# JORGE CIMENTADA

## Contact Information

Max Planck Institute of Demographic Research
Laboratory of Digital and Computational Demography
Konrad-Zuse-Str. 1
18057 Rostock, Germany

*Phone:* +34 697-382-009
*E-mail:* cimentadaj@gmail.com
https://cimentadaj.github.io/
*Google Scholar*
*Github:* github/cimentadaj

## Education

| | | | |
|---|---|---|---|
| 2015/2019 | Ph.D. | | Pompeu Fabra University, Political and Social Sciences |

*Fields: Sociology and Social inequalities*
Dissertation: "Educational institutions and their effect on inequality: Three Papers on Educational Systems and Inequality of Achievement and Opportunity"
Advisors: Gøsta Esping-Andersen, Bruno Arpino
Awarded **best PhD paper Prize (2017)**

| | | | |
|---|---|---|---|
| 2014/2015 | M.Sc. | | Pompeu Fabra University, Research in Sociology and Demography |

Advisors: Gøsta Esping-Andersen, Bruno Arpino

| | | | |
|---|---|---|---|
| 2009/2013 | B.A. | | PUCMM University, Business |

## Research Interests

Social/Geographical Mobility    Computational Statistics    Demography    Social Inequalities

## Current Positions

2019-    *Research Scientist*
Laboratory of Digital and Computational Demography
Max Planck Institute of Demographic Research

2019-    *Research affiliate*
ERC Project: Institutional Family Demography
Dondena Centre for Research on Social Dynamics and Public Policy
Bocconi University

2019-    *Scientific collaborator*
Sociometric Research Foundation

2018-    *Research affiliate*
Research and Expertise Centre for Survey Methodology
Mentor: Wiebke Weber

## Past Positions

2018/2019    *Data Scientist*
Kernel Analytics

## PUBLICATIONS

### Refereed Journal Articles

2018      Esping-Andersen, G. & **Cimentada, J.** (2018). Ability and Mobility: The Relative Influence of Skills and Social Origin on Social Mobility. *Social Science Research*, Volume 75, Pages 13-31. [Replication files][Open access]

### Submitted Articles

2019      **Cimentada, J.** & Klüsener, S. (2019), Exploring the Demographic History of Populations with Enhanced Lexis Surfaces, submitted to *Demographic Research*. [Replication files] [Open access]

## WORK IN PROGRESS

**Cimentada, J.** (2018), Unequal Decentralization of Education: An Intervention of the AGE Program on Indigenous Populations in Mexico. In preparation for *Population and Development Review* [Replication files]

**Cimentada, J.** (2017), Does curricular tracking explain global SES gaps? an international comparison of the SES achievement gaps from 2000 to 2015. SocArXiv, 21 Sept. 2017. In preparation for *Research in Social Stratification and Mobility* [Replication files] [Open access]

**Cimentada, J.** & Weber, W. (In preparation), The sqpr package: a gateway for correcting for statistical measurement error.

**Cimentada, J.** (In preparation), A unified statistical ecosystem to analyze the European Social Survey: an R package.

## COMPUTATIONAL SKILLS

**Statistics:** R, Python, SPSS, Stata, Stan, Excel

**Programming:** Bash, Git, cron, Web Scraping, API interactions, ssh, Shiny applications, Emacs

**Big data:** Impala, Hadoop, Spark, Oracle, SQL, PostgreSQL, Airflow

**Text processing:** Regular Expressions, Tesseract, LaTeX

## STATISTICAL SOFTWARE

### Scientific and statistical software

opendataes: Interact with the datos.gob.es API [website]
sqpr: Access the SQP API and adjust statistical models for measurement error [website]
essurvey: Download data from the European Social Survey [CRAN, website]
perccalc: Estimate continuous distributions from categorical variables [CRAN, website]
coauthornetwork: Explore your network of coauthors from your Google Scholar profile [Github]
cimentadaj: Personal package [Github]

### Contributions to other statistical software

corrr: Exploring correlations in a 'tidy' format. [Github]
broom: Convert statistical analysis objects into tidy format [Github]
scholar: Extract citation data from Google Scholar. [Github]

### Scientific web applications

Exploring the Demographic History of Populations with Enhanced Lexis Surfaces
Educational Inequality Around the World

- Commissioned by the Research and Expertise Centre for Survey Methodology:
* Download Spanish translated data from the European Social Survey
* SQP: A a Tool for Correction for Measurement and Sampling Error (joint project with GESIS)

Open source Github ranking: R (http://git-awards.com/users/cimentadaj)
3 out of 126 in Madrid
13 out of 482 in Spain

## Honors, Awards, and Fellowships

| | |
|---|---|
| 2019 | Full scholarship to the Summer Institute in Computational Social Science, Oxford University |
| 2018 | Best conference presentation 'National Spanish R Conference', Department of Mathematics, University of Murcia (€200) |
| 2017 | Pompeu Fabra EBES grant to "Bayesian Inference and Stan", Newcastle University (€600) |
| 2017 | Best PhD paper Prize for the paper "Does curricular tracking explain SES gaps? An international comparison of the SES achievement gaps from 2000 to 2015", Pompeu Fabra University (€300) |
| 2017 | Full travel stipend to the Visualization Retreat Rostock, Max Planck Institute of Demography |
| 2016 | Pompeu Fabra EBES grant to 'EERA Summer School: Methods and Methodology in Educational Research', Linz University (€600) |
| 2015 | Best Master's thesis, Department of Political and Social Science, Pompeu Fabra University |

## Selected Presentations

### Conference presentations

| | |
|---|---|
| 2019 | "An app for the correction of measurement and sampling error in the European Social Survey", European Survey Research Association, Zagreb, 15-19 July |
| 2018 | "Interacting with the datos.gob.es API using opendataes", The National Spanish R Conference, Murcia, 22-23 November |
| | "Ability and Mobility: The Relative Influence of Skills and Social Origin on Social Mobility", European Population Conference, Brussels, 6-9 June |
| 2017 | "Visualizing Educational Inequality Around the World: are SES gaps growing over time?", Max Planck Institute for Demographic Research Visualization Retreat, Rostock, 28-29 June |

### Workshops

| | |
|---|---|
| 2019 | Summer Institute in Computational Social Science, Oxford University, 15-27 June |
| 2019 | Applying big data to Institutional Family Demography, Dondena Centre for Research on Social Dynamics and Public Policy, Bocconi University, 3-6 May |

### Invited Presentations

2018    Downloading European data with essurvey, Charles III University of Madrid (September)

"Does curricular tracking explain cross-national variation in achievement gaps?", Universitat Barcelona (February)

The essurvey package, University of Southampton (January)

2017    Introduction to the tidyverse, PyData Conference, Barcelona (May) [Course]

### Presentation meet ups

2019    'Downloading European data with essurvey' and 'Accessing Spanish public data with opendataes', Canary Islands R meetup (March)

2018    Downloading Spanish public data with opendataes, Madrid R meetup (November)

## Teaching and Mentoring Experience

### Teaching assistant

2015    Teaching Assistant, Statistics 101 for Political Science with Dr. Bruno Arpino

### Graduate Mentoring

2017    Introduction to the tidyverse and functional programming, Econ and Pol Sci Departments, Pompeu Fabra University (March) [Course]

2016    Introduction to R programming and its strengths, RECSM Institute (April) [Presentation]

Getting familiar with R objects, DEMOSOC Research Group (April) [Course]

### Short courses

2017-    Introduction to R - Barcelona Summer School in Survey Methodology with Basilio Moreno, 2017, 2018, 2019 [Course]

## Teaching Interests

Social/Geographical Mobility; Introductory and Advanced Quantitative Methods; Data Science applied to Social Science; Social Science Research Design; Social Inequalities; Big data and Demography

## Scientific reviews

### Statistical/Software review

rOpensci, Journal of Open Source Software

## Academic Skills and Languages

### Short Methods Courses

| | |
|---|---|
| 2018 | Text Mining & Natural language Processing, Department of Mathematics, University of Murcia |
| 2018 | Introduction to Bayesian Inference and Stan, Newcastle University |
| 2016 | EERA Summer School: Methods and Methodology in Educational Research, Linz University |
| 2016 | Analyzing Comparative Longitudinal Survey Data with Multilevel Modelling, RECSM Summer School |
| 2016 | Probability Sampling Methods, RECSM Summer School |
| 2015 | Causal Inference in Observational Studies, Pompeu Fabra University |
| 2013 | Protecting Human Research Participants, National Institute of Health (NIH) of the United States |

**Languages:** Spanish (native), English (fluent)

## Professional Activities and Service

### University/Departamental

2017-2018  Graduate representative PhD program

2017        Co-organizer of the RECSM RonR! meeting group and seminars

2016        Adaptation of the Randomization guide from the Abdul Latif Jameel Poverty Action Lab (J-PAL) to R. [Link]

### Professional Memberships

Comparative and International Education Society

Foundation for Open Access Statistics

International Union for the Scientific Study of Population (IUSSP)

## References

Gøsta Esping-Andersen
Professor of Sociology
Bocconi University & Pompeu Fabra University
gosta.esping@upf.edu
+34 93 542-2649

Sebastian Klüsener
Research Director, Head of the research area Demographic Change and Ageing
Federal Institute for Population Research
sebastian.kluesener@bib.bund.de
0611 75 4345

Bruno Arpino
Associate Professor of Statistics
Department of Statistics and Computer Science
University of Florence
bruno.arpino@unifi.it

Wiebke Weber
Head of the European Social Survey ERIC Core Scientific Team
Research and Expertise Centre for Survey Methodology (RECSM)
Pompeu Fabra University
wiebke.weber@upf.edu
(34) 93 542 1163

Léa Pessin
NICHD postdoctoral fellow
The Pennsylvania State University, Population Research Institute
lpessin@psu.edu
(814) 826-3987

Léa Pessin
NICHD postdoctoral fellow
The Pennsylvania State University, Population Research Institute
lpessin@psu.edu