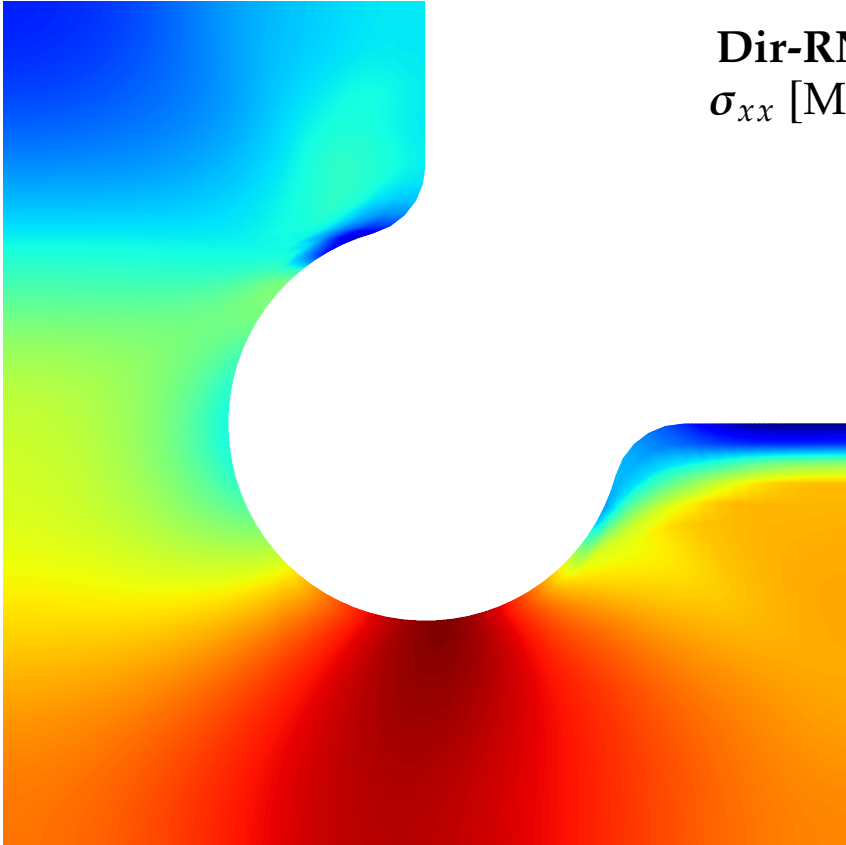


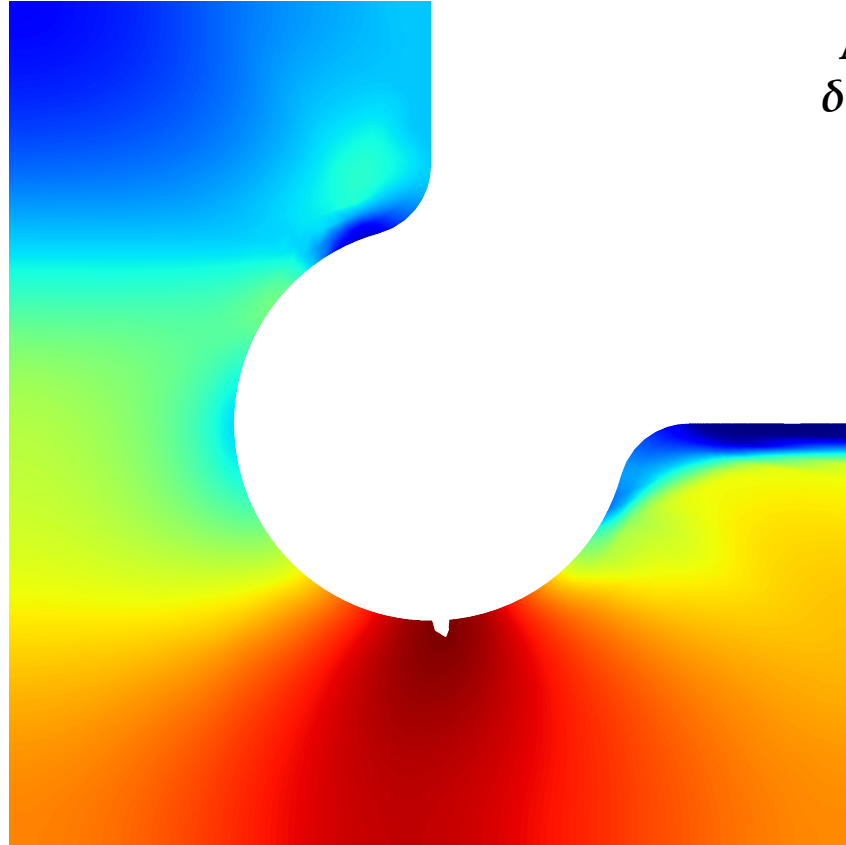
Abaqus
 σ_{xx} [MPa]



292.459
242.035
191.611
141.188
90.764
40.340
-10.083
-60.507
-110.931
-161.354

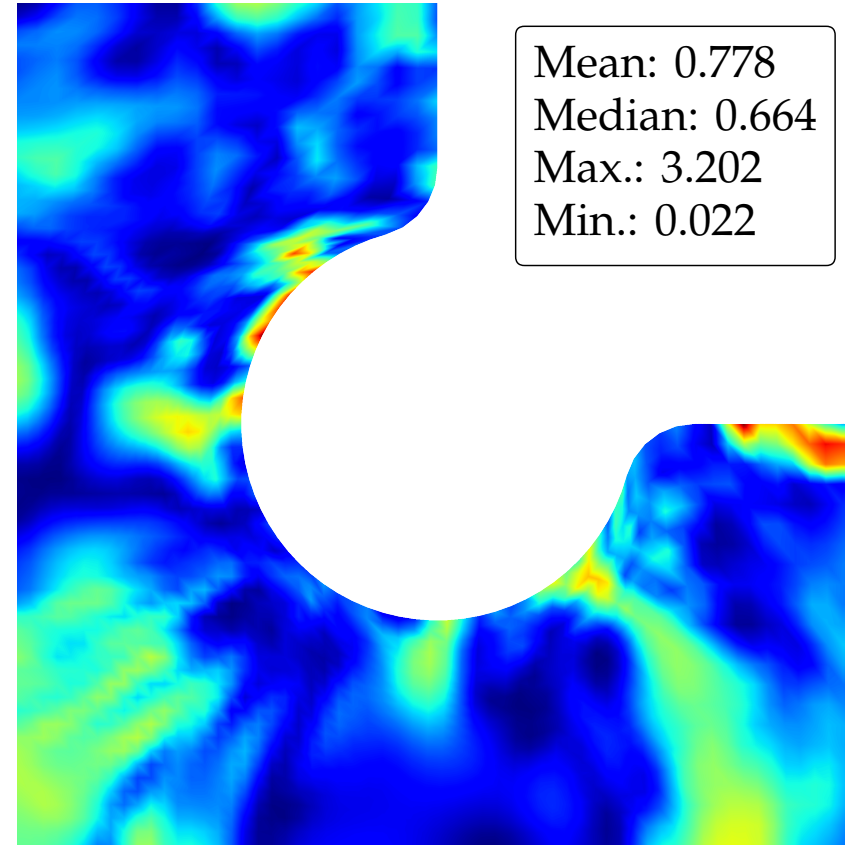
This figure shows the σ_{xx} stress field from an Abaqus finite element analysis. The color scale ranges from -161.354 MPa (dark blue) to 292.459 MPa (dark red). The plot shows a U-shaped component with a central circular hole and a semi-circular notch on the right side. The stress is highest at the bottom of the notch and around the hole.

Dir-RNN
 σ_{xx} [MPa]



This figure shows the σ_{xx} stress field from a Dir-RNN model. The color scale is identical to the Abaqus plot, ranging from -161.354 MPa (dark blue) to 292.459 MPa (dark red). The plot shows a U-shaped component with a central circular hole and a semi-circular notch on the right side. The stress distribution is very similar to the Abaqus plot, with high stress concentrations at the bottom of the notch and around the hole.

Abs. error
 $\delta\sigma_{xx}$ [MPa]



3.202
2.848
2.495
2.142
1.788
1.435
1.082
0.728
0.375
0.022

This figure shows the absolute error $\delta\sigma_{xx}$ between the Dir-RNN model and the Abaqus finite element analysis. The color scale ranges from 0.022 MPa (dark blue) to 3.202 MPa (dark red). The plot shows a U-shaped component with a central circular hole and a semi-circular notch on the right side. The error is highest at the bottom of the notch and around the hole, reaching up to 3.202 MPa.

Mean: 0.778
Median: 0.664
Max.: 3.202
Min.: 0.022