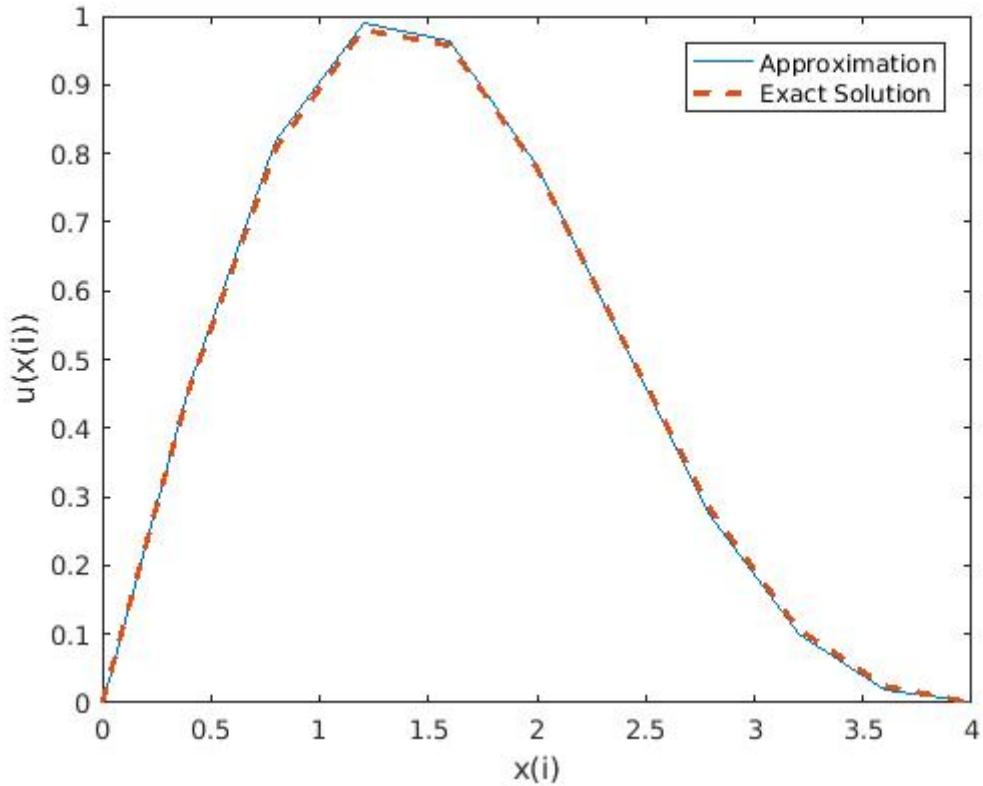
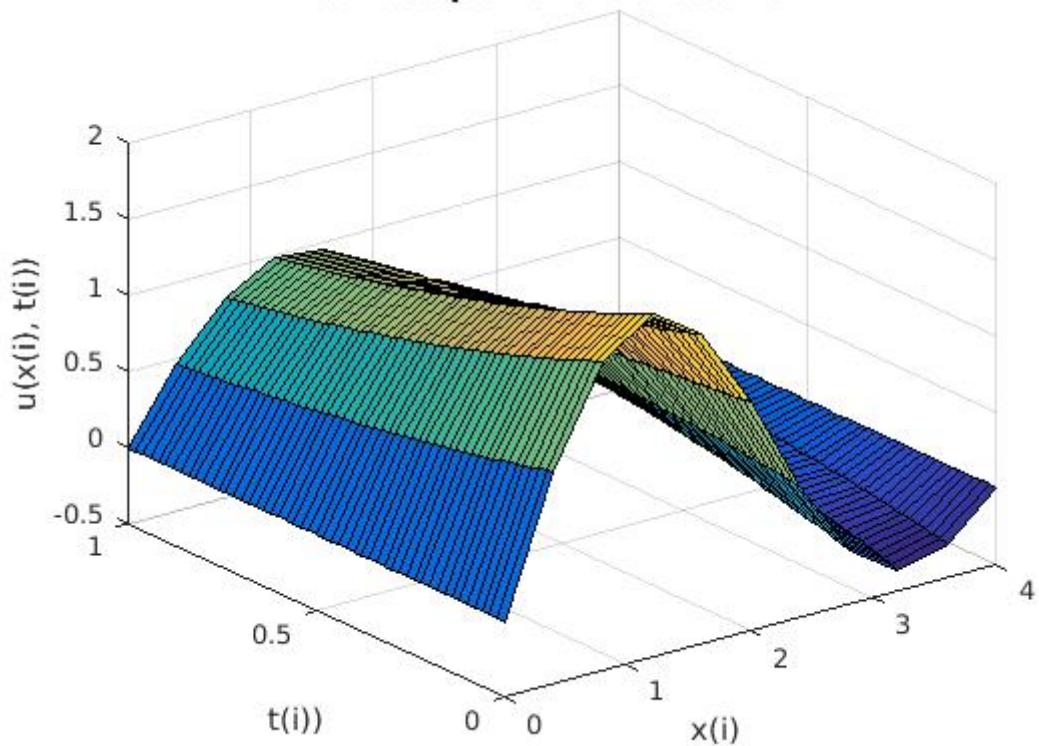


LAB 10

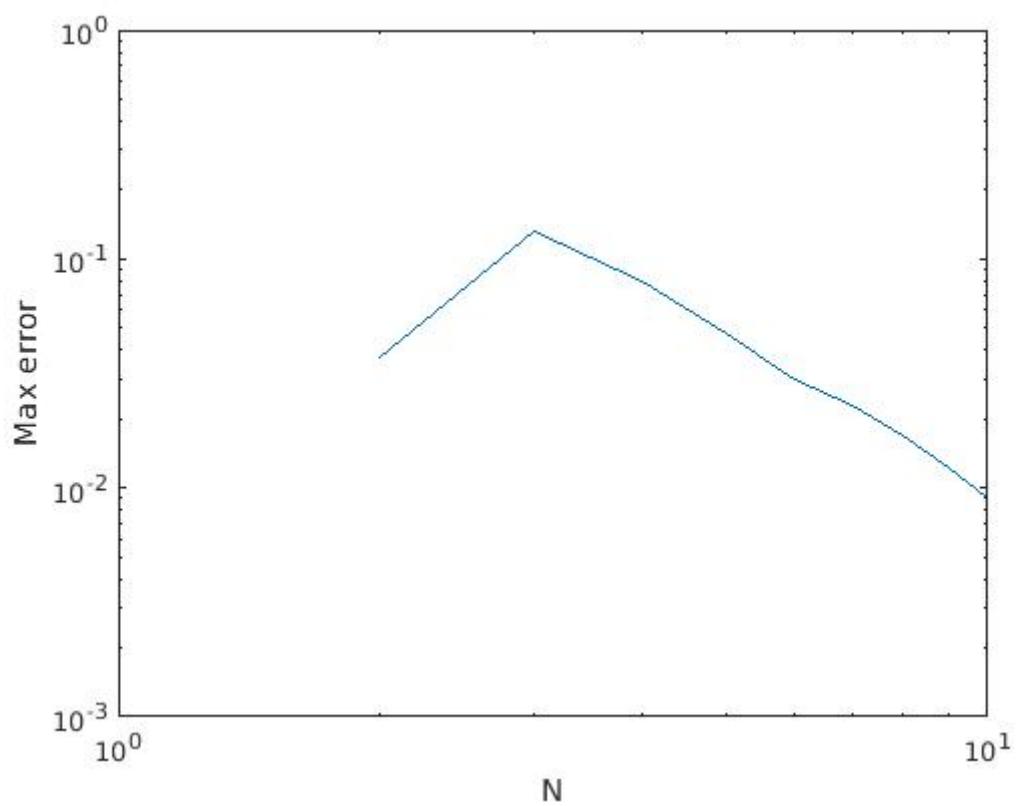
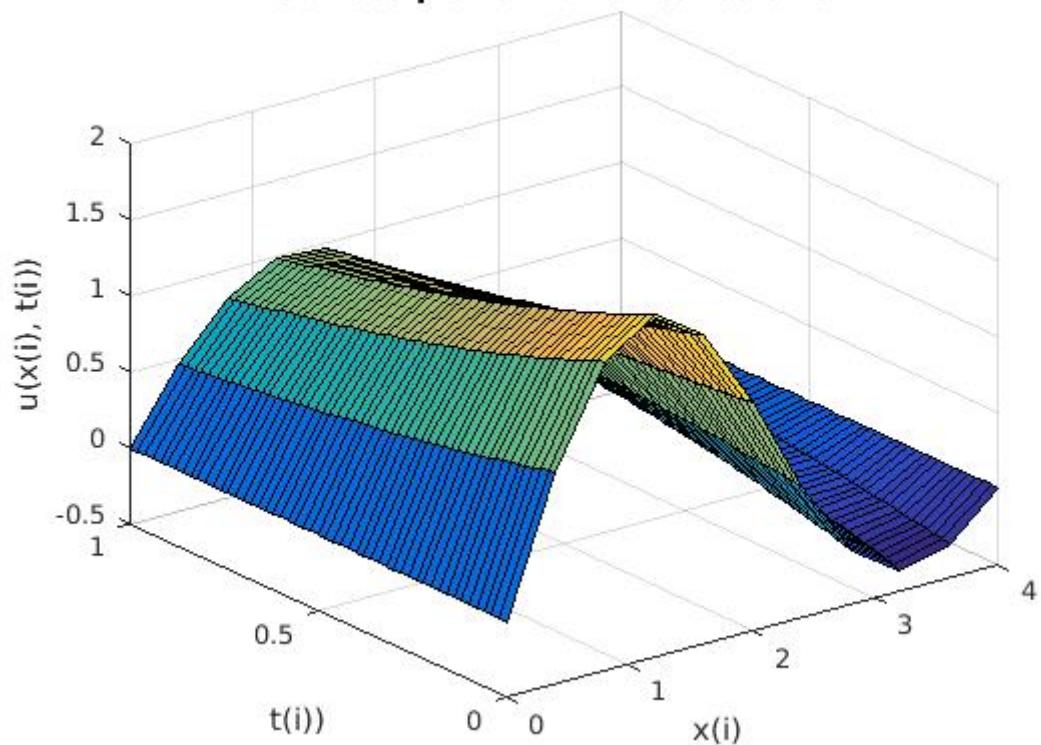
Part a: By FTCS scheme:



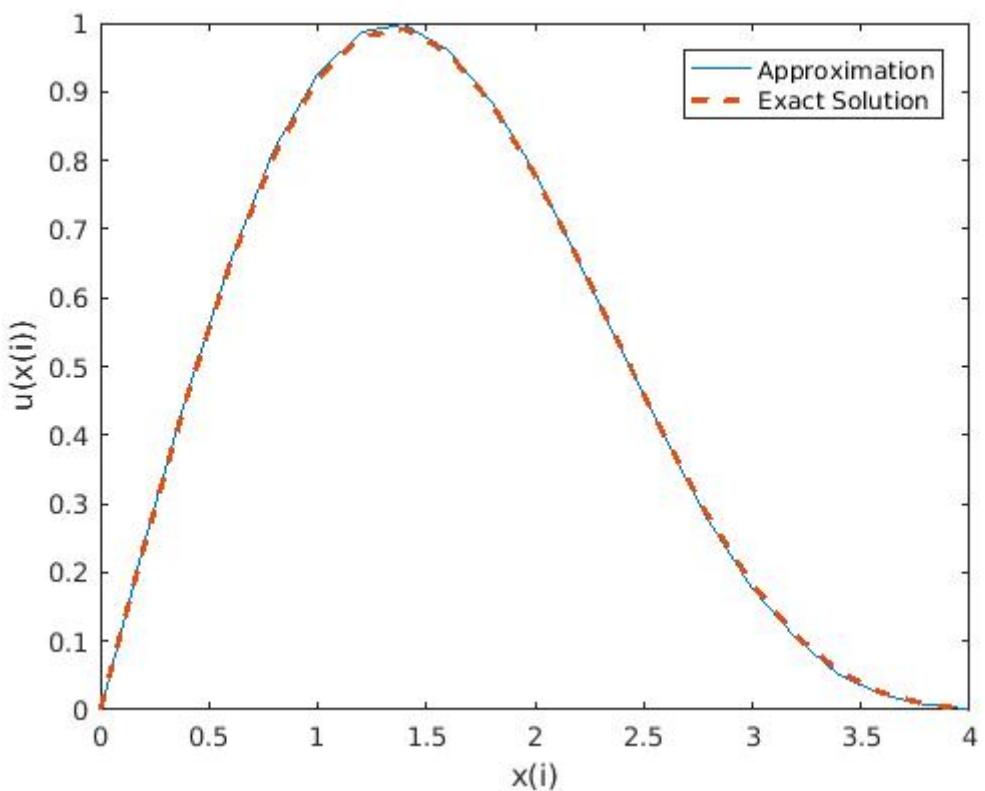
Surface plot of exact solution



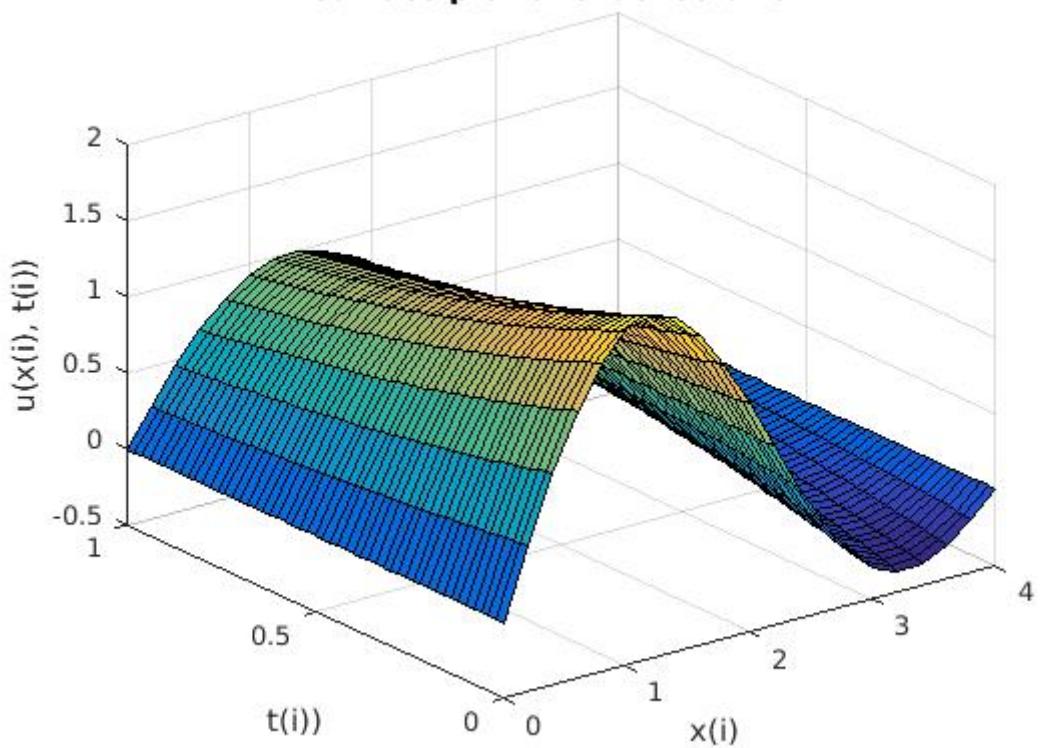
Surface plot of numerical solution



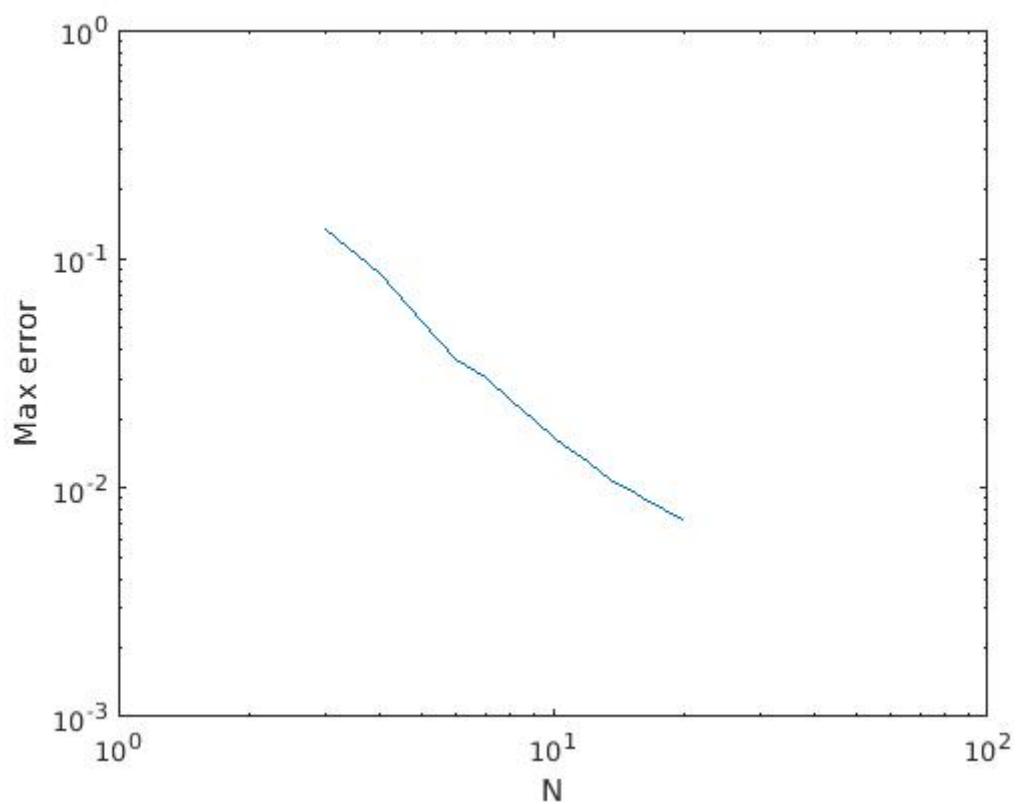
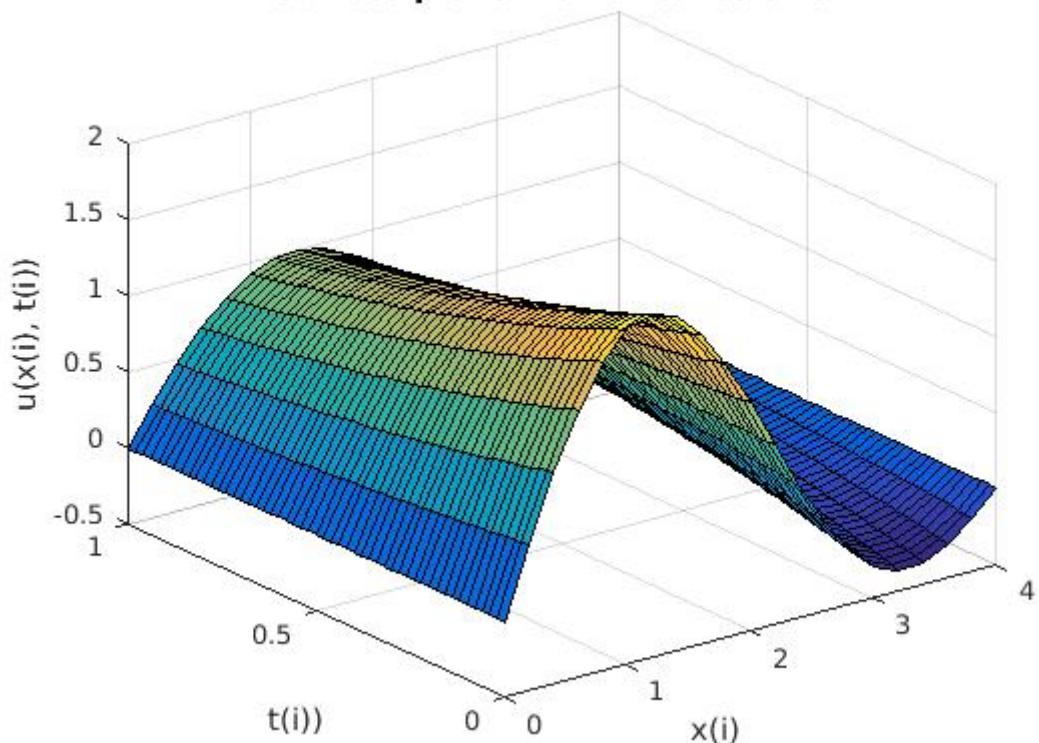
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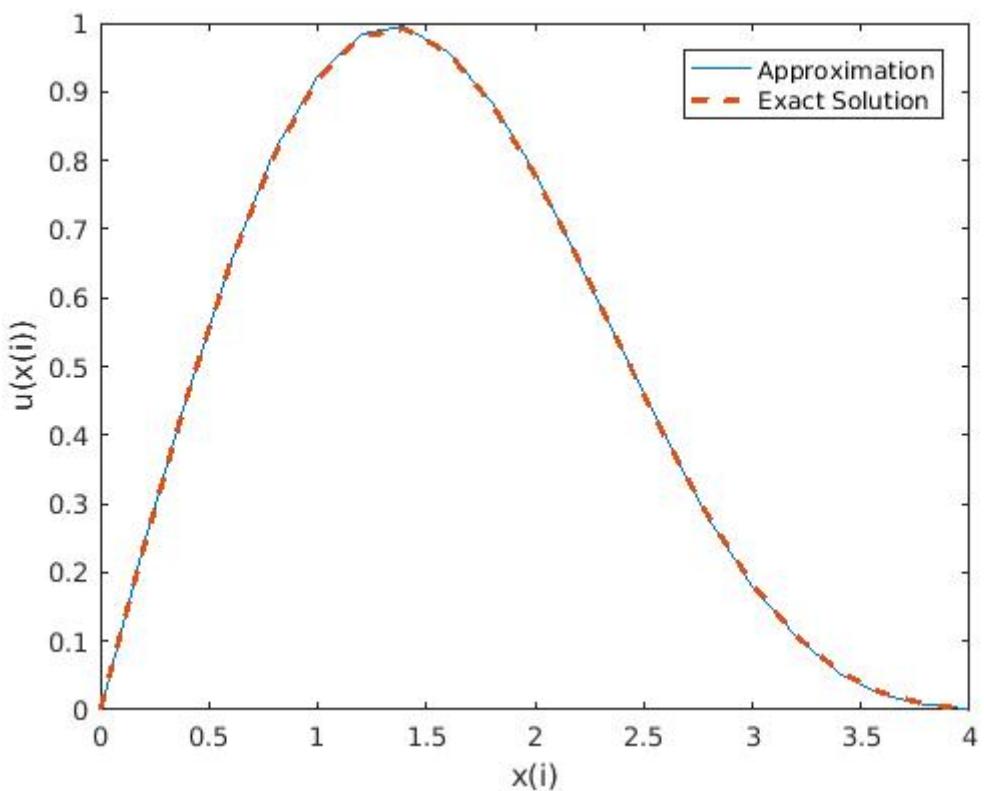
Surface plot of exact solution



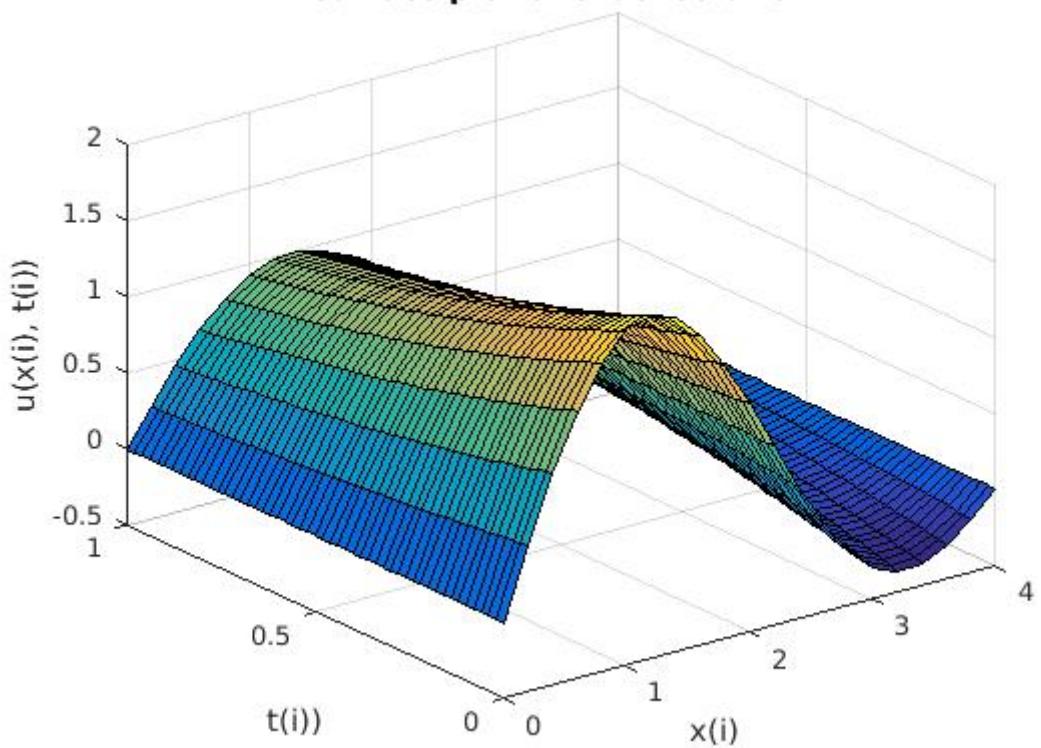
Surface plot of numerical solution



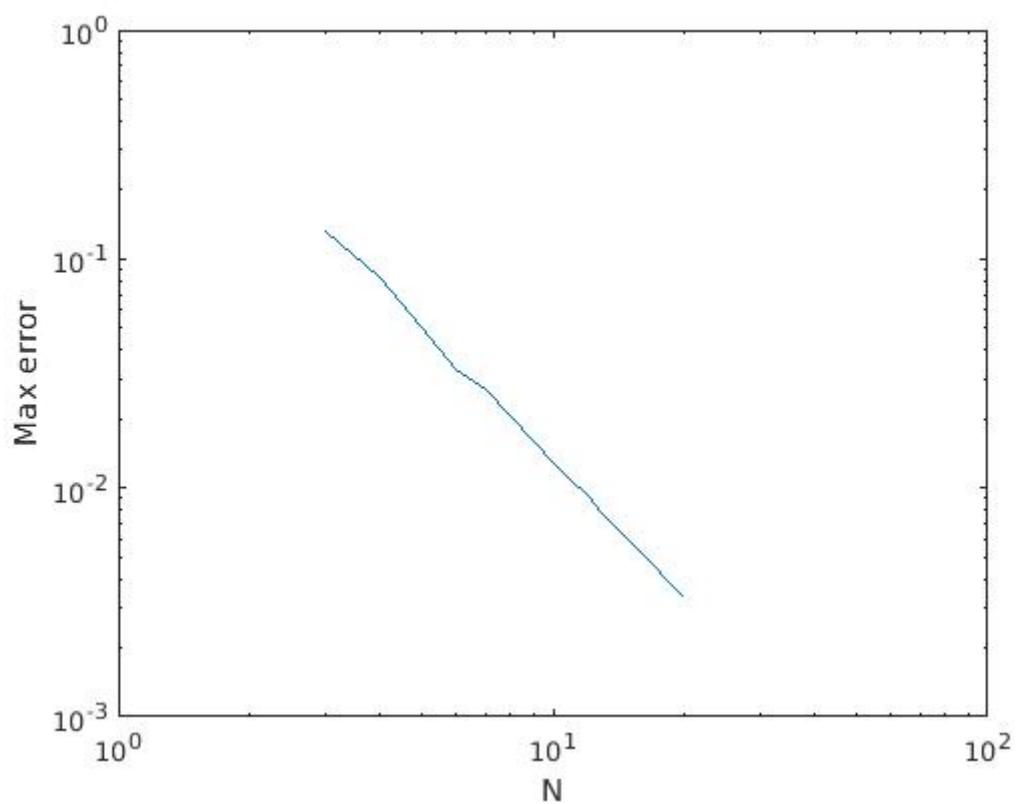
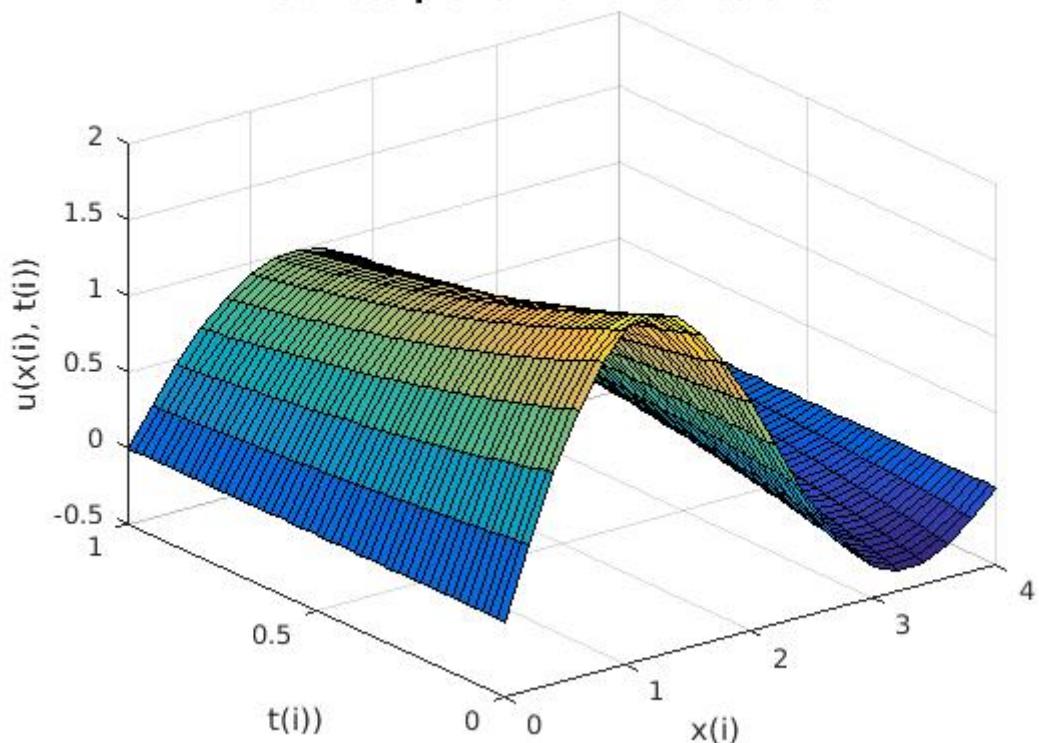
By Crank-Nicolson scheme:



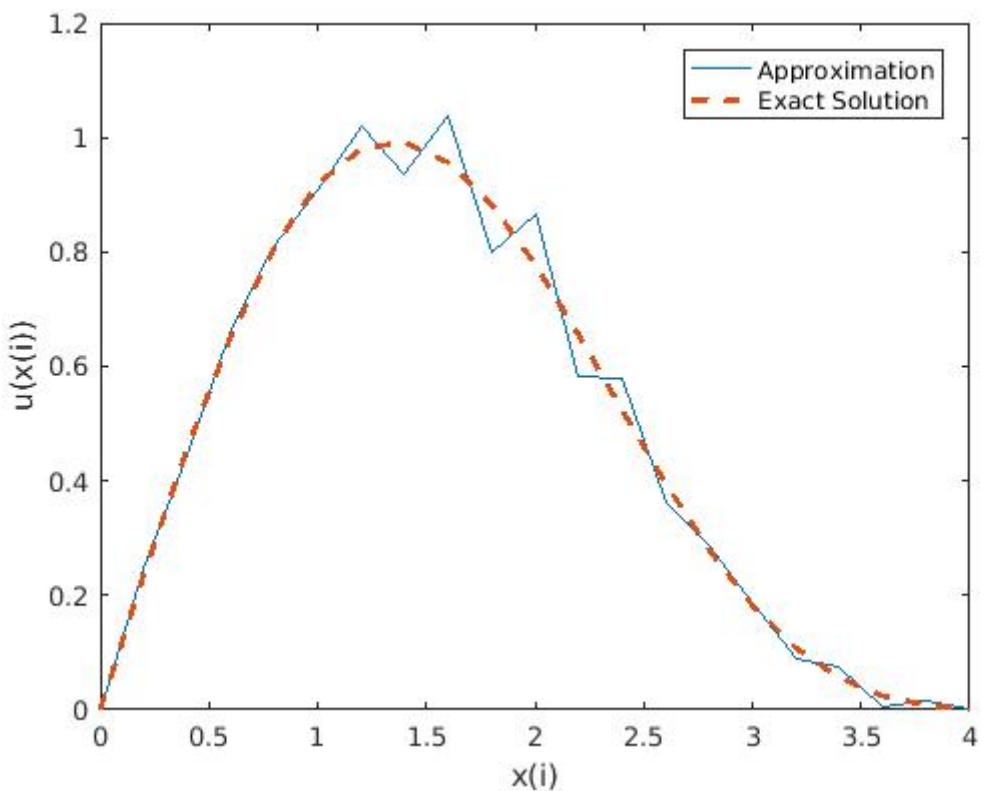
Surface plot of exact solution



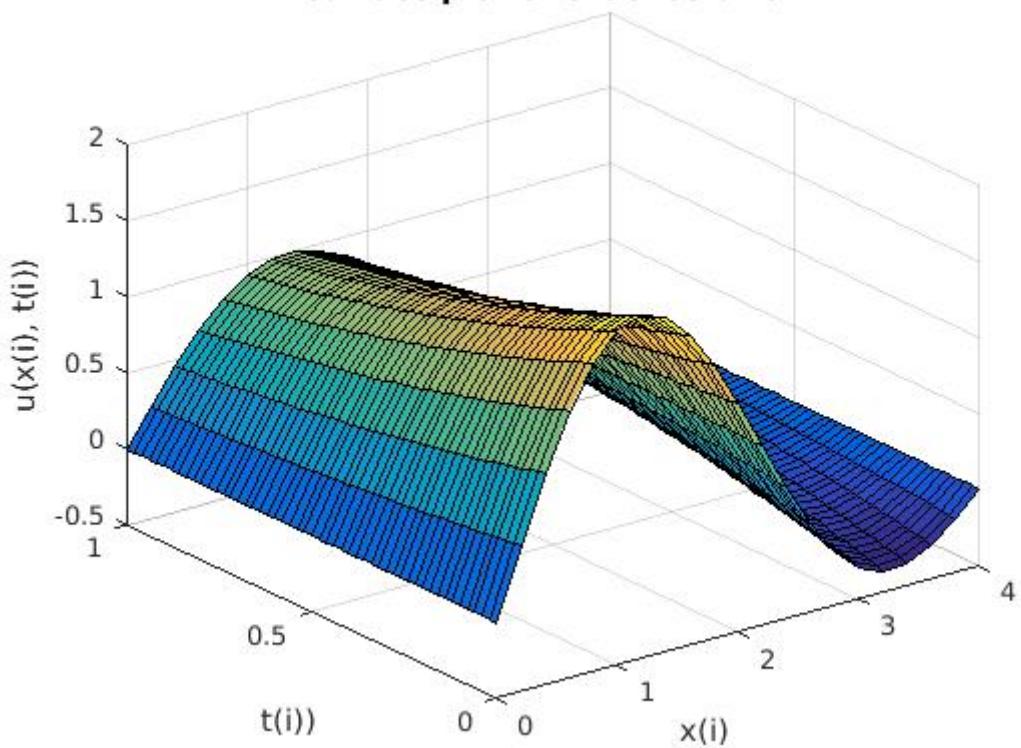
Surface plot of numerical solution



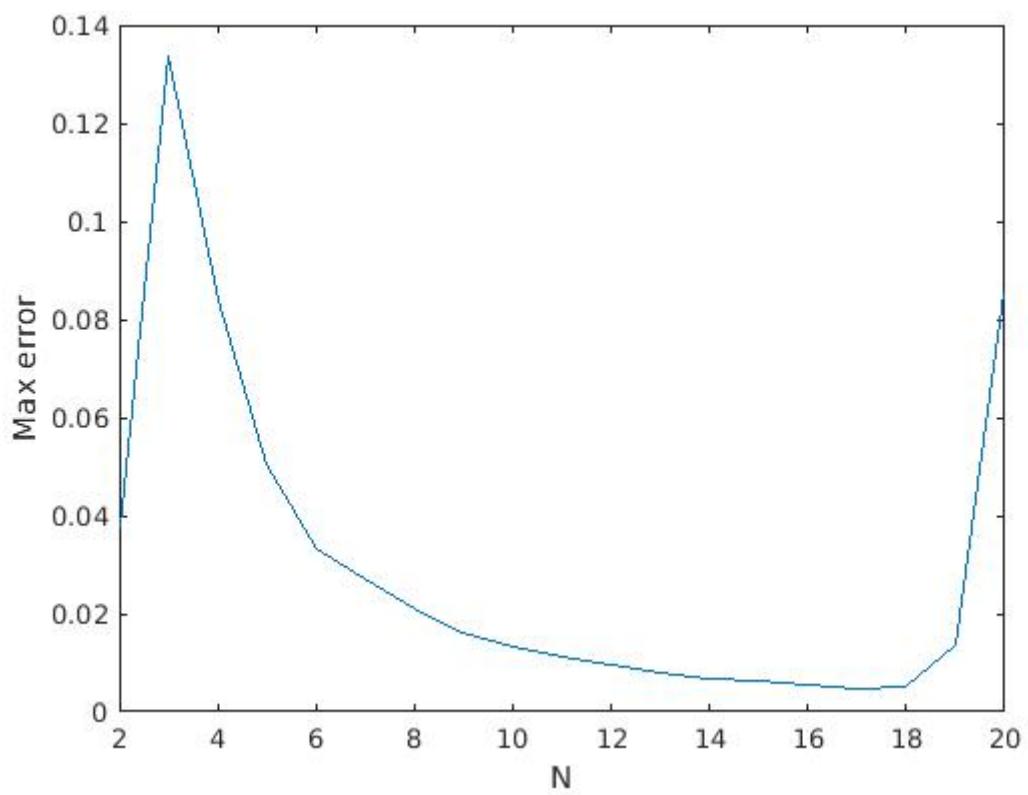
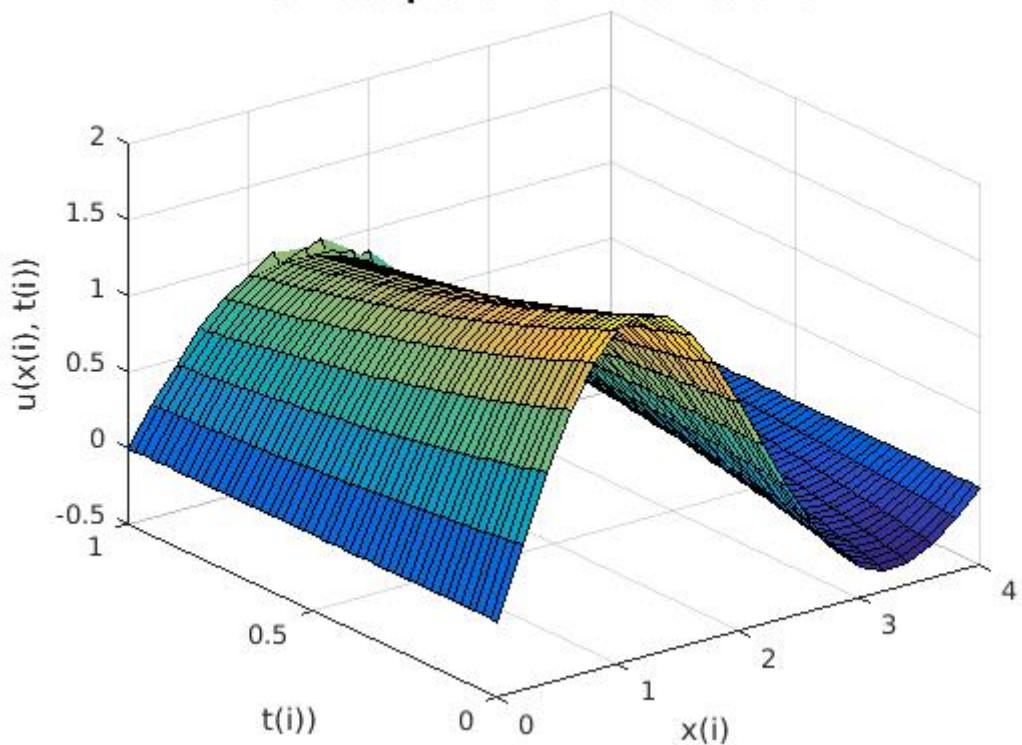
By Richardson scheme:



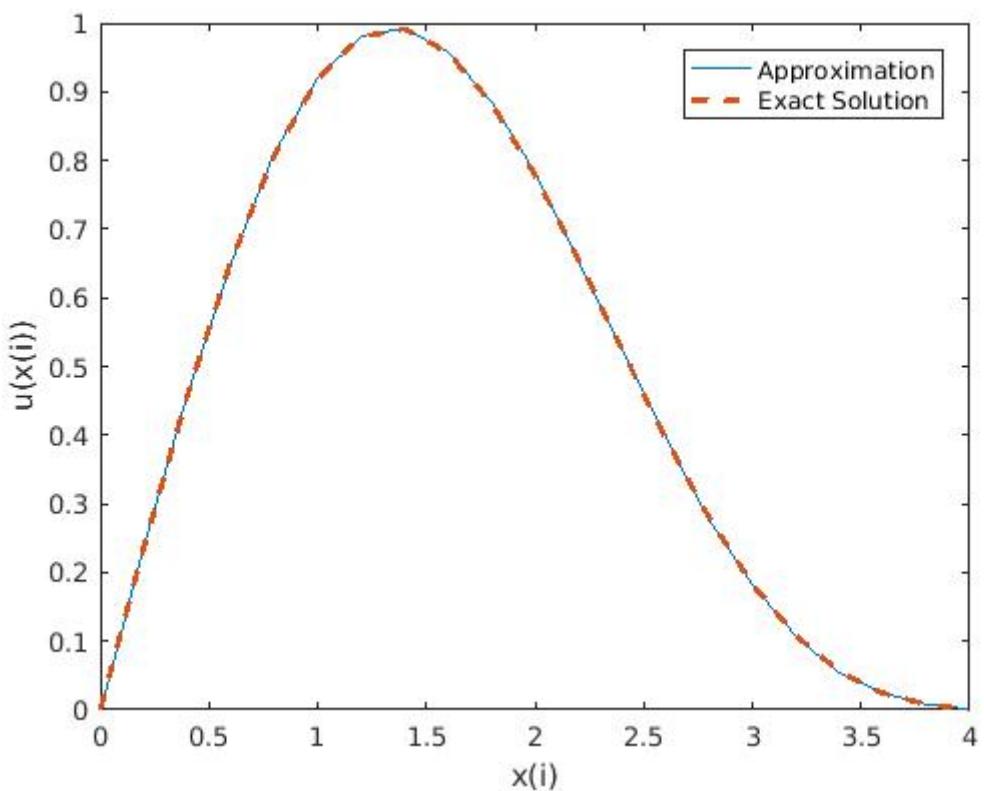
Surface plot of exact solution



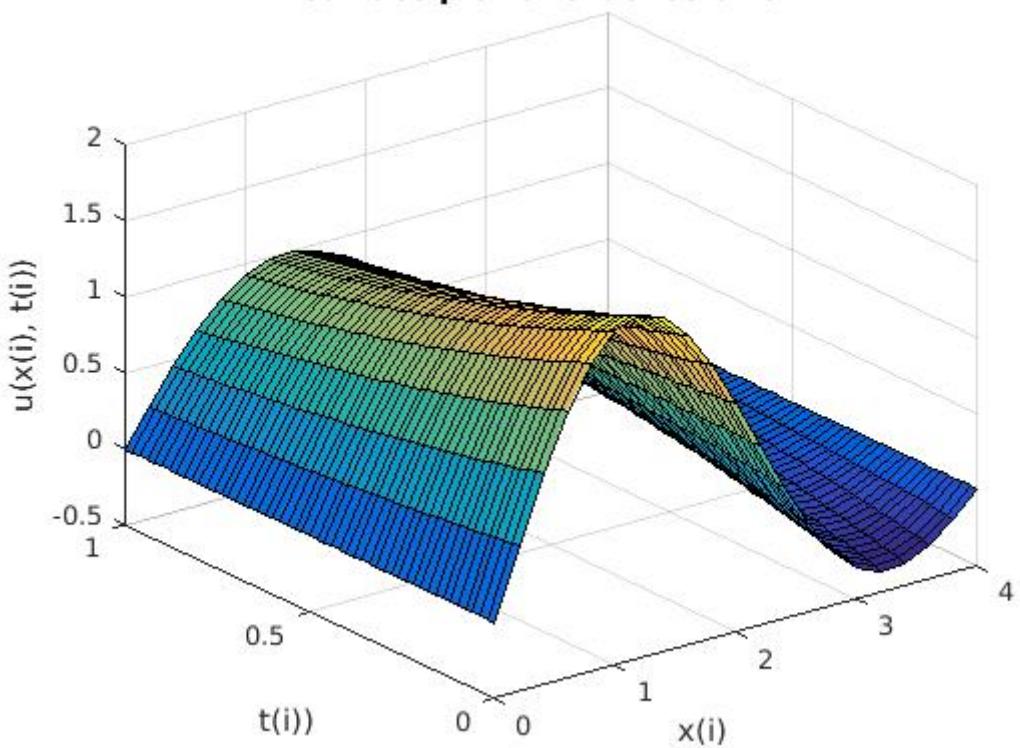
Surface plot of numerical solution



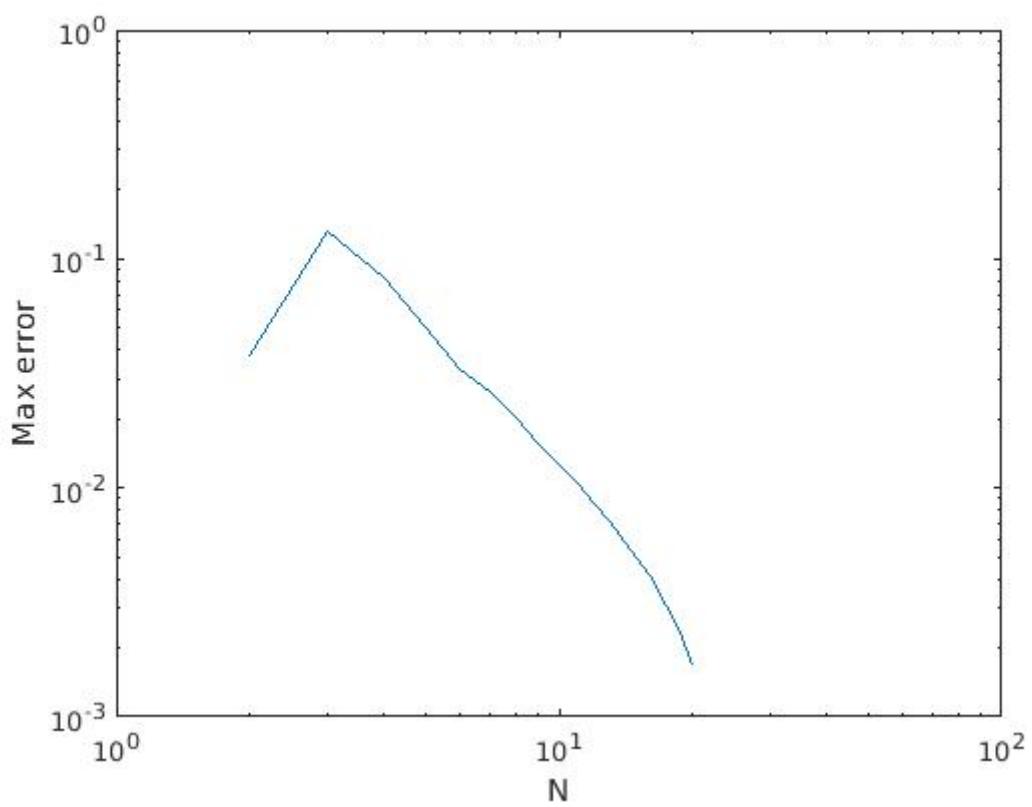
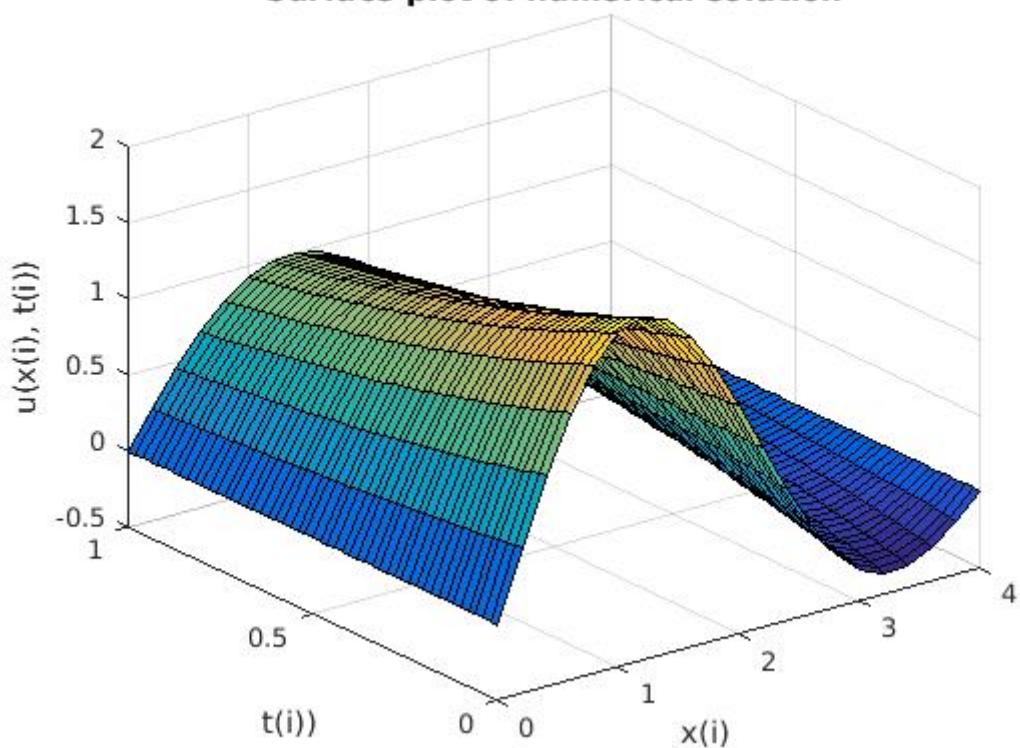
By Du-Fort Frankel scheme:



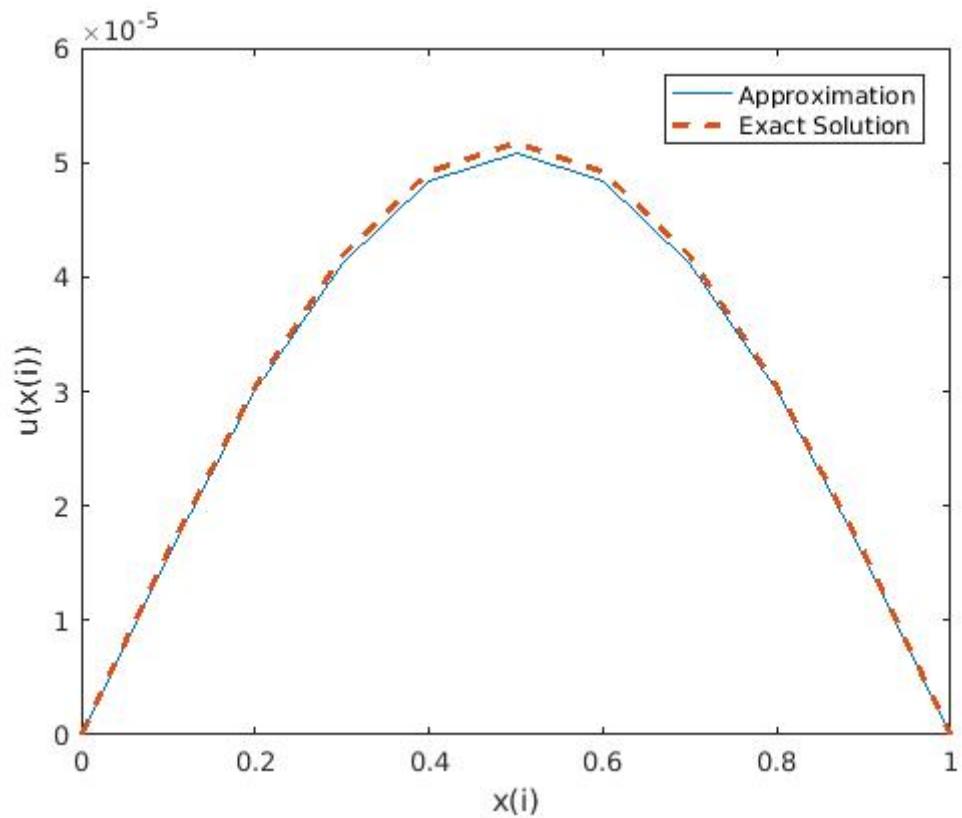
Surface plot of exact solution



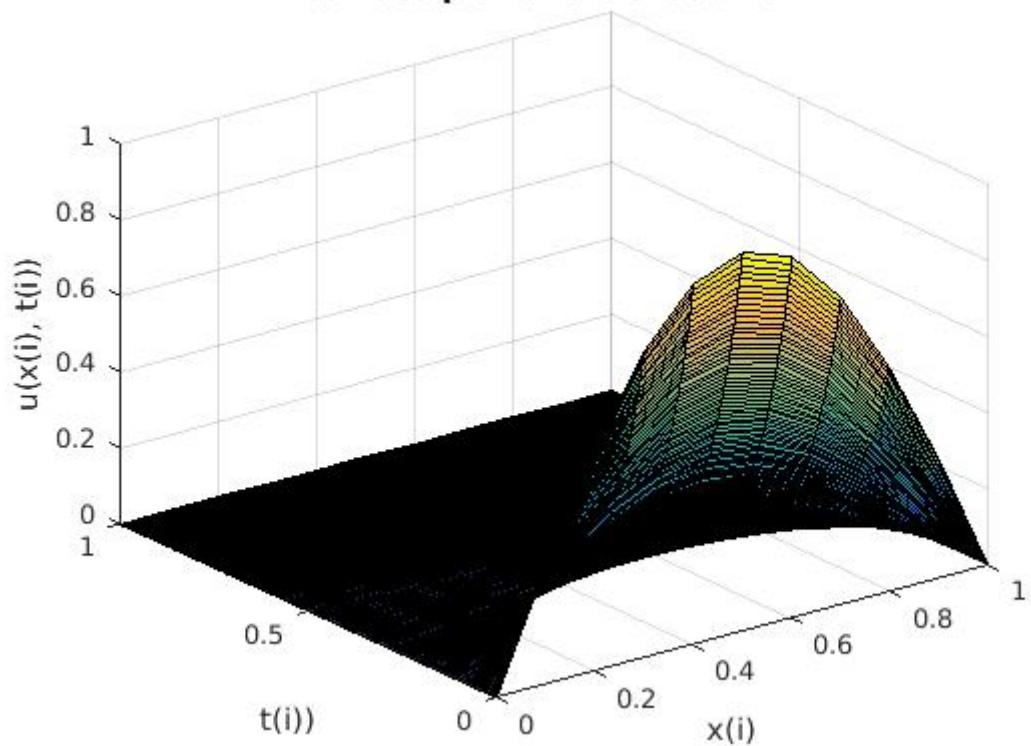
Surface plot of numerical solution



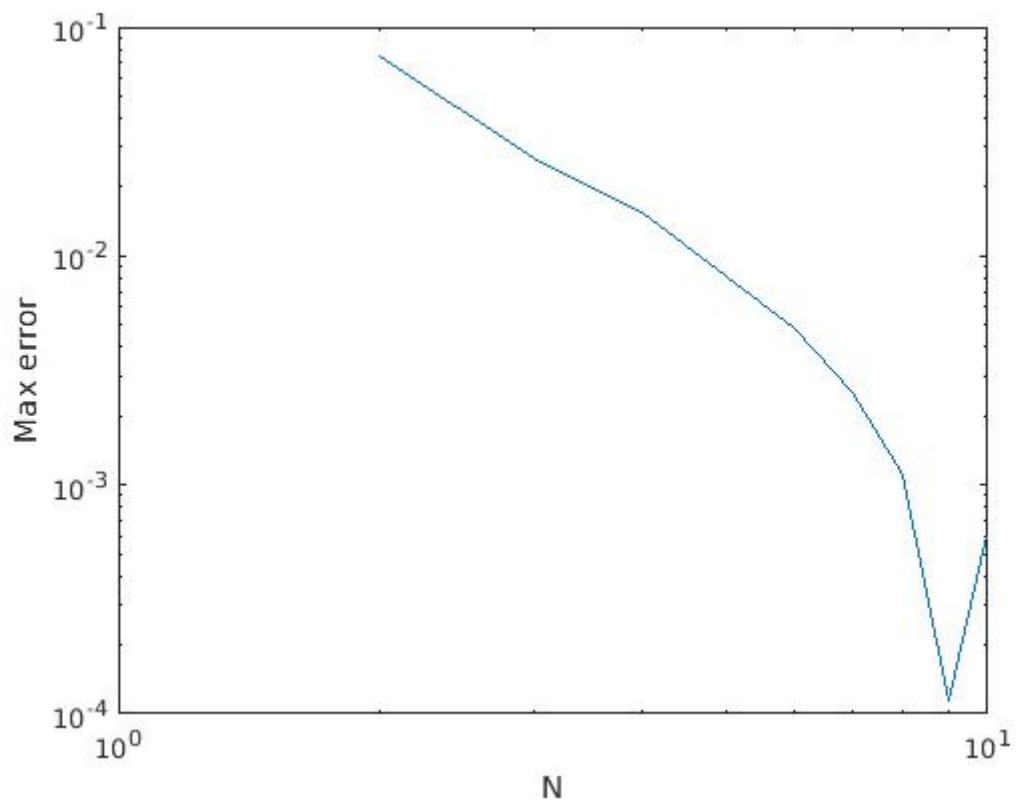
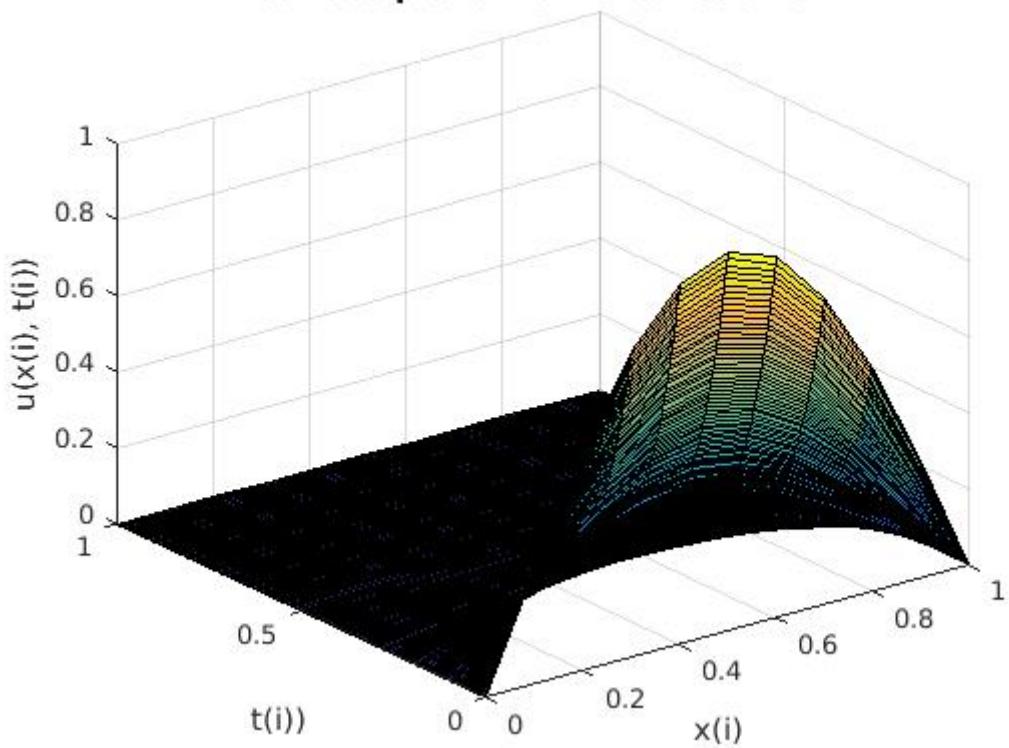
Part b: By FTCS scheme:



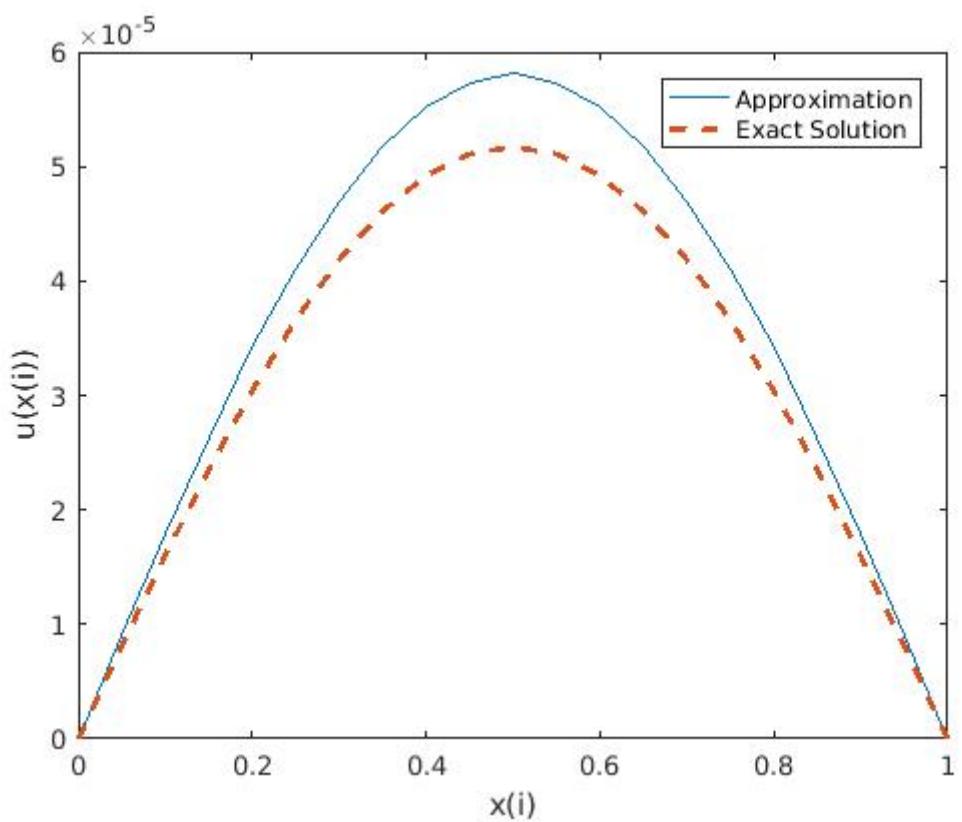
Surface plot of exact solution



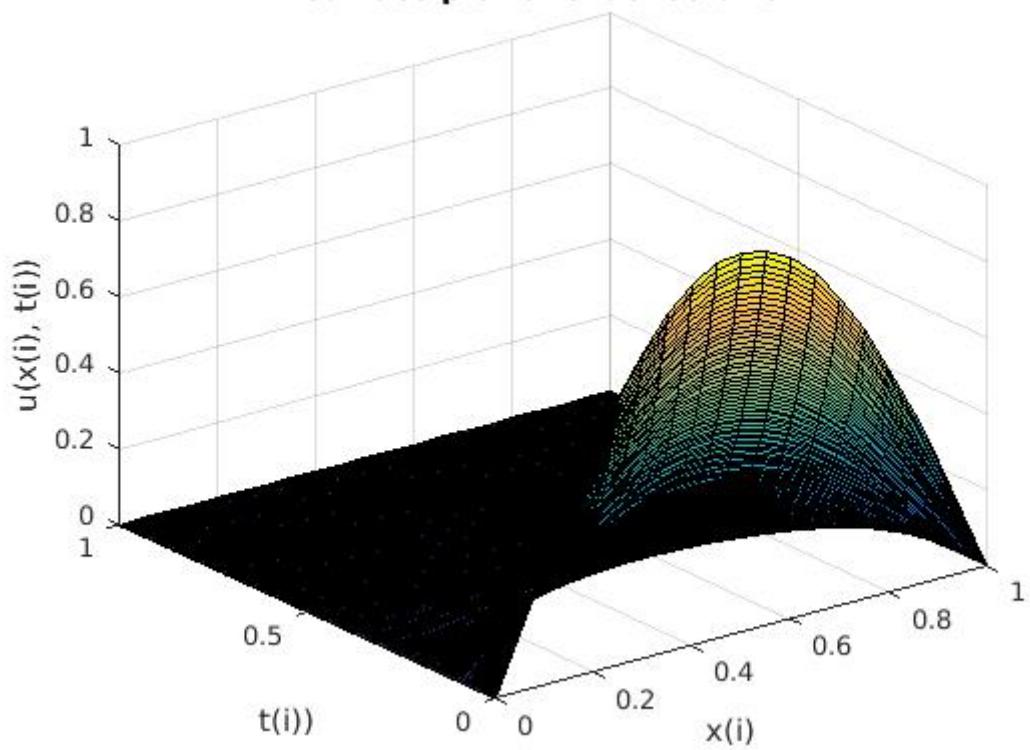
Surface plot of numerical solution



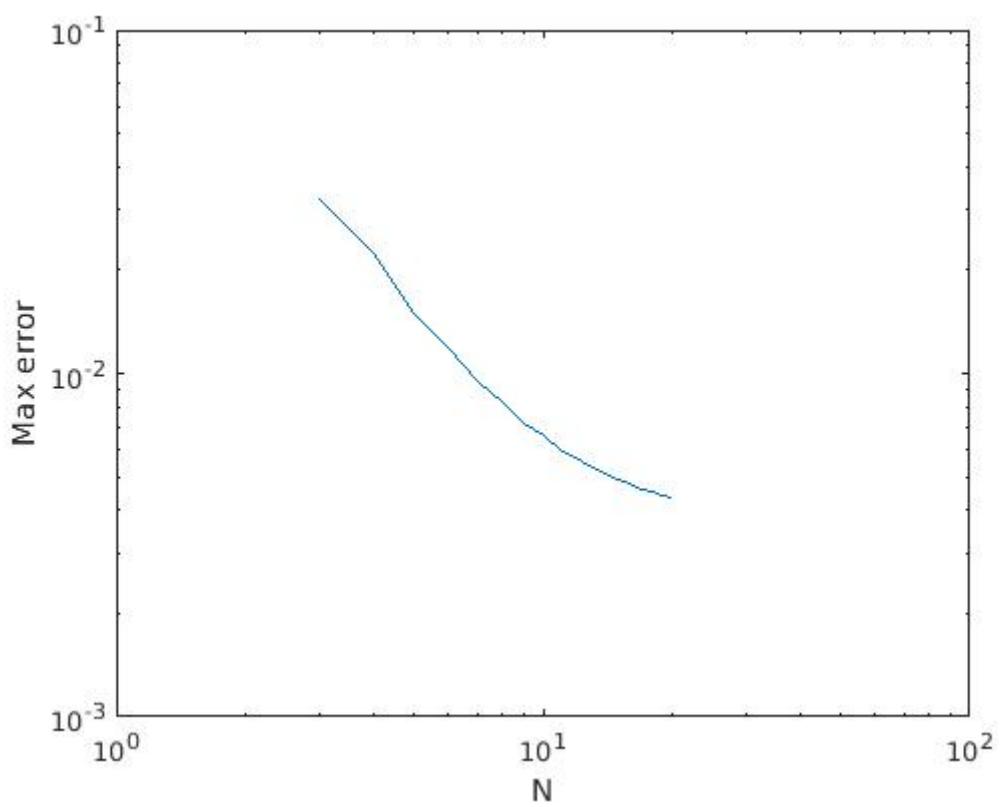
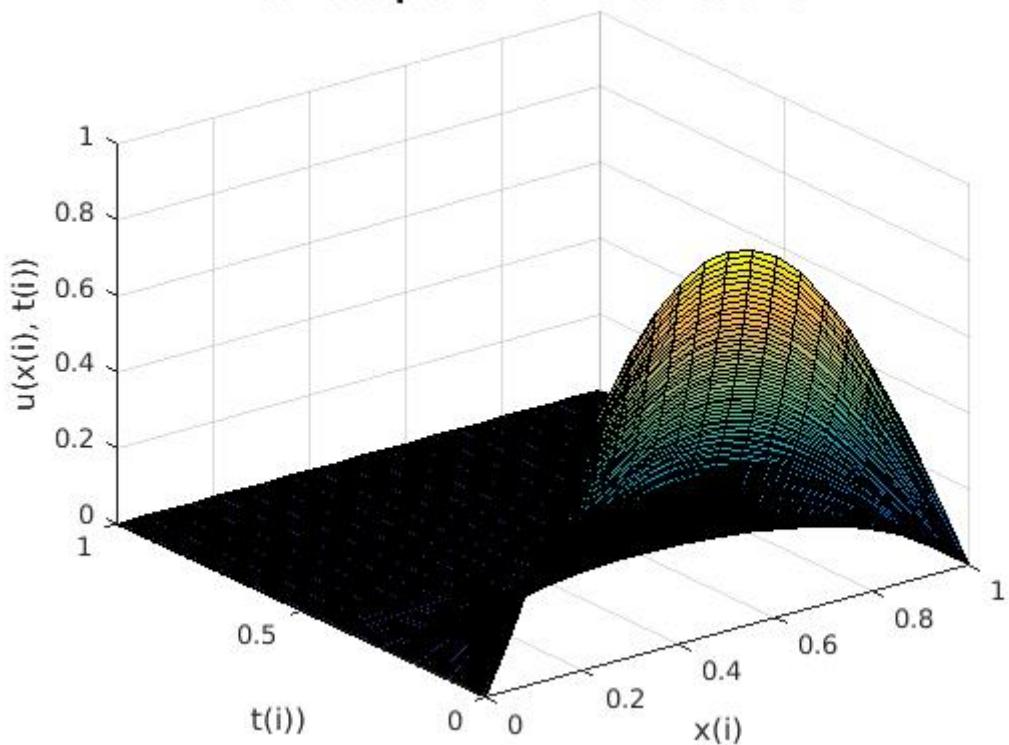
By BTCS scheme:



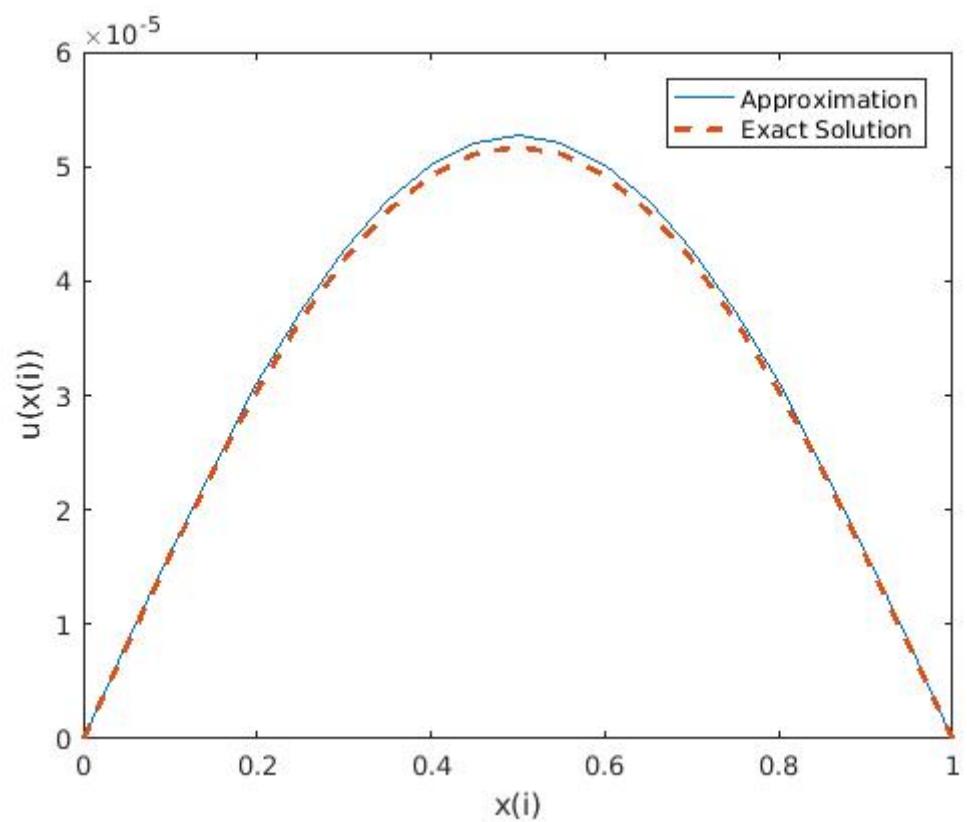
Surface plot of exact solution



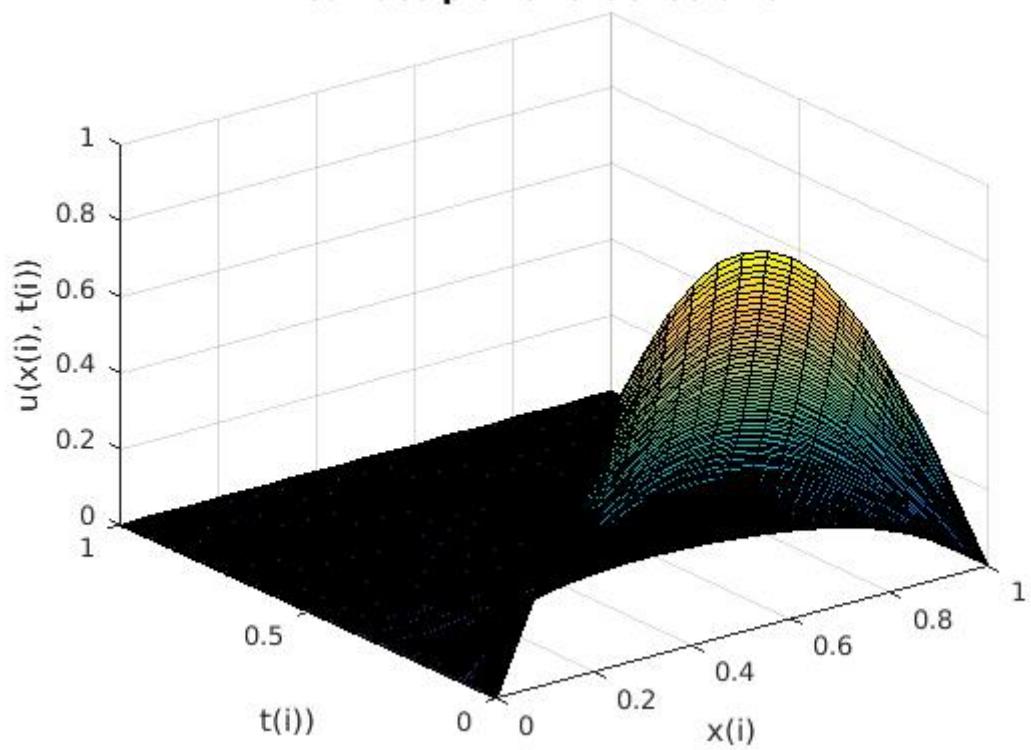
Surface plot of numerical solution



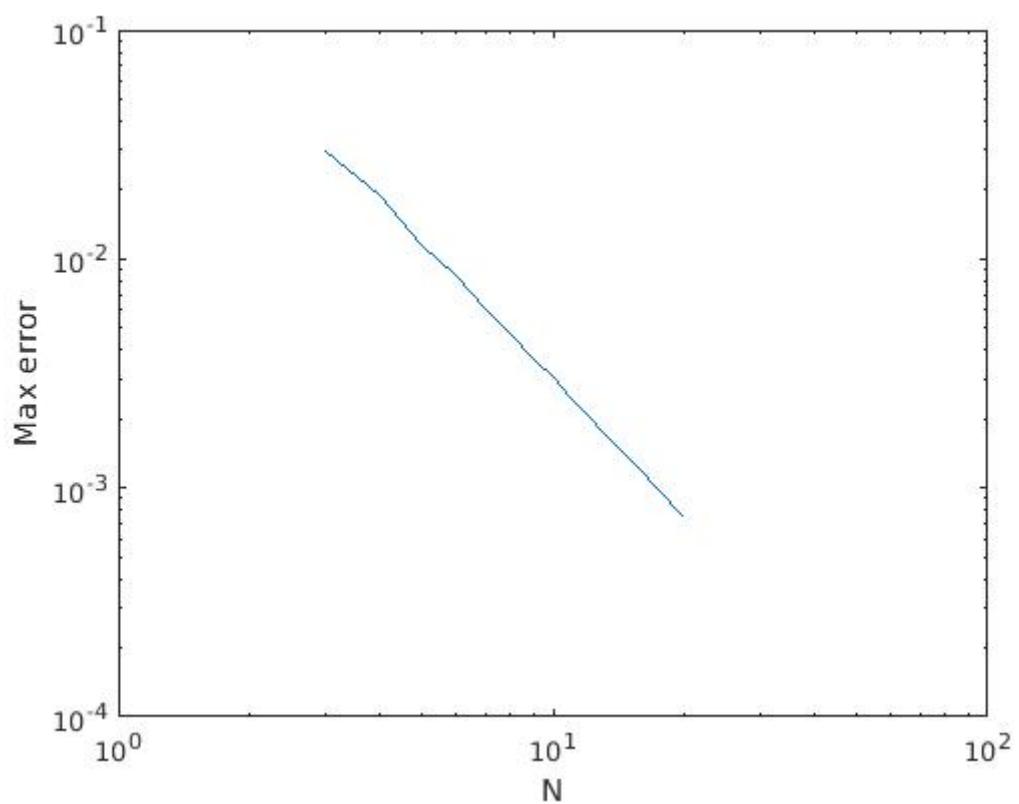
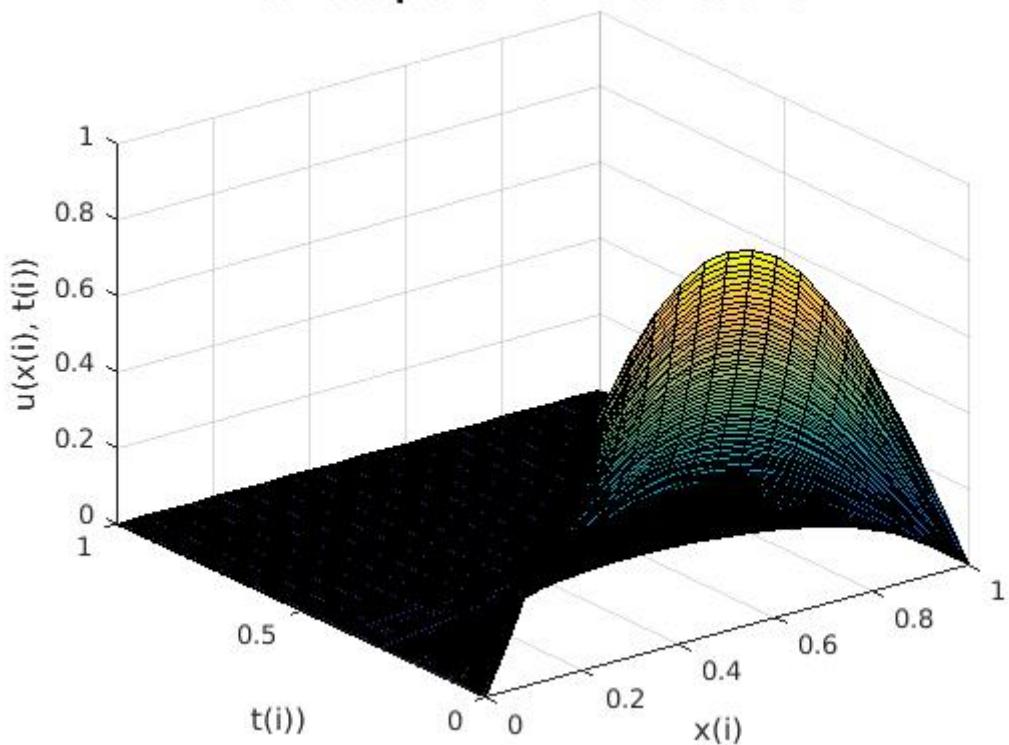
By Crank-Nicolson scheme:



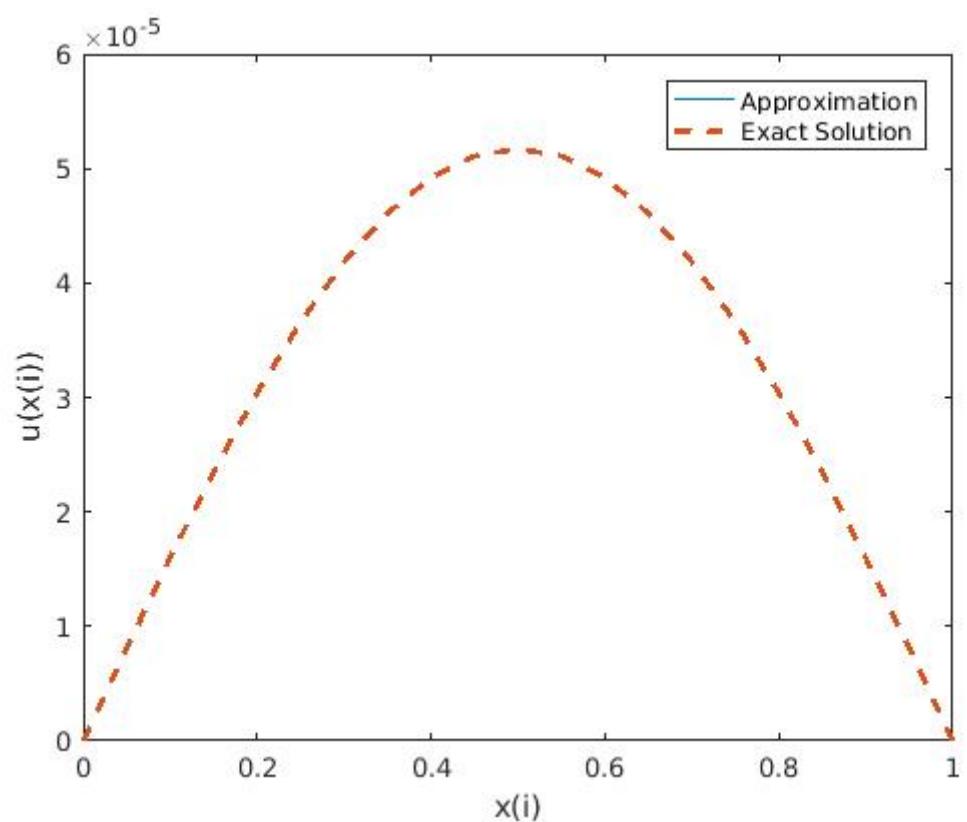
Surface plot of exact solution



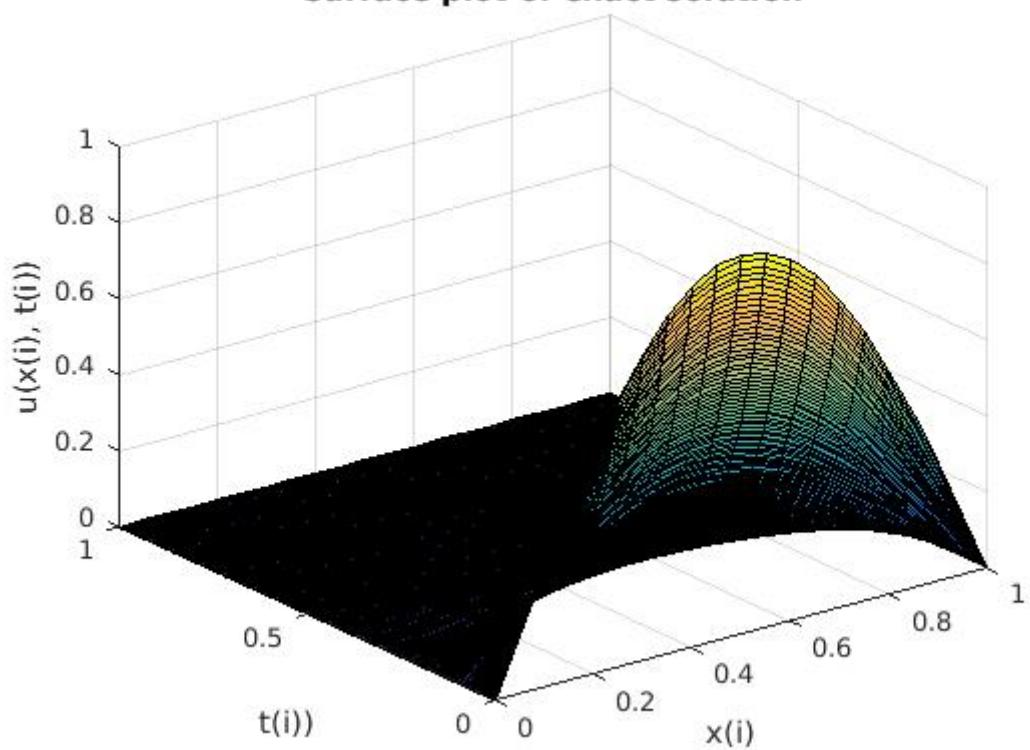
Surface plot of numerical solution

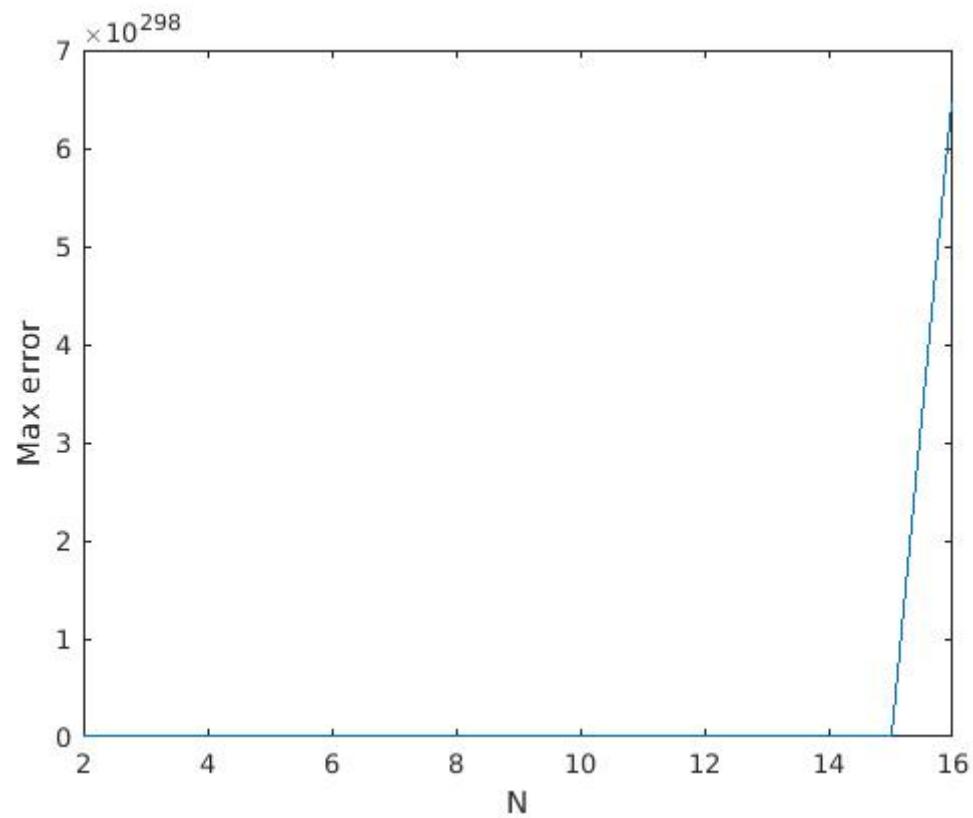


By Richardson scheme:

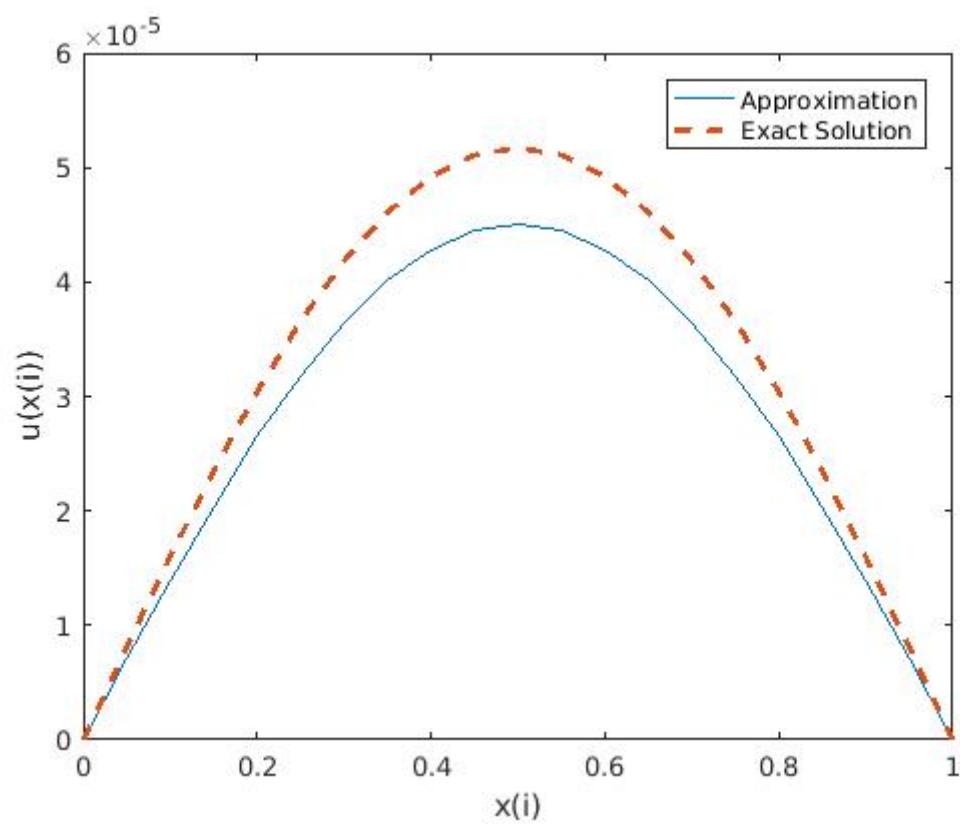


Surface plot of exact solution

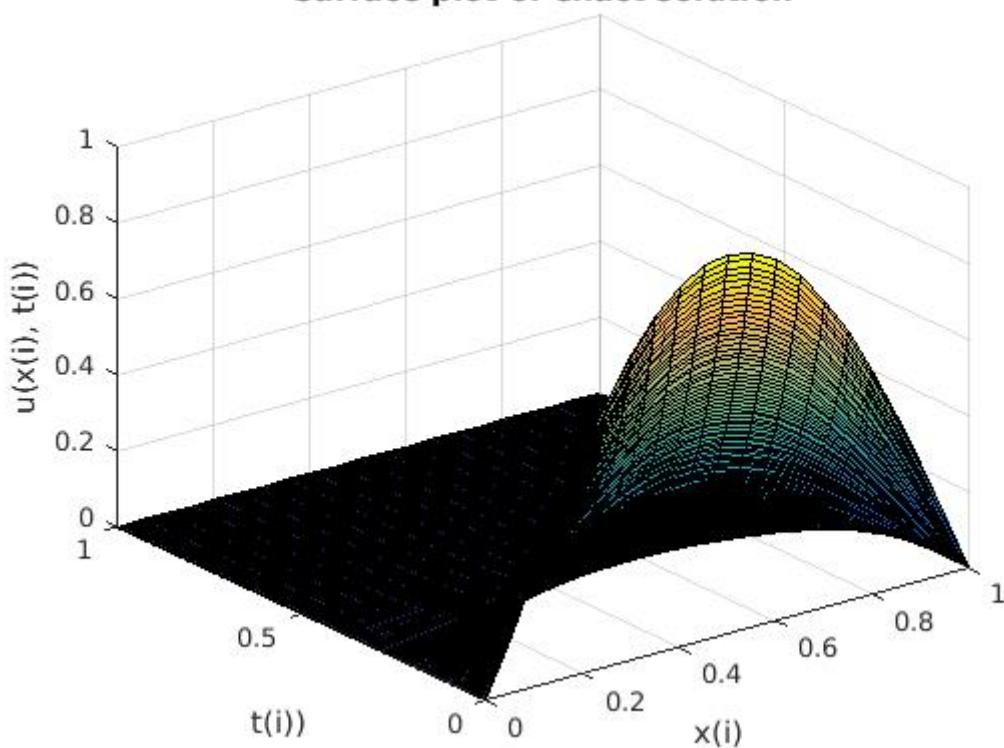




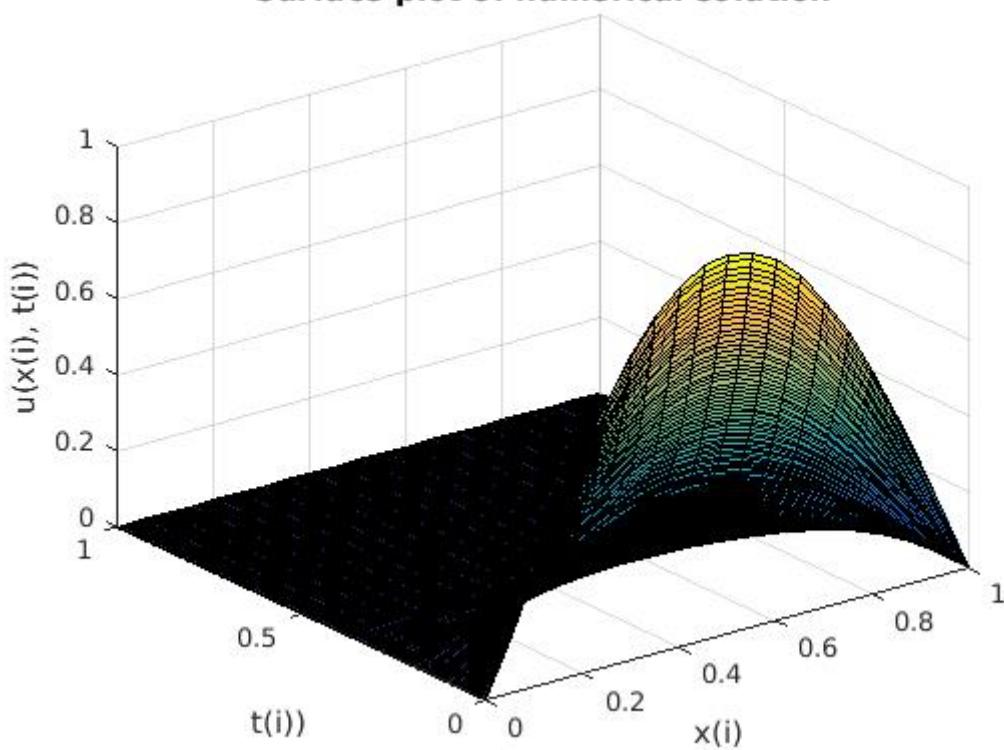
By Du-Fort Frankel scheme:

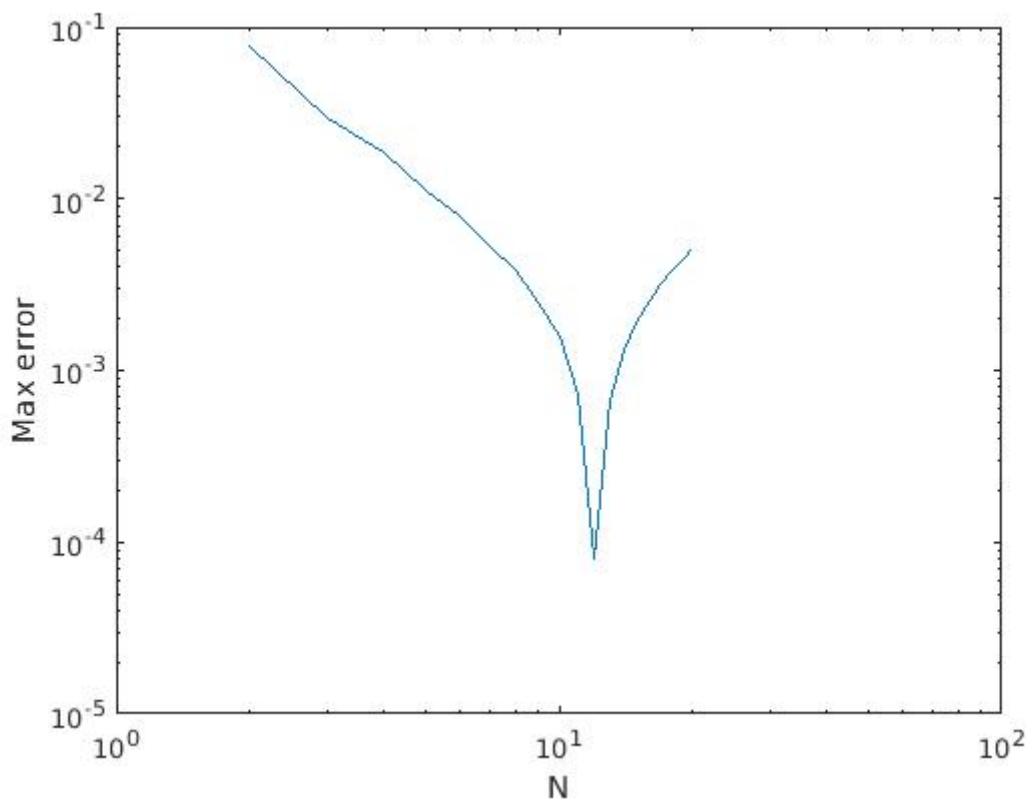


Surface plot of exact solution

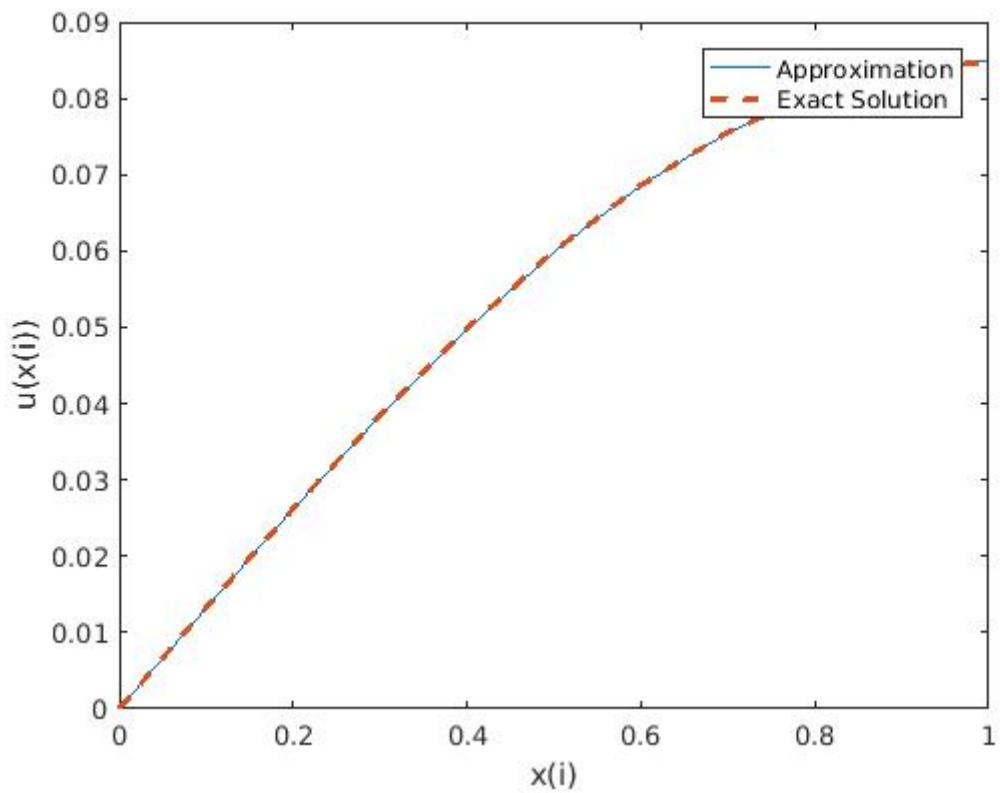


Surface plot of numerical solution

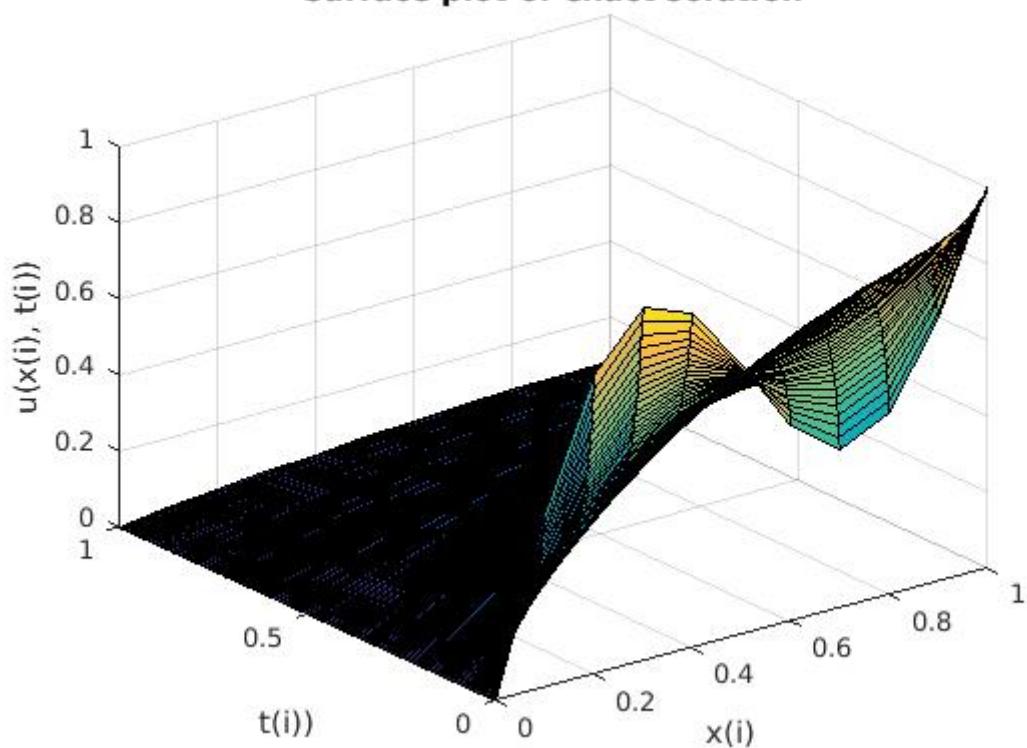




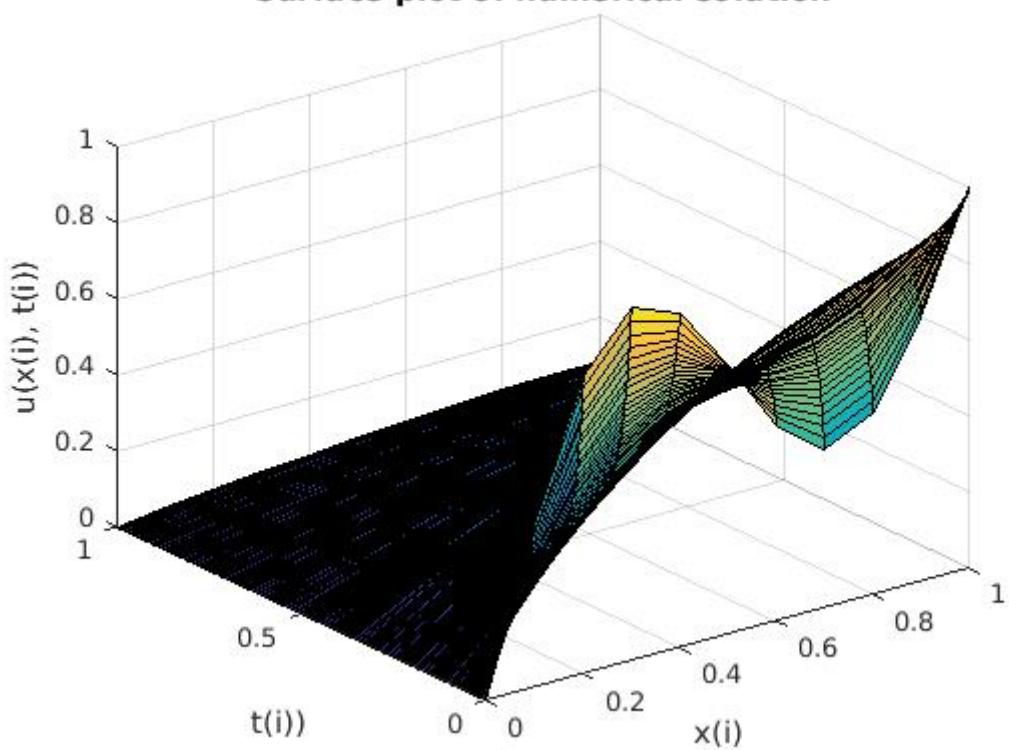
Part c: By FTCS scheme:

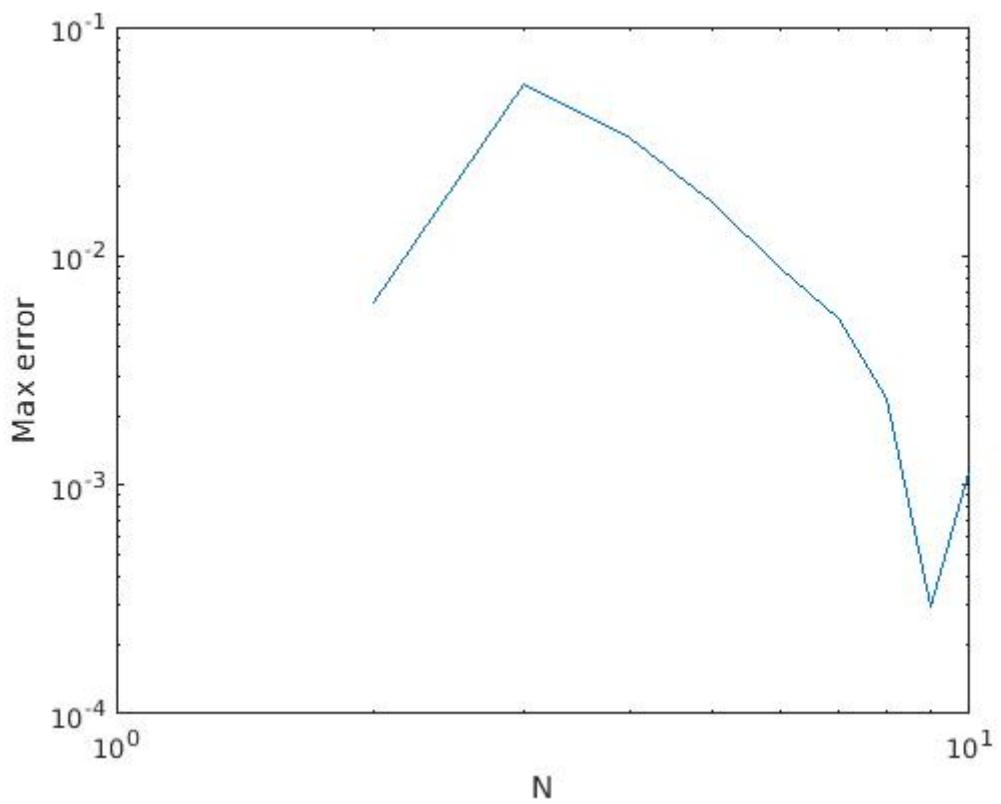


Surface plot of exact solution

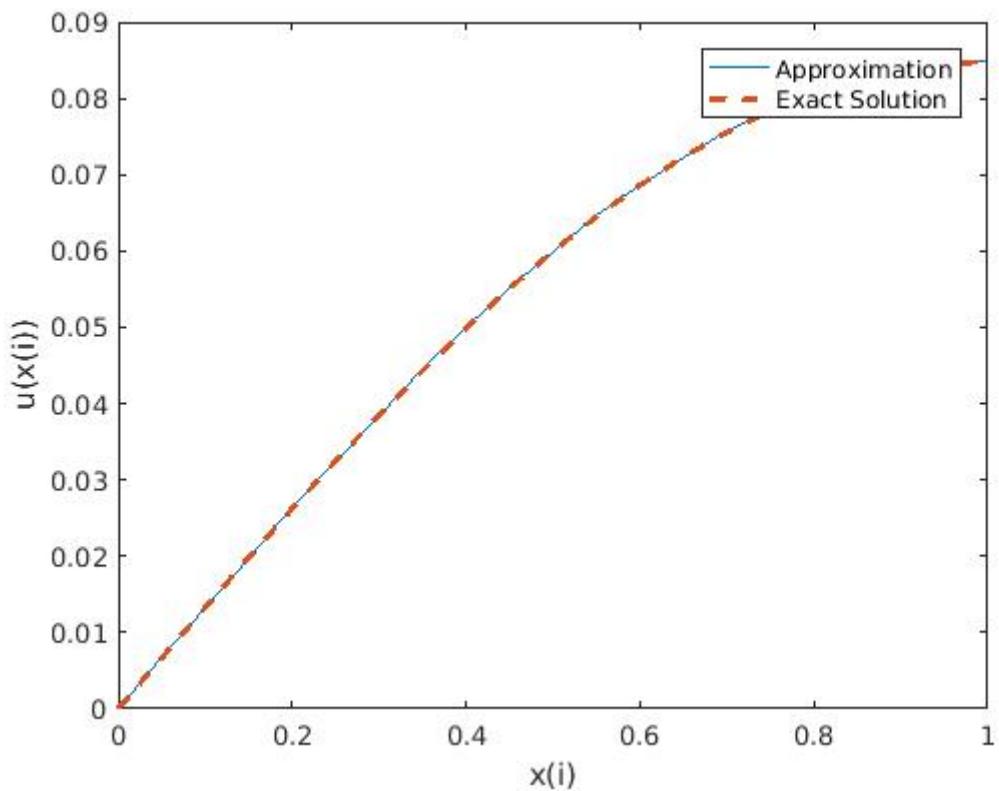


Surface plot of numerical solution

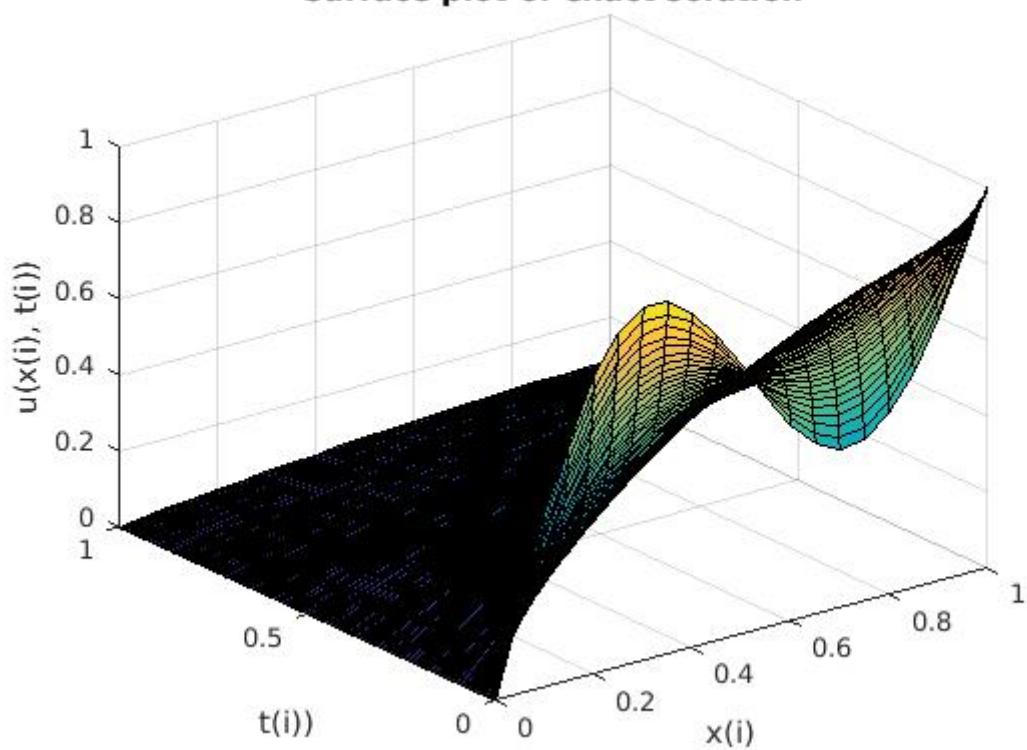




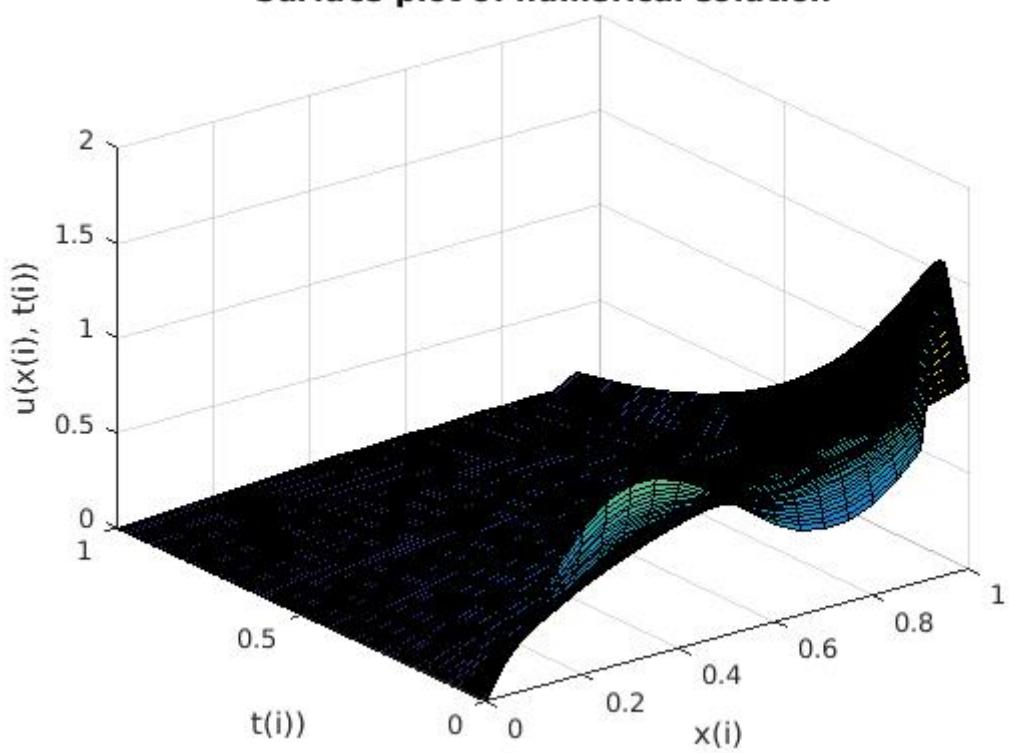
By BTCS scheme:

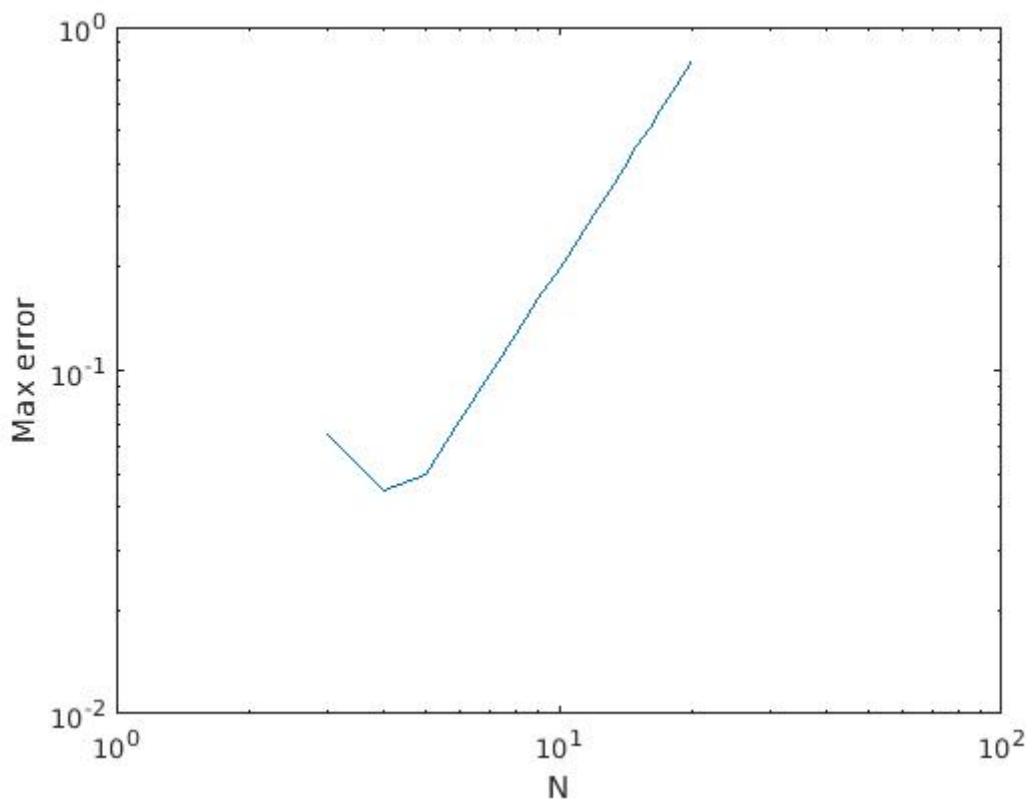


Surface plot of exact solution

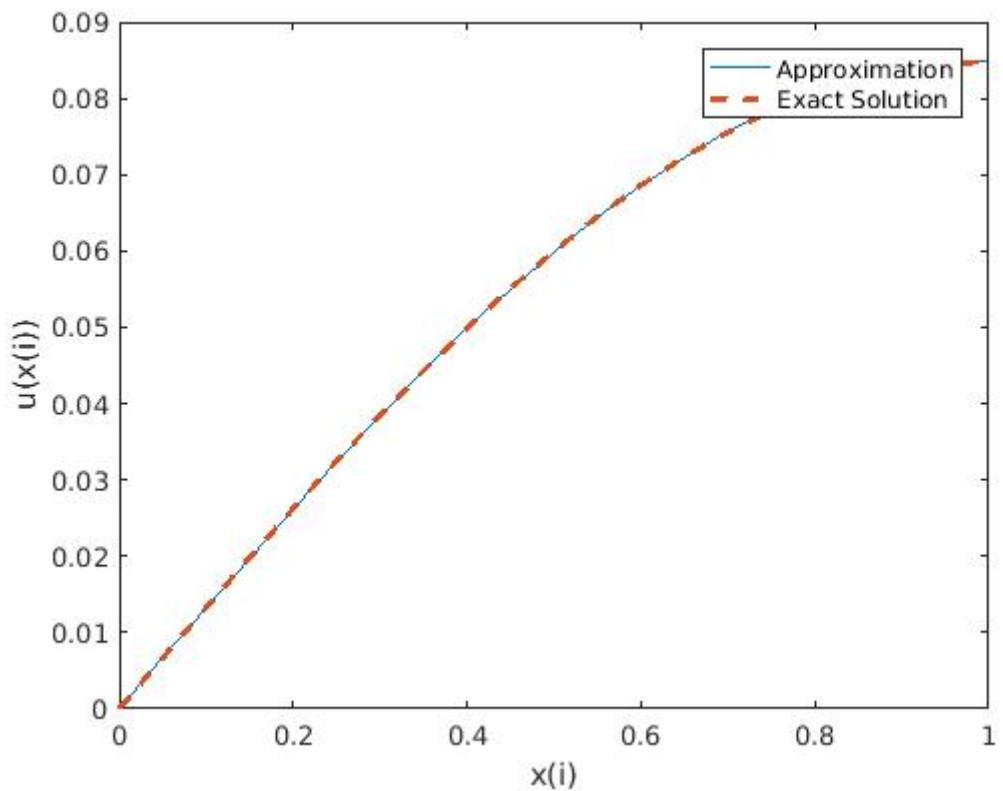


Surface plot of numerical solution

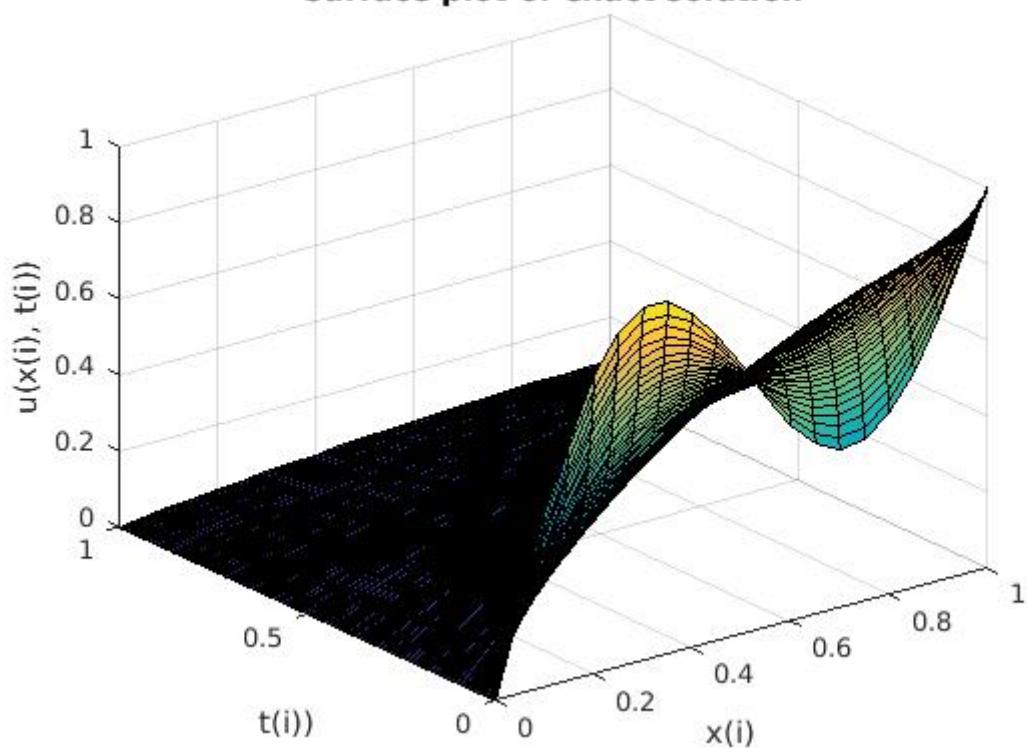




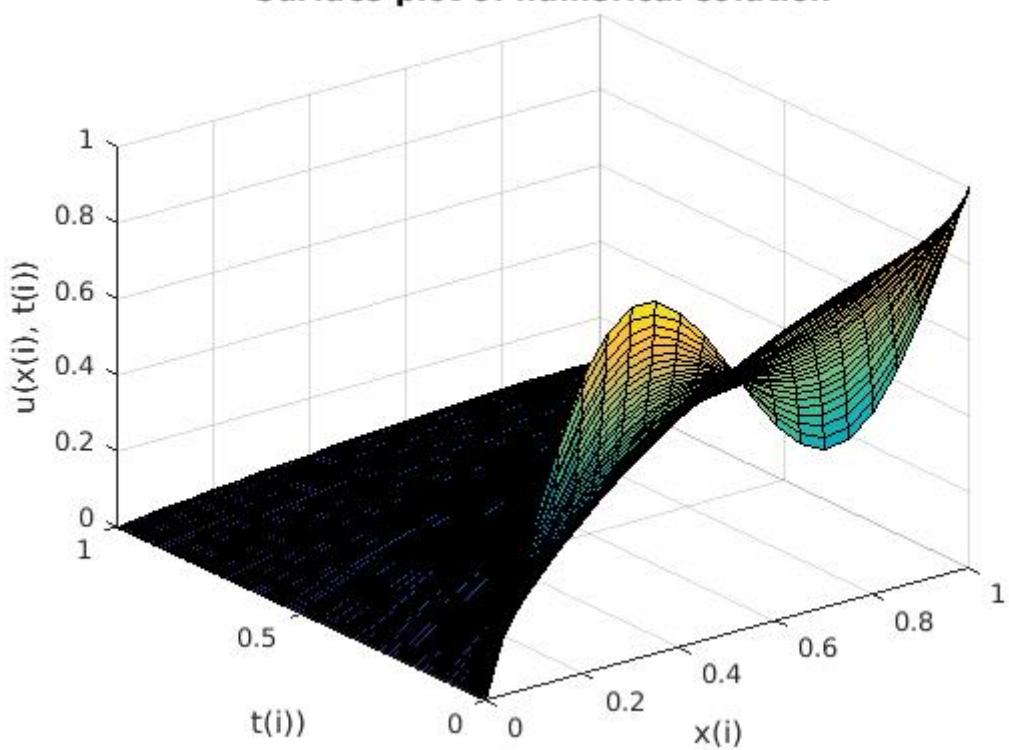
By Crank- Nicolson scheme:

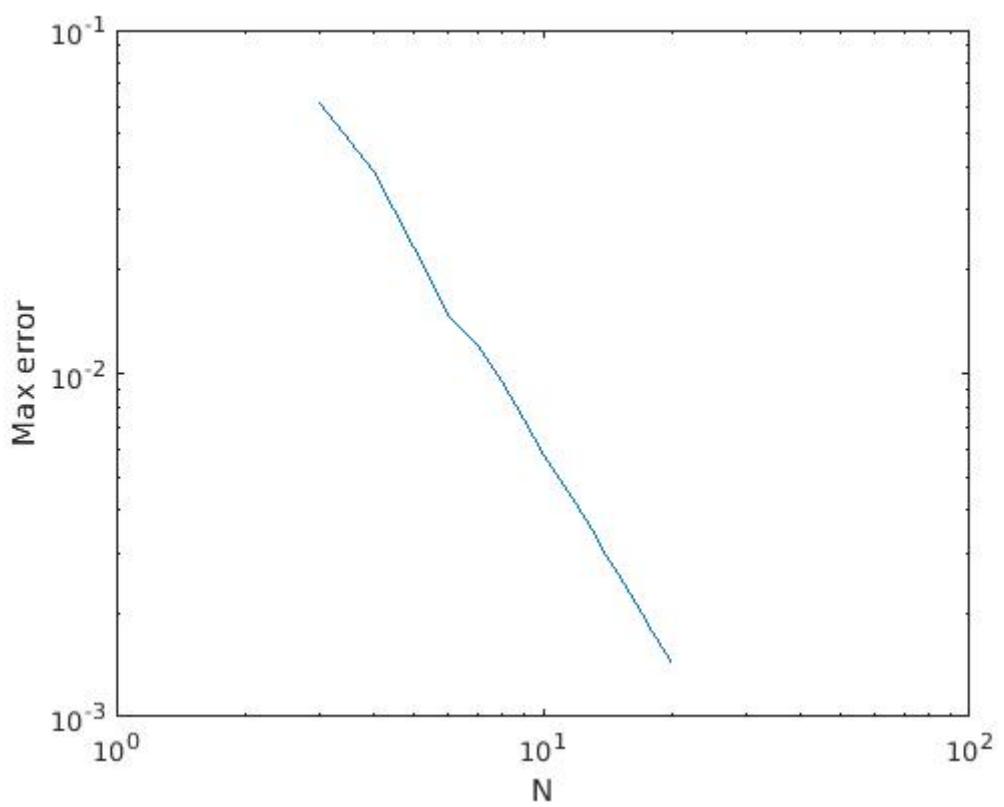


Surface plot of exact solution

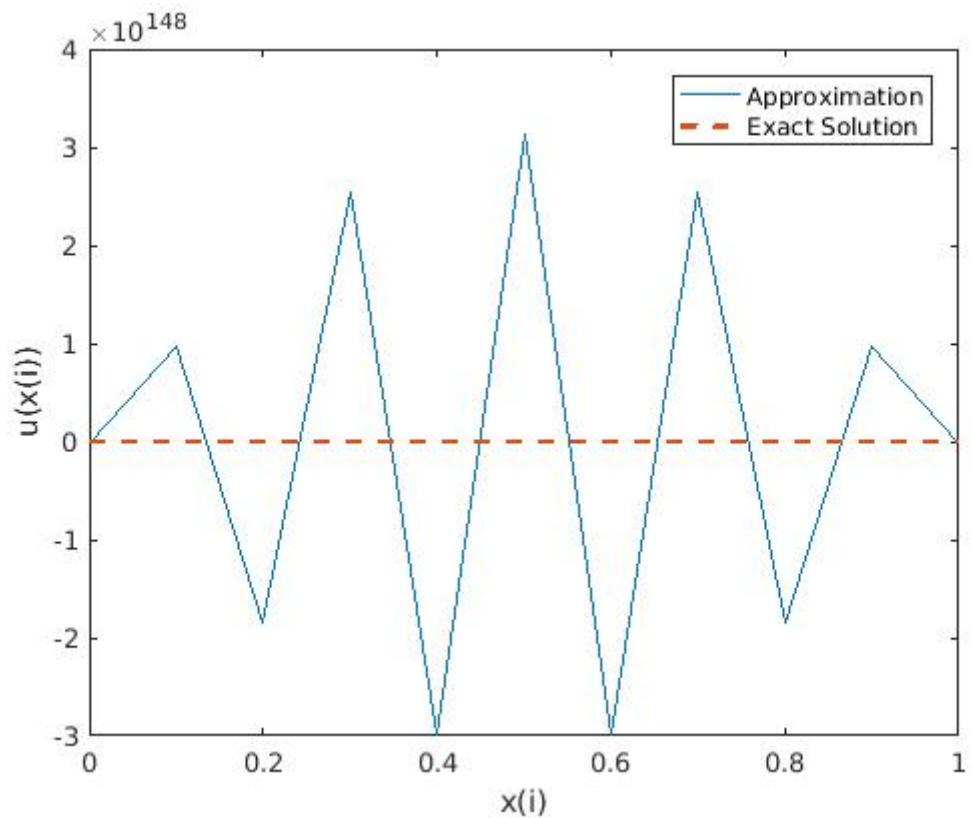


Surface plot of numerical solution

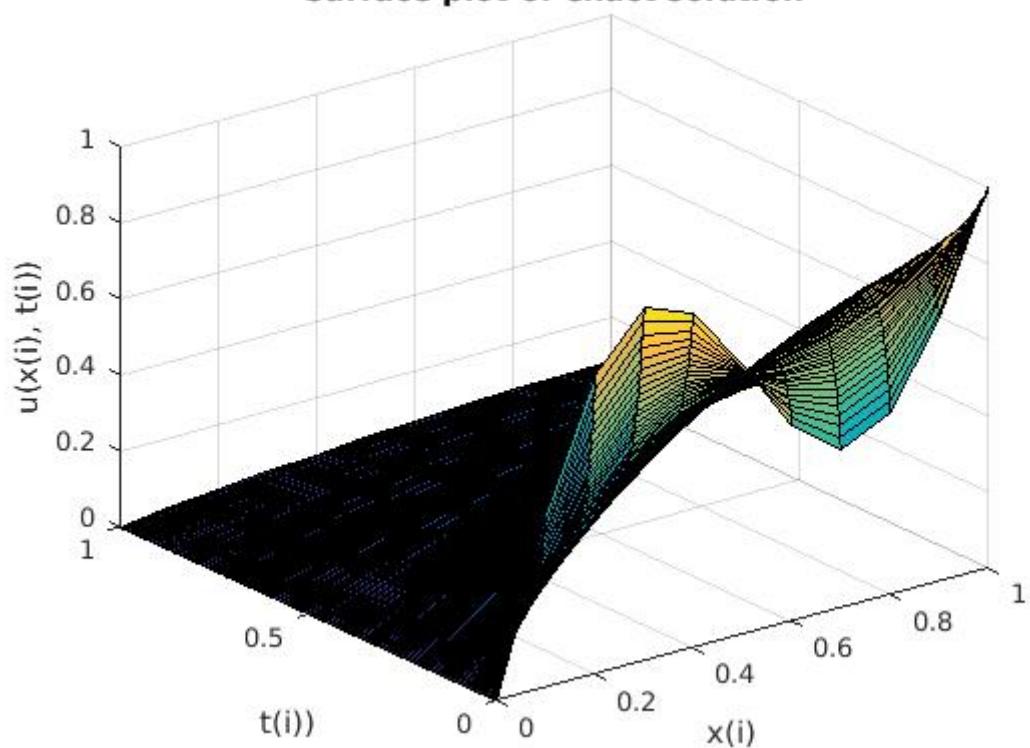




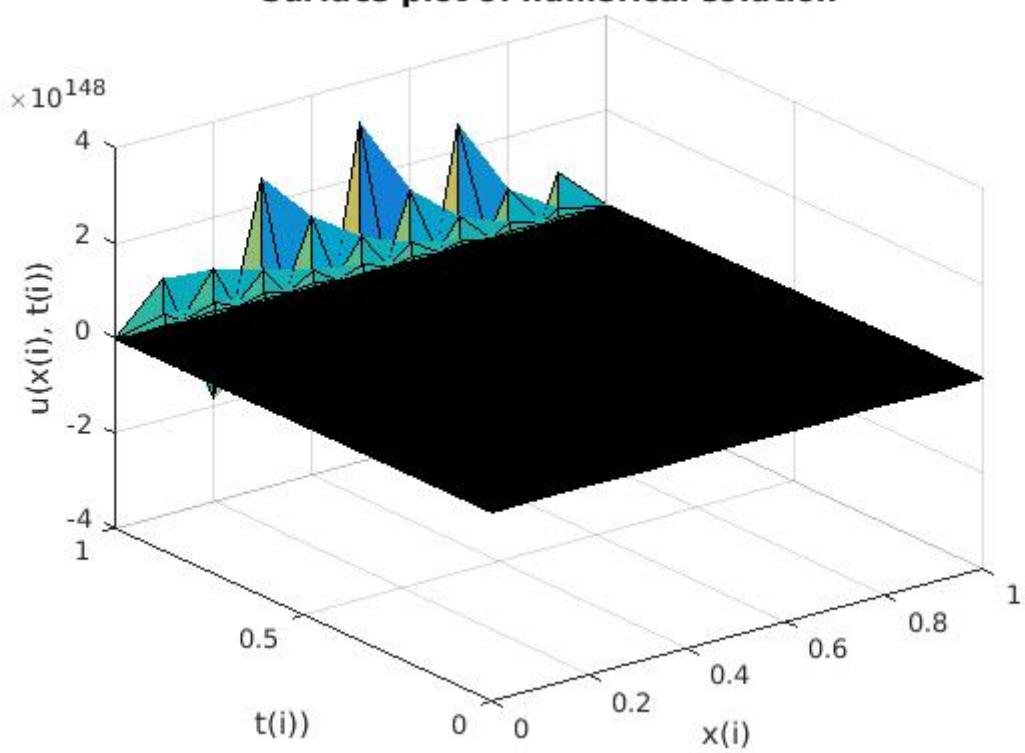
By Richardson scheme:

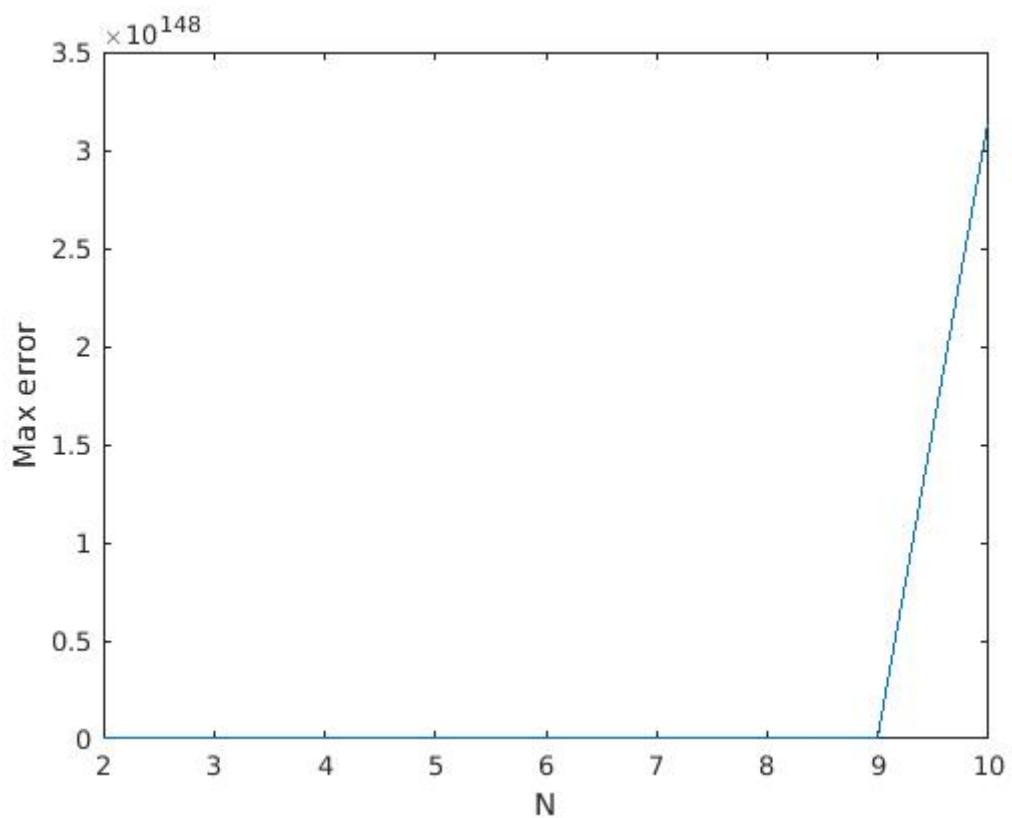


Surface plot of exact solution

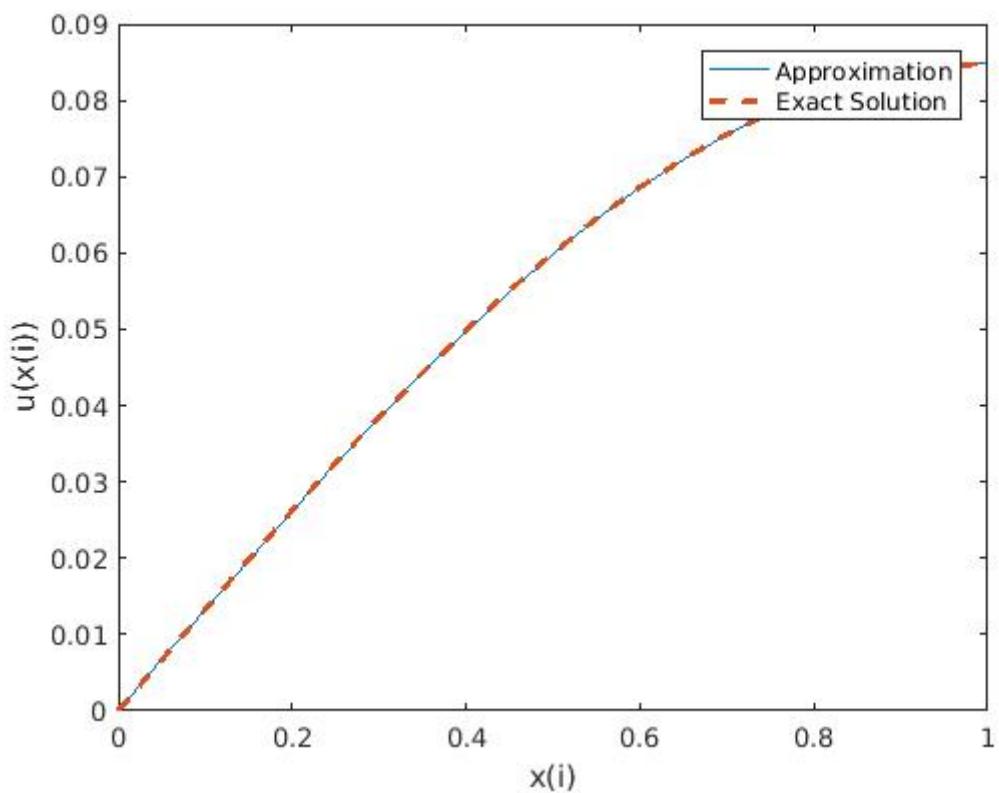


Surface plot of numerical solution

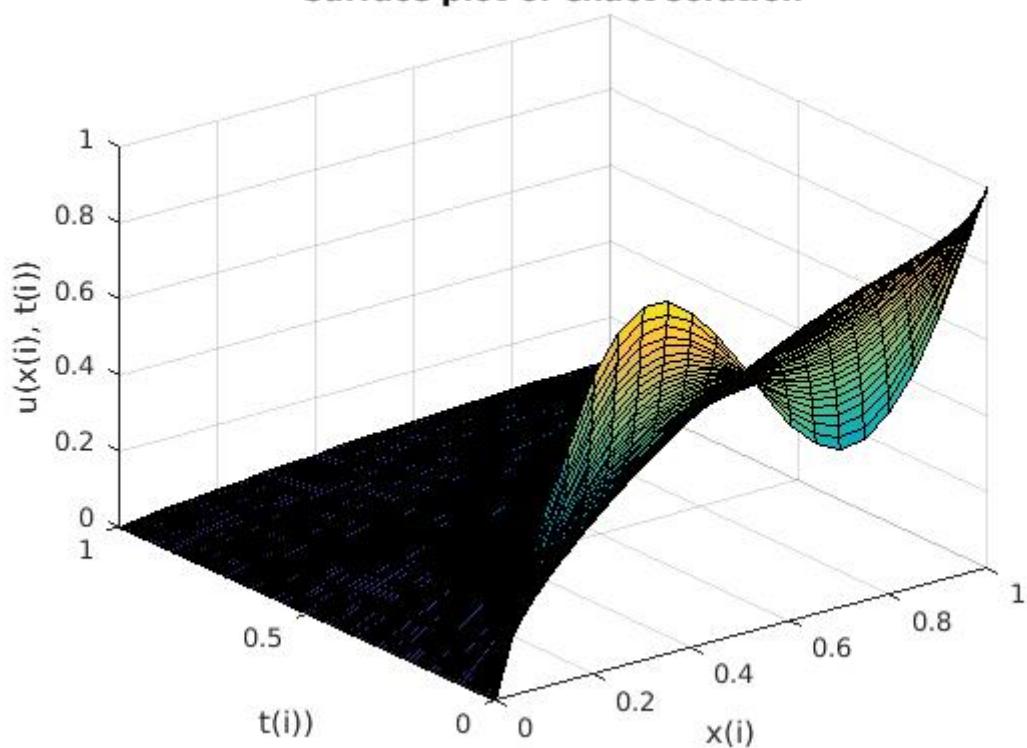




By Du-Fort Frankel scheme:



Surface plot of exact solution



Surface plot of numerical solution

