**ADVECTION**

Уравнение:

**SCHEMES**

1. Upwind (1st order).

Это явная схема, имеющая первый порядок точности O(,h)

При получим точное решение: .

2. Upwind (3rd order).

3. Central-difference (2nd order).

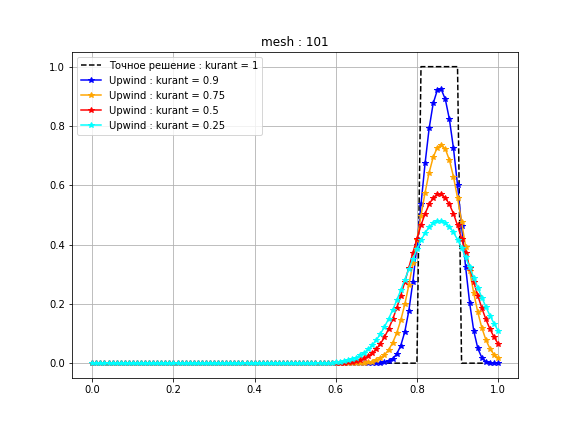
https://en.wikipedia.org/wiki/Upwind\_scheme

4. Central-difference (4th order).

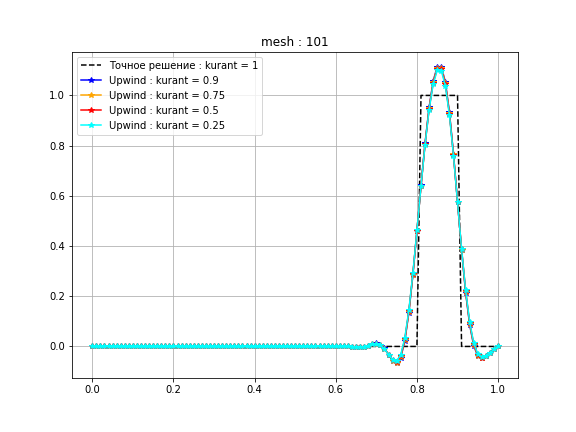
**RESULTS**

N\_mesh = 101, final\_time=0.8

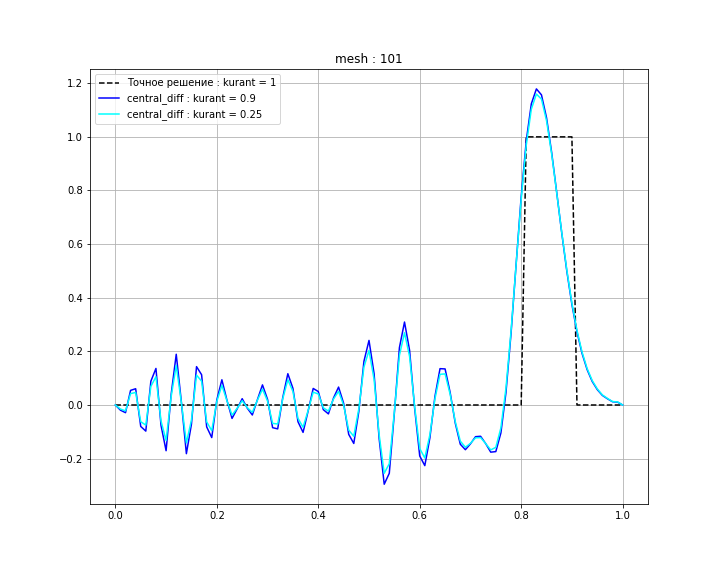
1. Upwind 1st order



1. Upwind 3rd order



1. Central-difference 2nd order



1. Central-difference 4th order

