

UNECE Workshop on Statistical Data Editing April 2020: Abstract Submission

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**Topic: (iii) Software: open source software and software demonstrations**

- This contribution is for a software demonstration.

RBEIS: A robust nearest neighbour donor imputation system implemented in SAS

This software demonstration will focus on the RBEIS system developed in SAS by ONS to apply a robust nearest neighbour donor imputation approach to social surveys datasets. The system implements a nearest neighbour minimum change methodology specifically designed to minimise conditional imputation variance when the analytical aim is to produce a single, unique dataset, rather than multiple imputed datasets. When relatively small sample-based social survey data are imputed with this generic aim there is a risk of imputation variance having an undesirable impact on survey estimates. The RBEIS system addresses this by imputing all records sharing the same characteristics simultaneously and sampling without replacement from the observed conditional distribution.