Results

The obtained results are shown in terms of *Work Precision Diagrams (WPD)* where, for each code, we plot the execution time versus accuracy. This latter, following the standard of the TestSet for IVP Solvers [1], is measured in terms of *mixed-error significant digits (mescd)*, defined as:

$$\text{mescd} = \max\Big\{0,\ -\log_{10} \max_n \|(y(t_n) - y_n)./(1 + |y(t_n)|)\|_\infty\Big\},$$

where $y_n \approx y(t_n)$, this latter the reference solution, $|y(t_n)|$ is the vector with the absolute values of $y(t_n)$, and $./$ is the component-wise division between vectors.

Some of the parameters used for the code are fixed as follows:

- code `fde12`: `fde12` for PECE and `fde12-10` for $PE(CE)^{10}$, respectively;
- code `flmm2`: used with `tol` $= 10^{-15}$ and `itmax` $= 10^3$. Moreover, `flmm2-1`, `flmm2-2`, `flmm2-3` will denote the usage of the code with the trapezoidal rule, the Newton-Gregory formula, and the BDF2 method, respectively;
- code `fcoll`: collocation points set at the s Gauss-Legendre abscissae, $s = 3, 4, 5$. Moreover we shall fix the following values of `r` for the graded mesh: 1 (if appropriate), 5, and 10. We shall denote `fcoll-s-r` the respective implementations;
- code `tsfcoll`: collocation abscissae set at $\{1/n, 2/n, \ldots, 1\}$, $n = 3, 4, 5$. Moreover, the parameter `r` is fixed as done for `fcoll`, and the respective implementations will be denoted as `tsfcoll-n-r`;
- the codes `fhbvm` and `fhbvm2` have no fixed parameters.

[1] https://archimede.uniba.it/~testset/testsetivpsolvers/