



Nationality
French
Current home
Southampton, UK
Website
Personal 
Institutional 

Édith Darin

Social sciences, Bayesian statistics and Geospatial data science

Contact

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Tech repo

Github
edarin
OpenStreetMap
edithdarin

Programming

OS Preferences
Windows
GNU/Linux
Statistical Programming
R (+++)
Python (+)
Reporting
Microsoft Office
Latex
R Markdown
R Shiny

Languages

French native
English fluent
German intermediate
Italian intermediate

Working experiences

- 07/18 **Research Fellow** WorldPop, University of Southampton, UK
Until 08/21 Specialist Research Technician
Building statistical models to provide up-to-date, spatially complete population count in data-scarce contexts. Lead modeller for hybrid census estimation in Burkina Faso and Mali. Lead trainer on gridded population estimation to national stats offices.
Methods developed: Hierarchical Bayesian modelling combining survey data with geospatial covariates. Random-forest models for producing high-resolution population estimates. Grid-based spatial sampling design for household surveys.
- 01/17-08/17 **Data Scientist Intern** mVAM, UN World Food Program, Italy
Assessing food security from remote data collection. Machine-learning based propensity score weighting in complex survey design. Scoping study on high-resolution mapping of food security indicators. Panel attrition analysis. Descriptive statistics on mobile phone data. Support mission for Mali Country Office (Bamako).
- 07/16-12/16 **Data Scientist Intern** Etalab, Governmental Task Force for OpenData, France
OpenFisca: French tax and benefit system micro-simulation platform.
Entrepreneurs d'Intérêt Général Project : Governmental program for recruiting high-skilled developers on specific short-term projects.
- 02/15-03/15 **Economist Intern** National Institute for Statistics, France
Micro-simulation model for studying the marginal effective tax rate.
- 01/14-05/14 **Research Assistant** École Normale Supérieure of Cachan, France
Sociological interviews on the impact of new technologies in the law sector.

Education

- 2018-2019 **MSc in Applied GIS and Remote Sensing** University of Southampton, UK
Dissertation Topic: *Slumness Mapping: an insight comparing survey data and geospatial covariates. A Use Case in Kinshasa, DRC.* With Distinction.
- 2015-2018 **MSc in Statistics and Economics**
Paris Graduate School of Economics, Statistics and Finance (ENSAE), France
Majors: Statistics, Machine Learning, Econometrics, Computational Social Sciences, Public Policy Evaluation. With Distinction.
- 2014-2015 **"Theory and Empirical Methods in Economics" Graduate Program**
École Normale Supérieure (ENS) de Cachan and Paris School of Economics, France
Erasmus: Humboldt (Berlin), Galatasaray (Istanbul). First class honours.
- 2013-2014 **Double Bachelor's Degree in Economics and Sociology**
ENS Cachan, Université Paris-I-Panthéon-Sorbonne, France
First class honours.

Academic outcomes

Peer-reviewed papers

- The role of earth observation in an integrated deprived area mapping "system" for low-to-middle income countries, Kuffer, M.; Thomson, D.R.; Boo, G.; Mahabir, R.; Grippa, T.; Vanhuyse, S.; Engstrom, R.; Ndugwa, R.; Makau, J.; **Darin, E.**; de Albuquerque, J.P. and Kabaria, C, *Remote Sensing*, 2020, 12, 982. [↗](#)
- A grid-based sample design framework for household surveys, Boo G; **Darin E**; Thomson DR and Tatem AJ, *Gates Open Research* 2020, 4:13, [↗](#)

Conference

- A bottom-up population modelling approach to complement the population and housing census, **Darin E**; Boo G; Tatem AJ, *International Population Conference*, 2021. [↗](#)
- A grid-based sampling design for household surveys in the absence of actionable sampling frames, Boo G; **Darin E**; Thomson DR and Tatem AJ, *GEOMED 2019*, 2019. [↗](#)
- High-resolution population mapping and estimation in the western part of the Democratic Republic of Congo, **Darin E**; Boo G; Leasure DL and Tatem AJ, *GEOMED 2019*, 2019. [↗](#)

Teaching

- Statistical population modelling for census support; **Darin E**, Leasure DR, Tatem AJ, *WorldPop*, *University of Southampton*, 2021, [↗](#)
- Small area population estimates using random forest top-down disaggregation: An R tutorial; Leasure DR, **Darin E**, Tatem AJ, *WorldPop*, *University of Southampton*, 2020. [↗](#)
- Gridded Population Workshop, *Joseph Ki-Zerbo and Norbert Zongo University*, Burkina Faso, 2021
- R Foundations Course for different Nigerian national agencies, 2020.
- Population Modelling Webinar, *GRID3 Webinar Series*, 2020. [↗](#)
- Population Modelling Session, *Data Science Nigeria Bootcamp*, 2019. [↗](#)

Datasets

- Census disaggregated gridded population estimates for Sierra Leone, version 2.0 (2015), WorldPop and Statistics Sierra Leone, 2021, *University of Southampton*, doi:10.5258/SOTON/WP00714. [↗](#)
- Census-based gridded population estimates for Burkina Faso (2019), version 1.0, WorldPop and Institut National de la Statistique et de la Démographie du Burkina Faso, *WorldPop*, *University of Southampton*, 2021. [↗](#)
- Modelled gridded population estimates for the Kinshasa, Kongo-Central, Kwango, Kwilu, and Mai-Ndombe provinces in the Democratic Republic of the Congo 2018, version 2.0, Boo G; **Darin E**; Leasure DR; Dooley CA; Chamberlain HR; Lazar AN; Tatem AJ, *WorldPop*, *University of Southampton*, 2020. [↗](#)

R Package

- wopr: An R package to query the WorldPop Open Population Repository, version 1.0.1, Leasure DR; Bondarenko M; **Darin E**; Tatem AJ, *WorldPop*, *University of Southampton*, 2020. [↗](#)

Contributions

- Financial incentives to work in France between 1998 and 2014, Sicsic M, *Economie et Statistique*, 2020. [↗](#)

Awards

- Faculty Dean's Prize for Research, University of Southampton, 2021
- Faculty Dean's MSc List Award, University of Southampton, 2019
- Vice-Chancellor Award for Research Impact, University of Southampton, 2018
- Scholarship Sarah Andrieux for Social and Economics Research (800€), 2017
- Finalist for OpenFisca of the Open Government Partnership Hackathon (Paris Summit 2016)
- Four-year scholarship at the École Normale supérieure de Cachan (4x15,600€), 2015