

Refined graph convergence

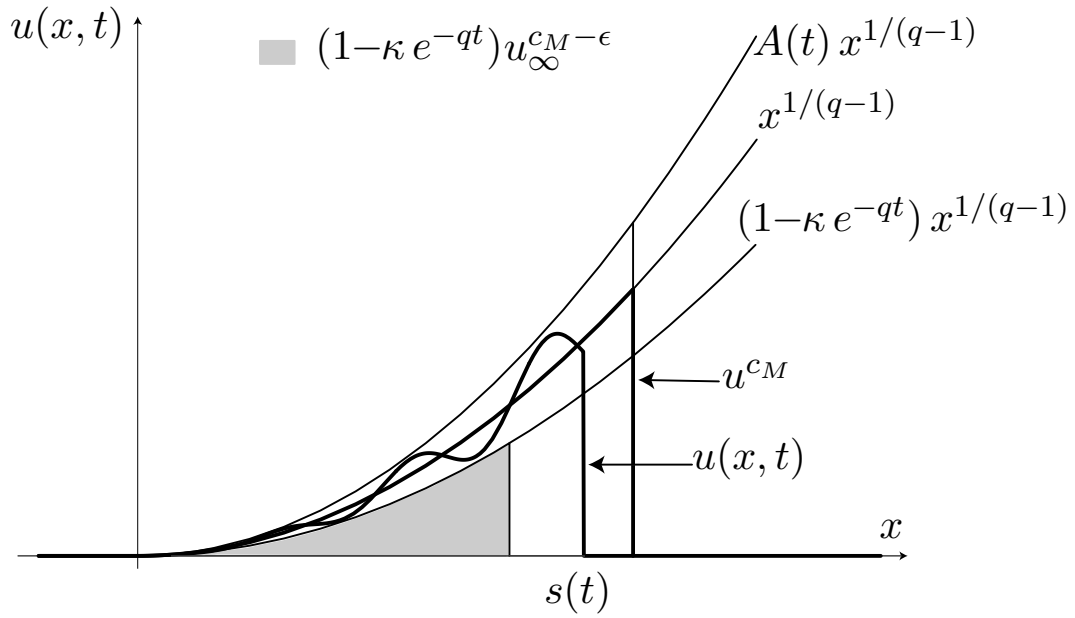


Figure 1: For $t > 0$ large enough, the two cases $s(t) \leq c_M$ and $s(t) > c_M$ are possible.

Special solutions

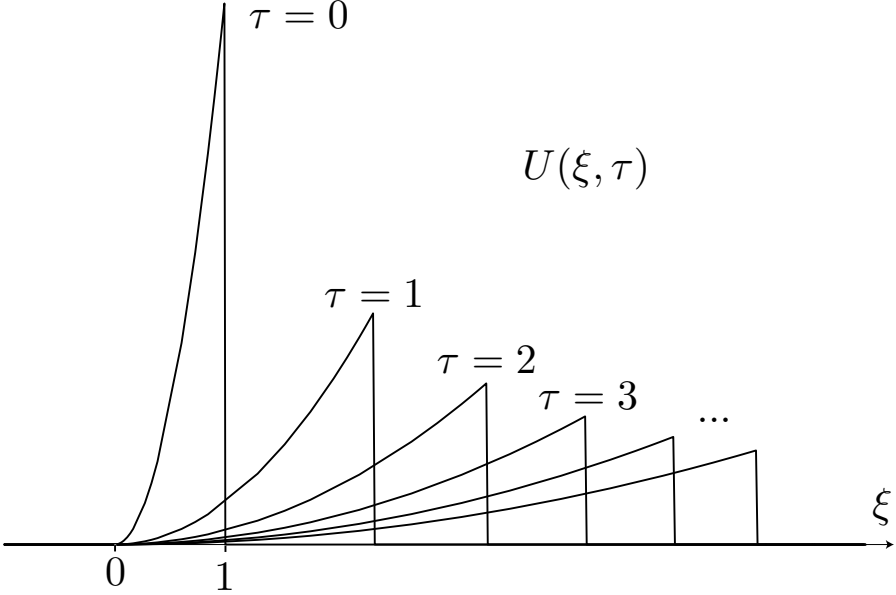


Figure 2: The N -wave solution corresponding to $U_0(\xi) = \frac{q}{q-1} \xi^{\frac{1}{q-1}} \mathbb{1}_{[0,1]}(\xi)$ for various $\tau > 0$, in case $q = \frac{3}{2}$.

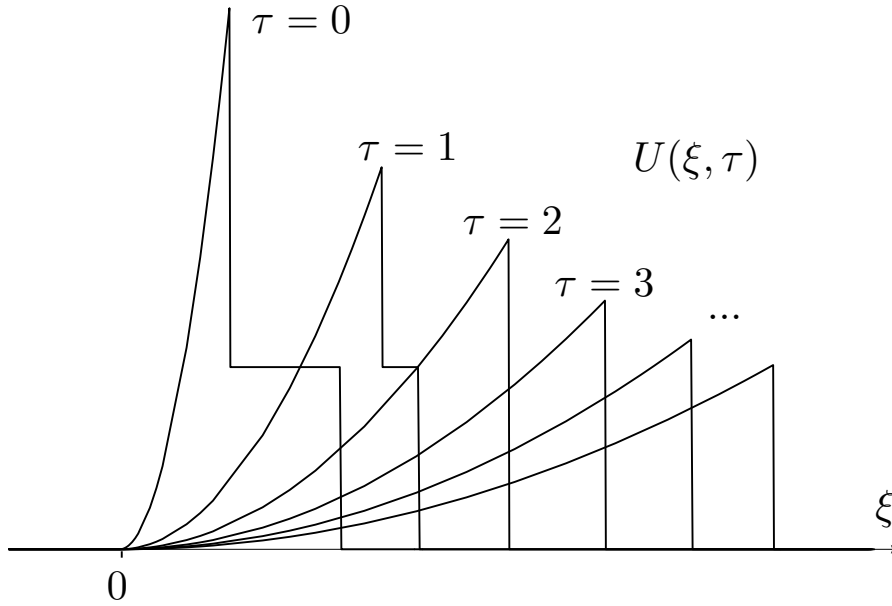


Figure 3: ThAe solution corresponding to the $U_0(\xi) = \kappa_0 \mathbb{1}_{[a_0, b_0]}(\xi) \xi^{\frac{1}{q-1}} + h \mathbb{1}_{[b_0, c_0]}(\xi)$ is plotted here for various $\tau > 0$, in case $q = \frac{3}{2}$, $a_0 = 0$, $b_0 = \frac{1}{2}$, $c_0 = 1$, $h = \frac{1}{2}$ and κ_0 such that $\int U_0(\xi) d\xi = 1$.

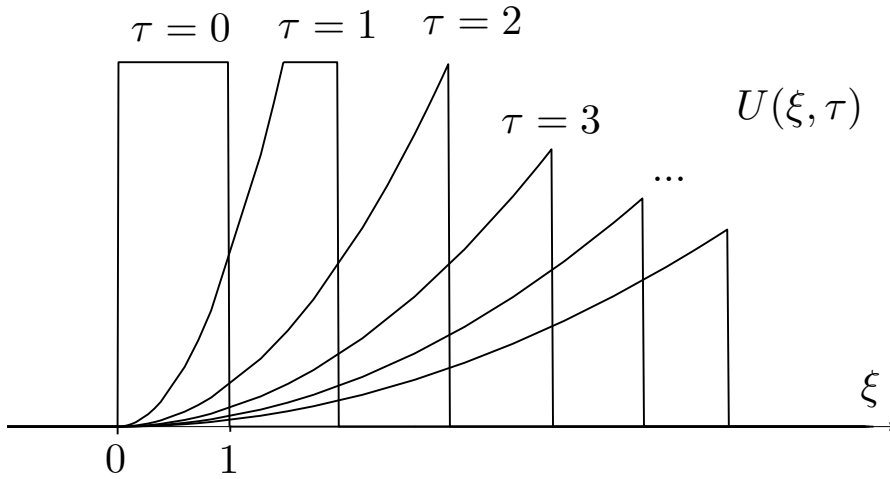


Figure 4: *The solution with $U_0(\xi) = \mathbb{1}_{[0,1]}(\xi)$ in case $q = \frac{3}{2}$. This corresponds to the limit situation (in the second case) for which $b_0 = 0$ at $\tau = 0$ and $\kappa(\tau) (b(\tau))^{1/(q-1)} = h$ for any $\tau \in (0, \tau_0)$.*

General solutions

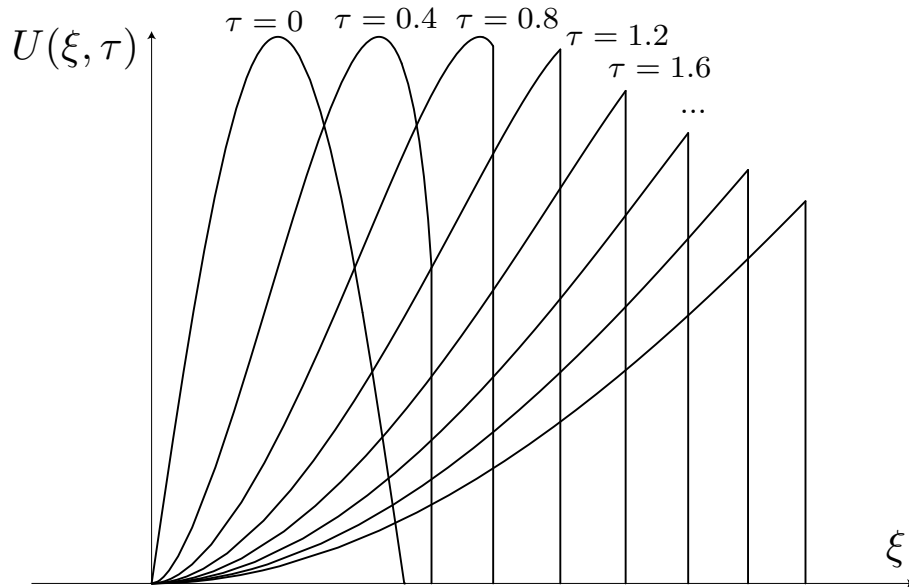


Figure 5: *A typical solution.*

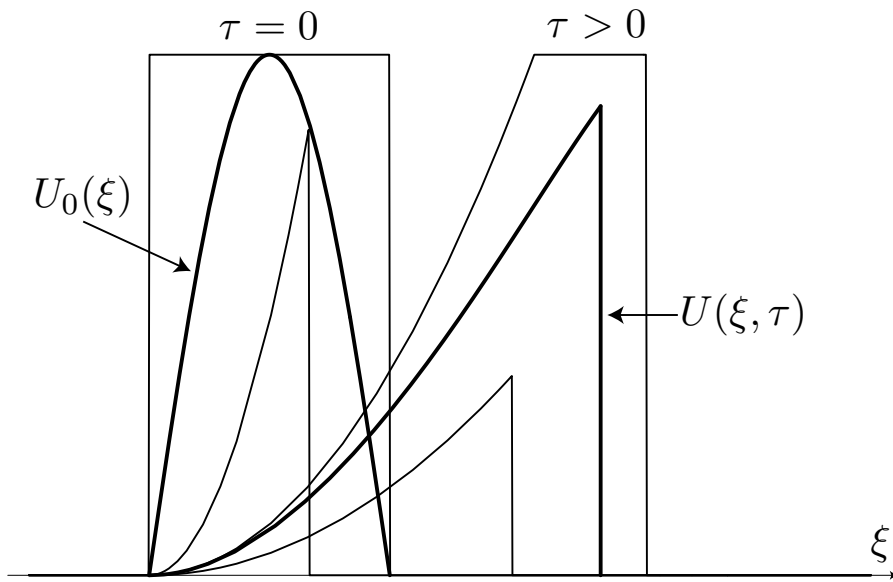


Figure 6: *Upper and lower solutions.*

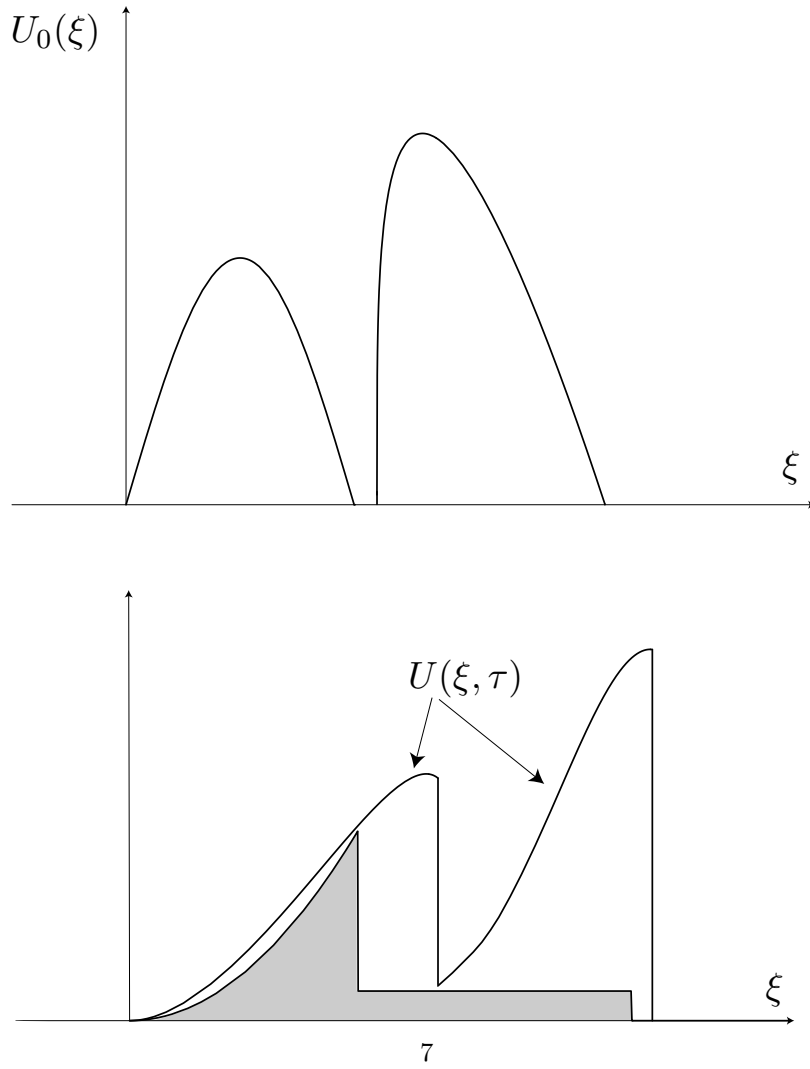


Figure 7: *Left: initial data. Right: for some $\tau > 0$ large enough.*