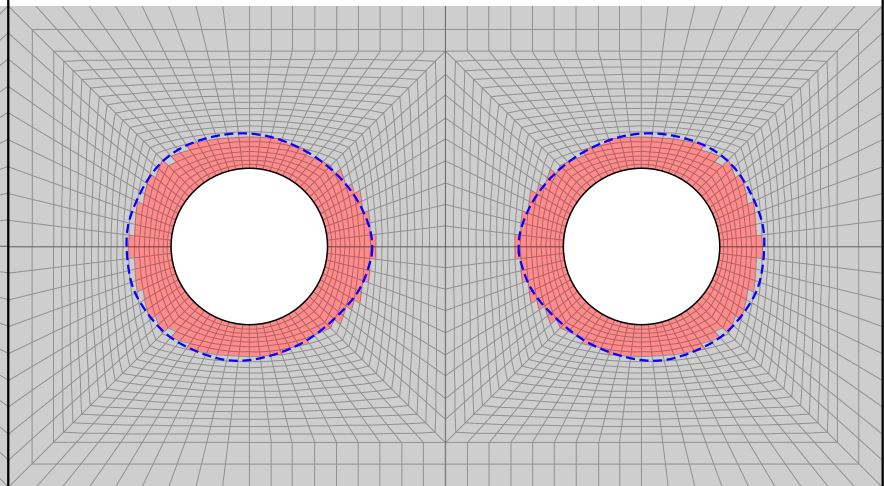


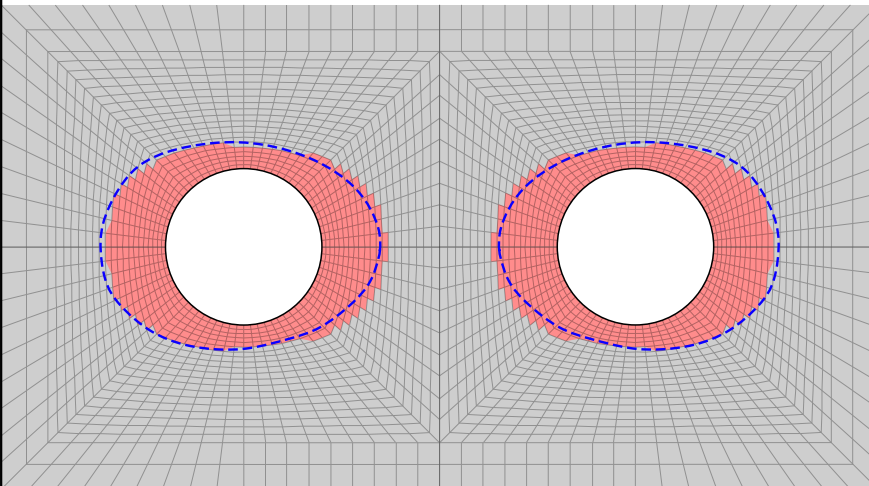
$c = 2.5 \text{ MPa}, \sigma_h = 30 \text{ MPa}, \sigma_v = 30 \text{ MPa}$



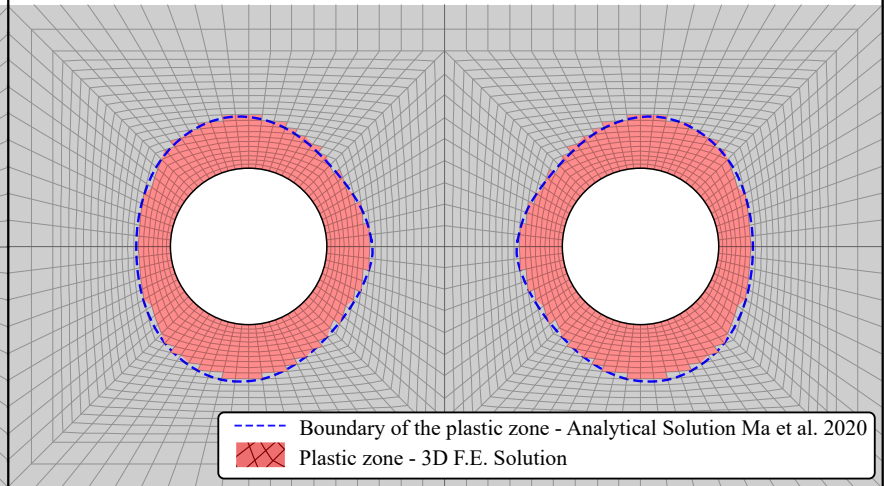
$c = 5 \text{ MPa}, \sigma_h = 30 \text{ MPa}, \sigma_v = 30 \text{ MPa}$



$c = 5 \text{ MPa}, \sigma_h = 30 \text{ MPa}, \sigma_v = 40 \text{ MPa}$



$c = 5 \text{ MPa}, \sigma_h = 40 \text{ MPa}, \sigma_v = 30 \text{ MPa}$



--- Boundary of the plastic zone - Analytical Solution Ma et al. 2020
 Plastic zone - 3D F.E. Solution