

# Scientific computing: Project 4 part 2

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Those results were obtained for the parameters:  $D_p=1$ ,  $D_q=8$ ,  $C=4.5$ ,  $dx=dy=1$  and  $p$  and  $q$  discretized as a  $40 \times 40$  grid. Additionally we implemented Neumann conditions i.e  $\hat{n} \vec{\nabla} = 0$ .

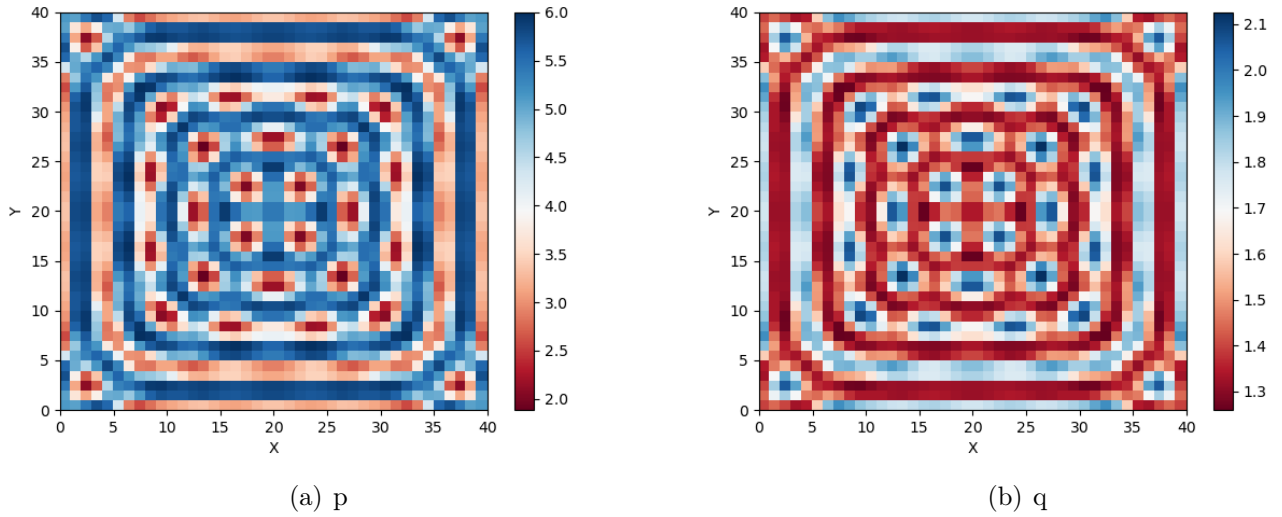
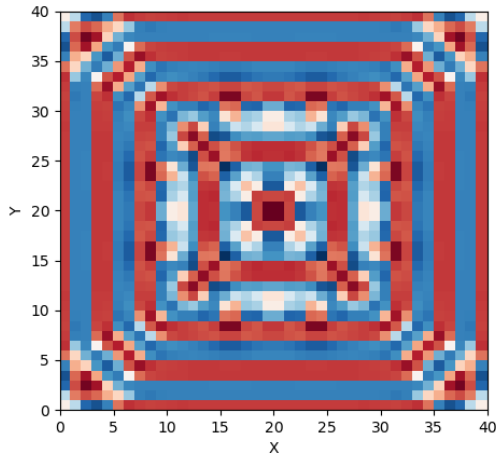
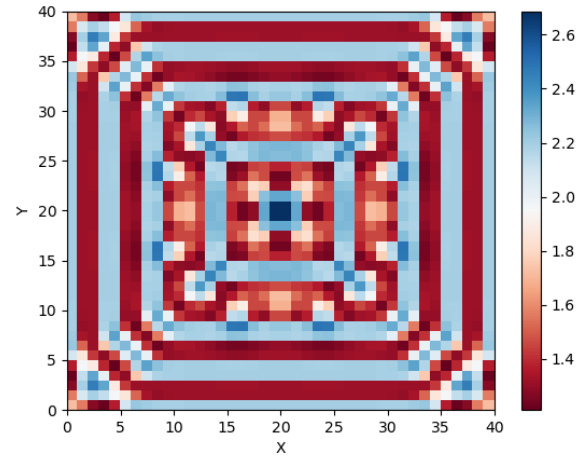


Figure 1:  $K=7$

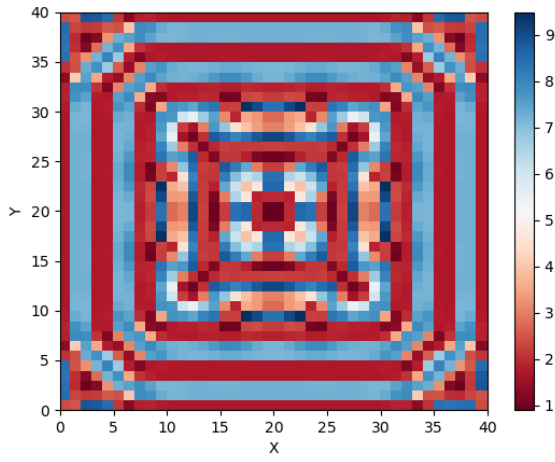


(a) p

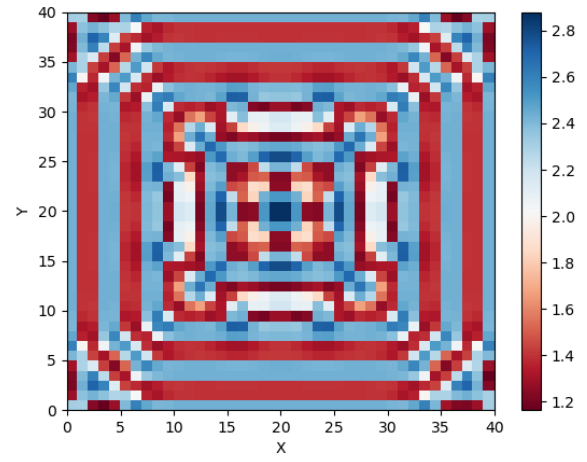


(b) q

Figure 2: K=8

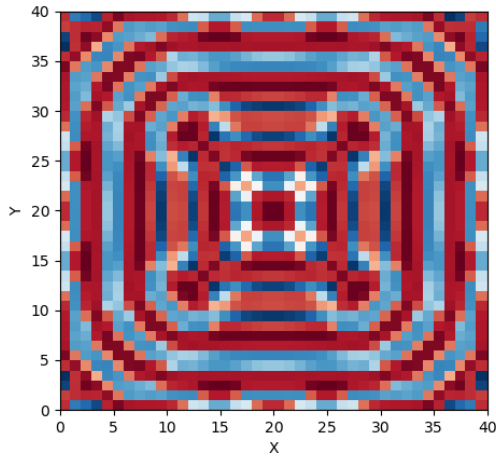


(a) p

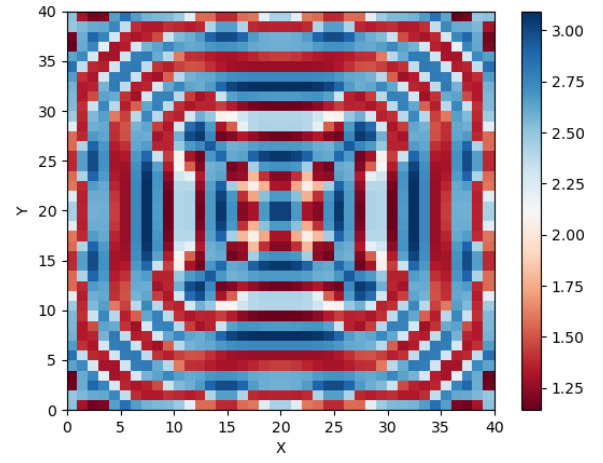


(b) q

Figure 3: K=9

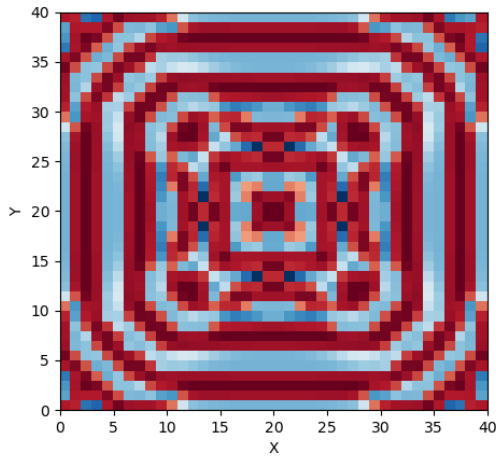


(a) p

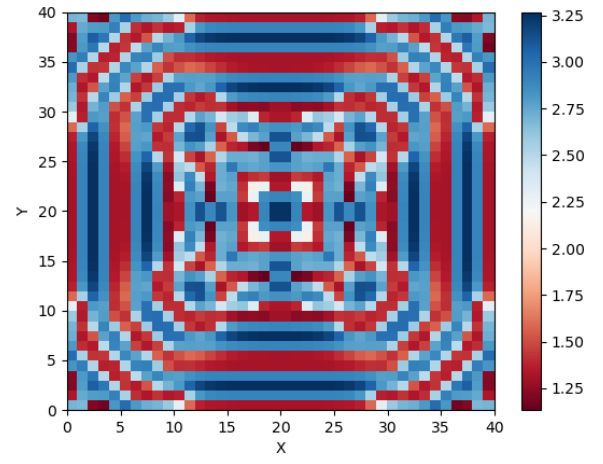


(b) q

Figure 4: K=10

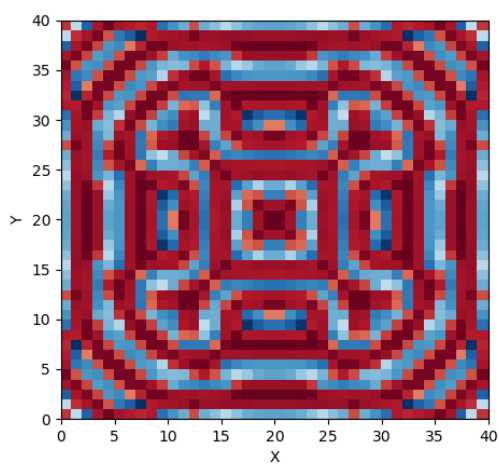


(a) p

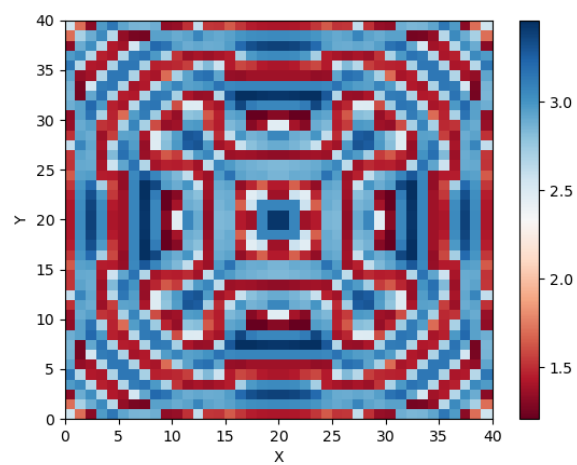


(b) q

Figure 5: K=11



(a) p



(b) q

Figure 6:  $K=12$