73. Estimation of transformation parameters from the ITRF2020 reference frame to the Italian Reference Frame (ETRF2000 at epoch 2008.0)

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This study evaluates different procedures for estimating the 14 parameters of a similarity transformation from coordinates expressed in ITRS– ITRF2020 at epoch t to ETRS89–ETRF2000 at epoch 2008.0. Three approaches are proposed and applied to the coordinates of permanent GNSS stations belonging to the Italian National Dynamic Network (RDN), which has officially realised the national reference system in Italy since 2012. The paper describes the dataset, the processing strategy used to estimate the GNSS station coordinates, the three transformation parameter estimation approaches and analyses the differences between the resulting solutions.