

## Workshop

### Building Multi-Source Databases for Comparative Analyses

Missing Data Imputation (Thursday, December 19): Preparatory Steps

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#### Readings:

a) Allison, Paul David. 2002. *Missing Data*. Thousand Oaks, Calif: Sage Publications. [https://1drv.ms/b/s!AodhPhV5c9Ljl\\_4JkoP\\_DMAU6-EwXw?e=2dDwYd](https://1drv.ms/b/s!AodhPhV5c9Ljl_4JkoP_DMAU6-EwXw?e=2dDwYd)

This book nicely and succinctly presents the logic behind the issues of missing data and the ways of dealing with them. Although it is a bit outdated, i.e., the newest algorithms are not included, the book is worth reading.

b) Buuren, Stef van. 2018. *Flexible Imputation of Missing Data*. Second edition. Boca Raton: CRC Press, Taylor & Francis Group.

The online version is available here: <https://stefvanbuuren.name/fimd/>

This book is up to date. It is technical and mathematically demanding. Relevant for this course are Chapters 1 through 6.

#### Software:

If you plan to attend the afternoon sessions (labs) on Missing Data Imputation, and you are not R users yet, please **install R** from [www.r-project.org/](http://www.r-project.org/), and **RStudio**, which is R graphical user interface, from [rstudio.com/products/rstudio/download/](http://rstudio.com/products/rstudio/download/) (choose *RStudio Desktop*, which is free). Additionally, for workshop participants who are new to R, the crash introduction to R session will be provided on Monday (December 16).

#### Tutorials:

There is also a brief practical tutorial for applying missing data analysis in R using the R package ‘mice’ that Stef van Buuren developed:

Buuren, Stef van, and Karin Groothuis-Oudshoorn. 2011. ‘Mice : Multivariate Imputation by Chained Equations in R’. *Journal of Statistical Software* 45(3). <http://www.jstatsoft.org/v45/i03/>.

#### Note:

The missing data imputation labs require computer access. Ideally, participants should work on their laptops. If you will not have access to a laptop on Dec. 19, please let me know in advance, via email at [kotnarowski@gmail.com](mailto:kotnarowski@gmail.com).