Here is the log of the document:

A. Amicarelli, 2025, RANS SPH CFD for Air Quality: a closure on the turbulent Schmidt number constrained to Taylor's theory, grid turbulence and a shear flow; paper preprint; protocol RS2501; pp.1-45.

20 June 2025
Preprint publication (version 4). Two turbulence closures are added: Sc_T-TGS (now the default one) and Sc_T-TLS. A test case is added: grid turbulence with surface PS. The title of the preprint is revised. Sc_T-TGS is constrained to Taylor's theory, grid turbulence and a shear flow. Inter-comparisons between Sc_T closures. Sc_T-TGS is almost equal to Sc_T-TLS under HIT and grid turbulence. Sc_T-TGS is almost equal to Sc_T-StHIT in a shear flow. All the figures are replaced, except for those panels which do not depend on Sc_T closures. Minor generalisation of the closed-form solution for the mean concentration under grid turbulence with surface PS (in a second appendix).

27 May 2025
Preprint (version 3). Fix to the Sc_T-StHIT formulation (Eq.2.6, Eq.5.5 and Eq.5.7): $(1-T_L/t_{FPm}\times(1-e^{-tFPm/TL}))$ is replaced by $(1-e^{-tFPm/TL})$ and associated modifications (e.g., in the ballistic-regime limits, K_T is doubled and Sc_T is halved); K_T is always assumed inhomogeneous at any step of the demo, even under HIT.

19 May 2025
Preprint publication (version 2). Fixes to image quality and references.

06 May 2025
Preprint publication (version 1).