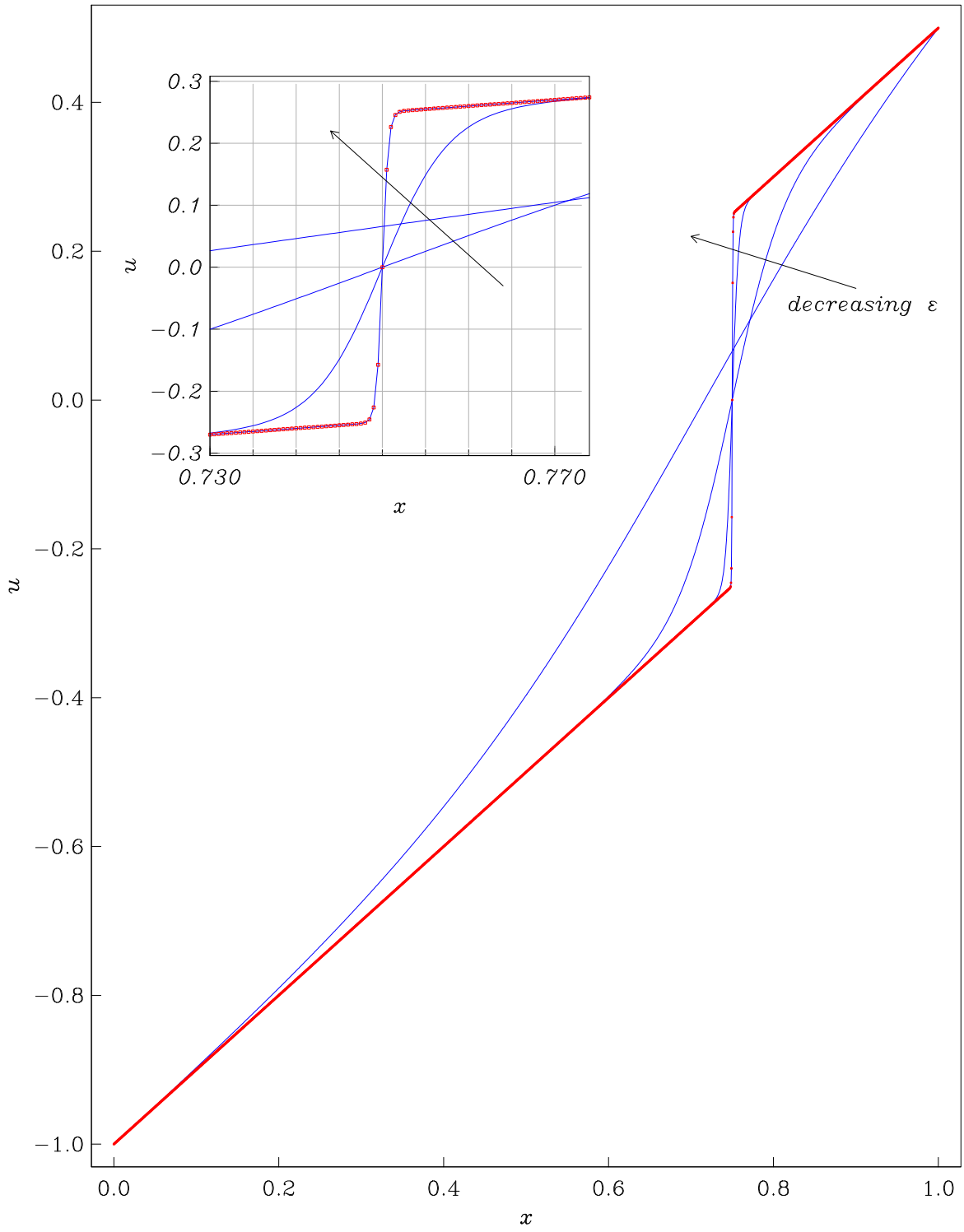
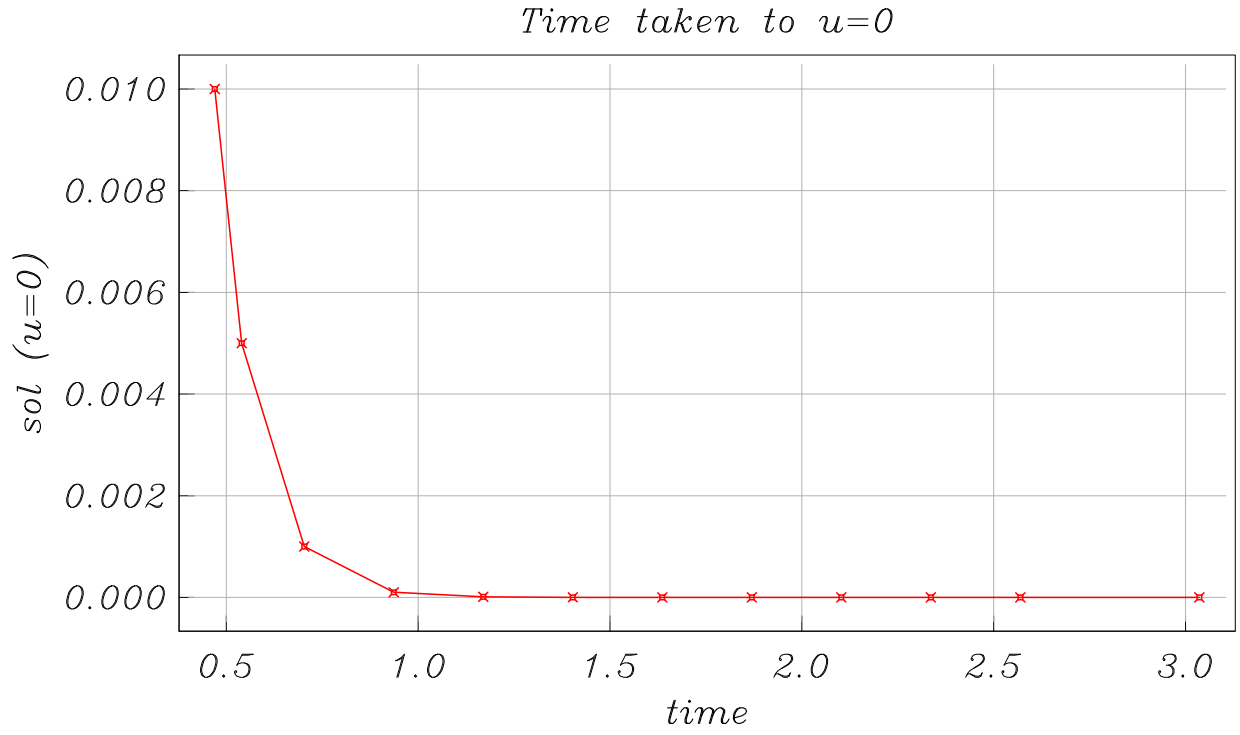
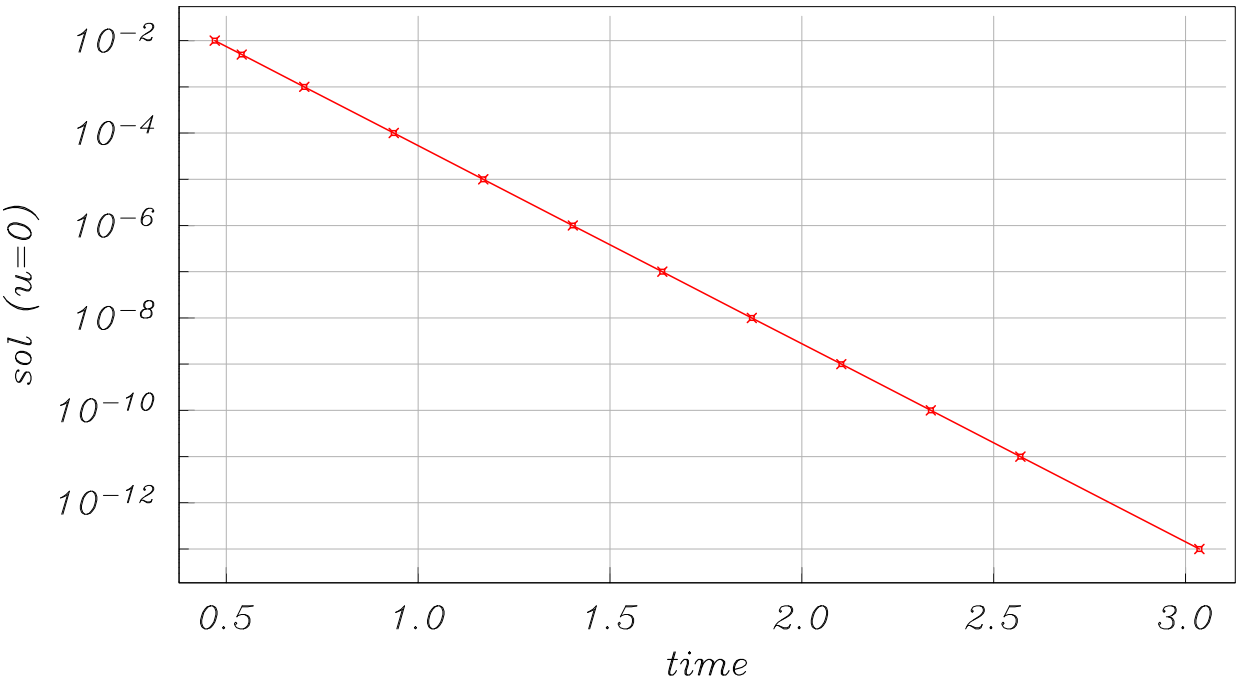
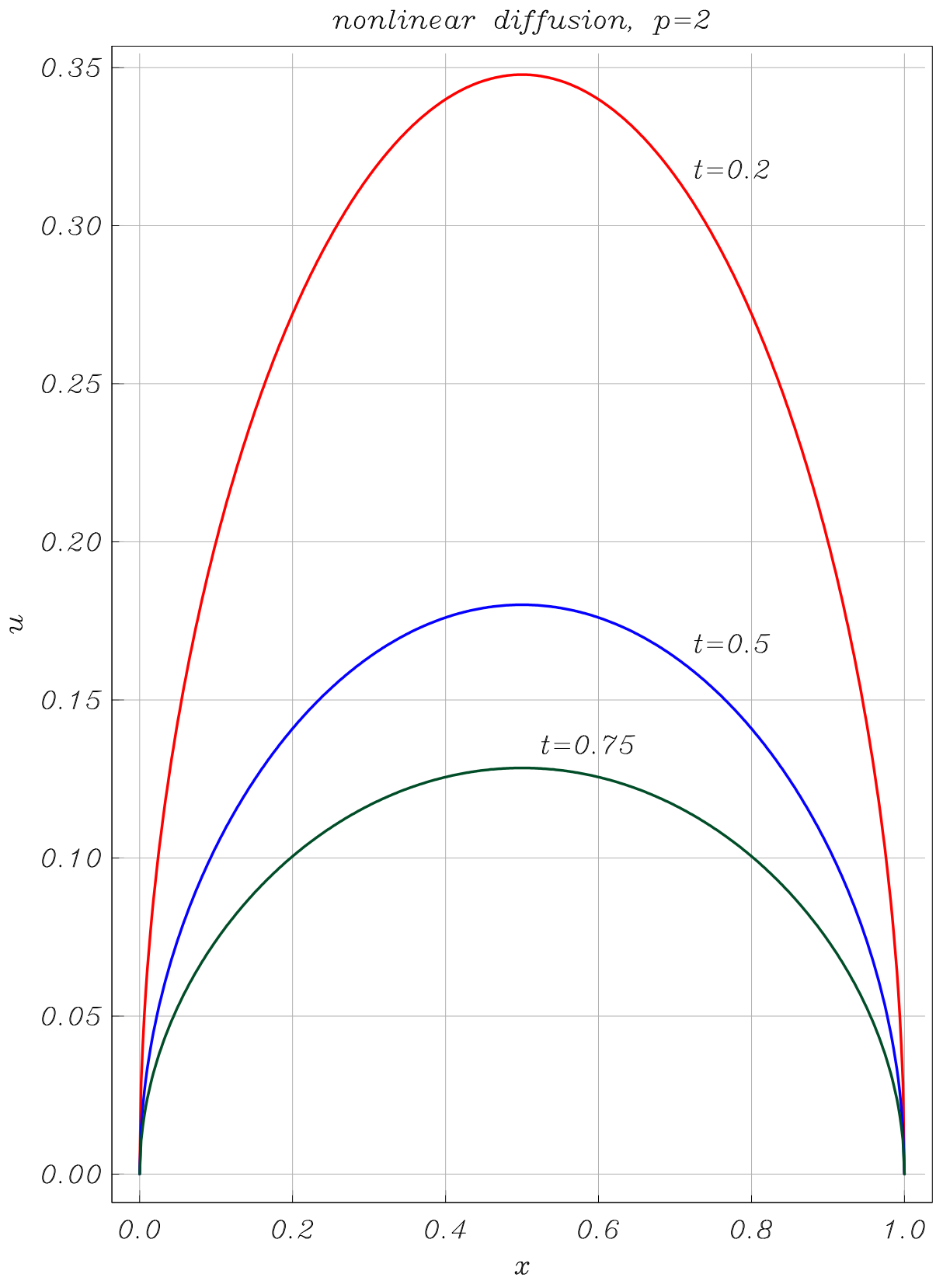

0.4
0.2
0.0
−0.2
−0.4
−0.6
−0.8
−1.0
u
0.0
0.2
0.4
0.6
0.8
1.0
x
decreasing ε
0.3
0.2
0.1
0.0
−0.1
−0.2
−0.3
u
0.730
0.770
x


Time taken to u=0
0.010
0.008
0.006
0.004
0.002
0.000
sol (u=0)
0.5
1.0
1.5
2.0
2.5
3.0
time


10^{-2}
10^{-4}
10^{-6}
10^{-8}
10^{-10}
10^{-12}
sol (u=0)
0.5
1.0
1.5
2.0
2.5
3.0
time


nonlinear diffusion, p=2
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
u
t=0.2
t=0.5
t=0.75
0.0
0.2
0.4
0.6
0.8
1.0
x

P=2 nonlinear diffusion solution, with explicit method, r=1/6, N=1000

	X=0.1	***X=0.3***	***X=0.5***	***X=0.7***	***X=0.9***
T=0.20	0.2000923	0.3157147	0.3477583	0.3157147	0.2000923
T=0.50	0.1036192	0.1634949	0.1800889	0.1634949	0.1036192
T=0.75	0.0739194	0.1166333	0.1284710	0.1166333	0.0739194

P=2, explicit and fully nonlinear newton iteration compared at *T=0.2*, *N=1000 x* points
FN : Fully nonlinear, implicit solved with newton linearisation; **LG** : Lagged approach

	X=0.1	***X=0.3***	***X=0.5***	***X=0.7***	***X=0.9***
Explicit, ***r=1/6***	0.2000923	0.3157147	0.3477583	0.3157147	0.2000923
Nonlinear, ***r=1/6***	0.1999169 FN 0.1999169 LG	0.3155951 FN 0.3155951 LG	0.3476484 FN 0.3476484 LG	0.3155951 FN 0.3155951 LG	0.1999169 FN 0.1999169 LG
Nonlinear, ***r=2***	0.1999180 FN 0.1999180 LG	0.3155969 FN 0.3155969 LG	0.3476504 FN 0.3476504 LG	0.3155969 FN 0.3155969 LG	0.1999180 FN 0.1999180 LG
Nonlinear, ***r=1/6, N=1800 & N=3600***	0.1999949 0.2000436	0.3156483 0.3156815	0.3476972 0.3477278	0.3156483 0.3156815	0.1999949 0.2000436