

Assignment No 5

V M Rishikesh

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1 Resistor Problem

This report cover various plots related to "The resistor problem" assignment

1.1 Resistor idea

The red dots represents the points of potential= 1.0 V

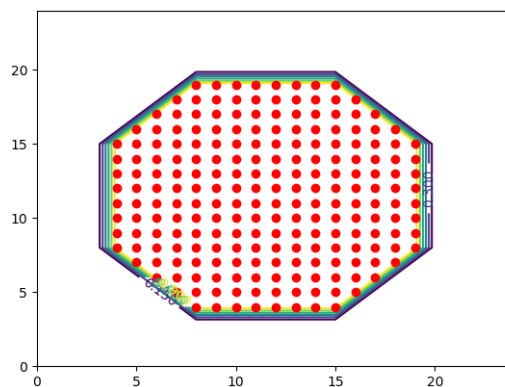


Figure 1: Contour plot of potential

1.2 Error with potential

Here the the curve becomes linear from 100th iteration onwards

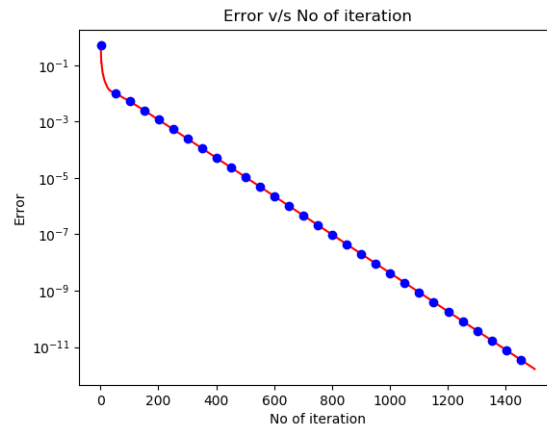


Figure 2: Semilogy of error

1.3 Surface potential

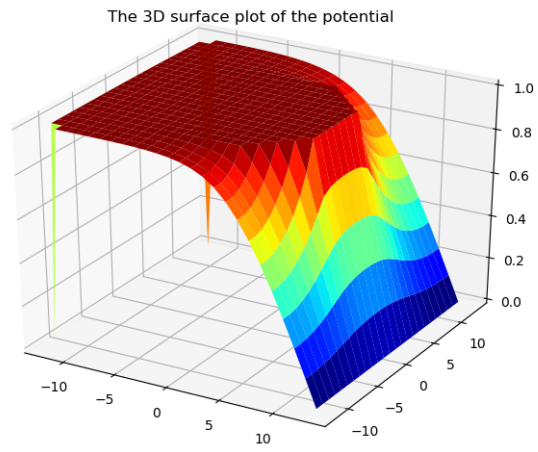


Figure 3: Contour plot

1.4 Vector plot

To be clear, the top is the zero potential region.

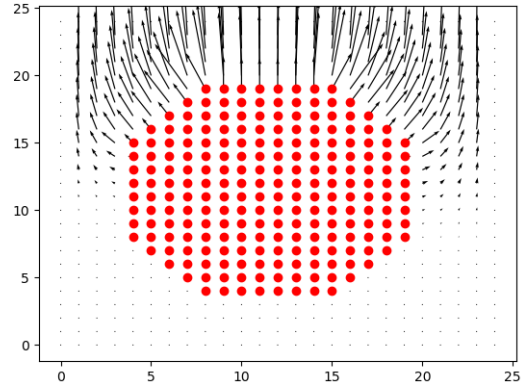


Figure 4: Quiver plot