## Homework 8

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## 1 Problem 1

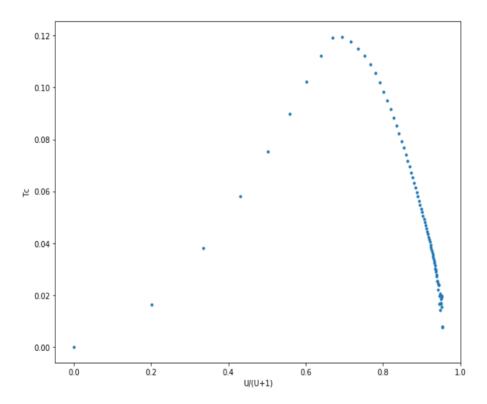


Figure 1: At large U values, there exist some problems with the convergence, therefore I only include graph until U/(U+1)=0.97.

At small U and infinite U,  $T_c$  is approaches zero.  $T_c$  is maxed at about U = 2.25, where I think the hopping and the interactions between sites reach a delicate balance.