# Emmanuel LETOUZÉ

eletouze@datapopalliance.org

## EDUCATION

**MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE (MA, USA)**

**Post-Doctoral Visiting Scholar**                                                       **Sept. 2016—Dec 2017**
- Research in Prof. Alex 'Sandy' Pentland's Human Dynamics Group at MIT Media Lab on Big Data for Human Development

**UNIVERSITY OF CALIFORNIA, BERKELEY**

**PhD, Department of Demography**                                                  **Sept. 2009—Aug. 2016**
- Dissertation title: *"Applications and Implications of Big Data for Demo-Economic Analysis: The Case of Call Detail Records"*
- Committee: Ronald D. Lee (Chair; Econ. & Demography), Edward Miguel (Econ.), Jennifer Johnson-Hanks (Sociology & Demog.)
- Qualifying Examination Fields: (i) Demography and Development, (ii) Fertility and Development, (iii) Historical Demography

**COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK**

**MA in International Affairs—Economic Development**     (3.92/4.00 GPA)                   **May 2006**
- Fulbright Fellow
- MA thesis: "*The Impact of Vietnam's Household Registration System on Migrants' Welfare*" (supervisor Prof C. Pop-Eleches)

**SCIENCES PO PARIS**

**MA in Applied Economics-Economic Demography** (with Honors)                 **Oct. 2000**
- MA thesis: "Living Standards of Rural Migrants in Dakar" conducted at Dakar Research Development Institute (Summer 2000)

**BA** *(Diplôme)*                                                                  **July 1999**
- Major in Political Science, Minor in Economics

**LYCÉE HENRI-IV, PARIS**

**Preparatory class** (non-degree granting) to French" Grande écoles" competitive exams       **1993-94**

## INTERNATIONAL APPOINTMENTS

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|---|---|
| 2021– 2022 | Appointed Member of Eurostat's High-Level Expert Group on "Facilitating the use of new data sources for official statistics"; co-author of final report |
| 2017–2018 | Appointed Member of the Program Committees of the 1st and 2nd edition of the United Nations World Data Forum 2017 (Cape Town) and Dubai (2018) |
| 2015-2018 | Appointed Member of 2015-18 Panel on "Big Data and Population Processes" of the International Union for the Scientific Study of Population (IUSSP) |
| 2015-present | Appointed Member of the Technical Advisory Group, Global Partnership for Sustainable Development Data (GPSDD) |
| 2015-present | Visiting Fellow, Harvard Humanitarian Initiative (HHI), Harvard University, USA |
| 2014-present | Founding Fellow, MIT Connection Science, MIT, USA |
| 2012-present | Non-Resident Adviser, International Peace Institute, New York, USA |

## ACADEMIC AWARDS AND AFFILIATIONS

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|---|---|
| 2022 | Amazon Research Award Recipient 2021, University Pompeu Fabra, Spain |
| 2021 – 2023 | Marie Skłodowska Curie individual fellowship, University Pompeu Fabra, Spain |
| 2013– 2014 | University of California Dean's Normative Time Fellowship, UC Berkeley, USA |
| 2010 – 2013 | University of California Regents' Intern Doctoral Fellowship, UC Berkeley, USA |
| 2004 – 2005 | J. William Fulbright Fellowship for MA at Columbia University |

## EMPLOYMENT

**UNIVERSITY POMPEU FABRA**                                          **Barcelona, Spain**

**Marie Curie Fellow (Feb. 2021-Feb. 2023) then Visiting Professor (Engineering and ICT Dept.)**     **Feb. 2021-Current**

Research and teaching on crime, violence, inequalities and migration in LAC (Colombia, Mexico, Haiti…) and SSA (Liberia, Senegal…)

**DATA-POP ALLIANCE**                                           **New York (USA) & Barcelona**

**Director and Co-Founder** (http://www.datapopalliance.org)                    **Since Jan. 2014**
- Raised > $8m since January 2014, including from Rockefeller Foundation, Hewlett Foundation, World Bank, UNDP, AFD, GIZ….
- Directed a team of 35-40 staff in 15 countries (including Haiti) and a network of 30+ Research Affiliates
- Undertook 150+ research, capacity building and technical assistance projects with over 30 partners in over 10 countries
- Director (2017-20) and Co-Founder of the Open Algorithms (OPAL) project; $3m budget; led a core team of 6 people for 2 pilots in Senegal (with Orange-Sonatel and the National Statistical Office) and Colombia (with Telefonica and the NSO)

**UN GLOBAL PULSE, EXECUTIVE OFFICE OF THE UN SECRETARY-GENERAL**             **New York**

**Senior Development Economist** (P5 level)                                 **Jan. 2011—Jan. 2012**
- Author of UN Global Pulse's White Paper "Big Data for Development: Challenges & Opportunities" (published May 2012)
- Led economic research agenda and Contributed to GP's proof-of-concepts research projects and presentation of findings to the UN General Assembly on food prices using Twitter data, unemployment and social media, etc. (Nov. 2011)
- Developed academic collaborations with MIT, Harvard, UC Berkeley, Yale, etc.

**UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP)**                                             **New York**

**HUMAN DEVELOPMENT REPORT OFFICE**                                                    **Dec. 2008—Aug. 2009**

**Member of the Research Team—2009 Human Development Report on Human Mobility**    (P4 level)
- Lead author of *"Who Moves, Why and Where*? chapter; provided inputs to other chapters, including on forced migration
- Co-authored a background paper on the "Migration-Development Nexus"; Supervised 5 others
- Managed the preparation and production of all figures and graphs, oversaw and reviewed the French translation

**BUREAU FOR CRISIS PREVENTION AND RECOVERY**                                           **Aug. 2007—Dec. 2008**

**Policy Specialist, Post-Conflict Economic Recovery** (Staff, ALD3)
- Associate Project Manager, main author and lead data analyst of 2008 flagship report *"Post-conflict Economic"* (budget $2.5m)
- Served as BCPR focal point and provided inputs for the UN response to the 2007-2008 Food Crisis
- Received overall 2008 Performance Evaluation of 1

**BUREAU FOR DEVELOPMENT POLICY, POVERTY GROUP**                                         **Jan. 2006—June 2007**

**Public Finance Economist** (Consultant, P3 level)
- Co-authored 2 published papers and provided policy guidance and support on 'Fiscal Space' (see Publications)
- Conducted applied research on Budget Support, Debt Sustainability, Medium Term Expenditure Frameworks, etc.

**FRENCH MINISTRY OF FINANCE'S TECHNICAL ASSISTANCE AGENCY IN VIETNAM**                     **Hanoi, Vietnam**

**Technical Assistant & Chief of Project "Strengthening Vietnam's Economic Governance"**    **Oct. 2000—Aug. 2004**
- Developed and coordinated $2.5m technical assistance program to Vietnam's Ministry of Finance, National Statistics Office, and National Assembly on public finance, official statistics, and macroeconomic modeling
- Co-organized 3 sessions of the Franco-Vietnamese intergovernmental Forum—including background research
- Provided research assistance over 3 months for a study on "Migration, Urbanization and Rural Development in Vietnam

## PUBLICATIONS (SELECTED, REVERSE CHRONOLOGICAL ORDER)

**Academic (Peer Reviewed)**

1. Pokhriyal N, Letouzé E, Vosoughi S. Accurate intercensal estimates of energy access to track Sustainable Development Goal 7. EPJ Data Sci. 2022;11(1):60. doi: 10.1140/epjds/s13688-022-00371-5. Epub 2022 Dec 9. PMID: 36530792; PMCID: PMC9734985.
2. Letouzé, Emmanuel; Villar, Zinnya del; Molina, Rodrigo. L.; et al. "Parallel Worlds: Revealing the Inequity of Access to Urban Spaces in Mexico City Through Mobility Data". *Projections*, vol. 16, June 2022. Measuring the City: The Power of Urban Metrics (MIT Press), https://projections.pubpub.org/pub/01kebgos.
3. Middleton, Stuart E.; Letouzé, Emmanuel; Hossaini, Ali; and Chapman, Adriane. "Trust, Regulation, and Human-in-the-Loop AI." *Communications of the ACM,* vol. 65, no. 4, April 2022, pp. 64–68, doi:10.1145/3511597.
4. Fiorio, Lee; Zagheni, Emilio; Abel, Guy; Hill, Johnathan; Pestre, Gabriel; Letouzé, Emmanuel; and Cai, Jixuan. "Analyzing the Effect of Time in Migration Measurement Using Georeferenced Digital Trace Data." *Demography,* vol. 58, no.1, February 2021, pp. 51–74. doi:10.1215/00703370-8917630.
5. Nadai, Marco de; Xu, Yanyan; Letouzé, Emmanuel; et al. "Socio-economic, built environment, and mobility conditions associated with crime: a study of multiple cities." *Scientific Reports,* vol. 10, no. 13871, August 2020, doi:10.1038/s41598-020-70808-2.
6. Oliver, Nuria; Lepri, Bruno; Sterly, Harald; Lambiotte, Renaud; Deletaille, Sébastien; Nadai, Marco de; Letouzé, Emmanuel; et al. "Mobile phone data for informing public health actions across the COVID-19 pandemic life cycle." *Science advances,* vol. 6, no. 23, June 2020, doi:10.1126/sciadv.abc0764.
7. Pestre, Gabriel; Letouzé, Emmanuel; and Zagheni, Emilio. "The ABCDE of Big Data: Assessing Biases in Call-Detail Records for Development Estimates." *The World Bank Economic Review,* vol. 34, no. Supplement_1, February 2020, pp. 89–97, doi:10.1093/wber/lhz039.
8. Salah, Albert A.; Pentland, Alex; Lepri, Bruno; and Letouzé, Emmanuel. *Guide to Mobile Data Analytics in Refugee Scenarios: The 'Data for Refugees Challenge' Study.* 1st ed, Springer, 2019, doi:10.1007/978-3-030-12554-7.
9. Lepri, Bruno; Oliver, Nuria; Letouzé, Emmanuel; et al. "Fair, Transparent, and Accountable Algorithmic Decision-making Processes." *Philosophy & Technology,* vol. 31, December 2018, pp. 611–627, doi:10.1007/s13347-017-0279-x.
10. Montjoye, Yves-Alexandre de; Gambs, Sébastien; Blondel, Vincent; Canright, Geoffrey; Cordes, Nicolas de; Deletaille, Sébastien; Engø-Monsen, Kenth; Garcia-Herranz, Manuel; Kendall, Jake; Kerry, Cameron; Krings, Gautier; Letouzé, Emmanuel; et al. "On the privacy-conscientious use of mobile phone data." *Scientific data,* vol. 5, no. 180286, December 2018, doi:10.1038/sdata.2018.286.
11. Lepri, Bruno; Staiano, Jacopo; Sangokoya, David; Letouzé, Emmanuel; and Oliver, Nuria. "The Tyranny of Data? The Bright and Dark Sides of Data-Driven Decision-Making for Social Good." *Transparent Data Mining for Big and Small Data.* Studies in Big Data, vol. 32, Springer, 2017, pp. 3–24, doi:10.1007/978-3-319-54024-5_1.
12. Kammourieh, Lanah; Baar, Thomas; Berens, Jos; Letouzé, Emmanuel; et al. "Group Privacy in the Age of Big Data." *Group Privacy*. Philosophical Studies Series, vol. 126, Springer, 2017, pp. 37–66, doi:10.1007/978-3-319-46608-8_3.
13. Bogomolov, Andrey; Lepri, Bruno; Staiano, Jacopo; Letouzé, Emmanuel; et al. "Moves on the Street: Classifying Crime Hotspots Using Aggregated Anonymized Data on People Dynamics." *Big Data,* vol. 3, no. 3, September 2015, pp. 148–158, doi:10.1089/big.2014.0054.

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**Non-Academic (Reports, White Papers, Book Chapters, Press Articles; selected)**

1. Letouzé, Emmanuel. "Étude sur les stratégies de développement, Objectifs du Millénaire pour le Développement et les Objectifs de Développement Durable" Etude realisée dans le cadre cadre du projet conjoint "Cadre Intégré National pour le Financement du Développement en Haïti" PNUD-MPCE. Final version submitted and accepted by UNDP in June 2022

2. Letouzé, Emmanuel; Spinardi, Anna; Soria, Ivette Y.; et al. "Capturing the Socioeconomic and Cultural Drivers of Sexual and Gender-based Violence in Sierra Leone." *Data-Pop Alliance*, July 2022. UNDP Sierra Leone. Link

3. E. Letouzé and N. Oliver. "*Using Data to Fight COVID19 and Build Back Better*". Vodafone Institute and Data-Pop Alliance. (2020)

4. E. Letouzé and N. Oliver. "*Sharing Is Caring*: *Four Key Considerations for Sustainable Private Data Sharing*". Vodafone Institute and Data-Pop Alliance White Paper. (2019) Link

5. Letouzé, E. "*Faire que la mesure compte*" (*Make Measurement Matter*). Article in *Regards Croisés sur L'Economie*, (July 2019)

6. Letouzé, E. Pentland, A. "Human AI for Human Development". *ITU Journal Special issue on Data for Good* (Dec. 2018)

7. E. Letouzé and al. *"The Evaluation of Complex Development Interventions in the Age of Big Data".* Chapter co-authored in Michael Bamberger, Jos Vassen, and Estelle Raimondo. (2016). Dealing with complexity in development evaluation: A practical approach. Thousand Oaks, CA: Sage. 429 pages.

8. Anttila-Hughes, J., Dumas, M., Jones, L., Pestre, G., Qiu, Y., Levy, M., Letouzé, E., Sala, S., Schwarz, B., Shoup, N., Tellman, E., Vinck, P. (2015). *"Big Data for Climate Change and Disaster Resilience".* Data-Pop Alliance Synthesis Report.

9. Letouzé, E., & Vinck, P. (2015). "*The Law, Ethics and Politics of Cell Phone Data Analytics".* Data-Pop Alliance White Paper.

10. Manske, J., Sangokoya, D., Barrett, L., Pestre, G., & Letouzé, E. (2015). "*Opportunities and Requirements for Leveraging Big Data for Official Statistics and the Sustainable Development Goals in Latin America". D*ata-Pop Alliance Synthesis Report.

11. Letouzé, E. (2015, February 18). "Big Data for the SDGs". Contribution to the 2015 UN Sustainable Development Report.

12. "Could Big Data provide alternative measures of poverty and welfare?" Contribution to ODI blog series on poverty measurement (with L. Pritchett, S. Klasen, M. Ravallion and S. Alkire and A. Lenhardt), June 11, 2013

13. *"Big Data for Conflict Prevention".* Lead author of IPI-USAID-UNDP Report with P. Meier and P. Vinck, April 2013

14. Letouzé, E. *"Big Data for Development: Challenges and Opportunities".* UN Global Pulse's White Paper, May 2012

## KEYNOTE PRESENTATIONS (SELECTED SINCE 2016)

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| January 2023 | Opening keynote on "Data, Development and Democracy" at the inauguration ceremony of the Lithuanian State Data Agency in Vilnius, Lithuania, at the invitation of the Chancellor of Lithuania |
| October 2022 | Keynote on "Private Data and Open Algorithms for Official Statistic" at the *Conference of the European Statistics Stakeholders* 2022 (CESS), in Rome, Italy |
| September 2022 | Keynote on "The Data Revolution for Development" at the *ELLIS Network Annual Doctoral Symposiu*m, Alicante, Spain |
| March 2021 | Opening Keynote on "AI for the SDGS" at the *AI for the Planet* conference co-organized by UNESCO and UNEP |
| March 2019 | Keynote on "Make Measurement Matter" at Eurostat's *New Techniques and Technologies for Statistics* (NTTS) international biennial scientific conference, Brussels, Belgium |
| December 2018 | Keynote on "Human AI for the SDGs" at the *Annual ITU Conference*, Geneva, Switzerland |
| September 2018 | Keynote on "Big Data and AI for Development" at *UNESCO Conference on Universal Access to Information*, Tunis, Tunisia |
| November 2017 | Keynote on "Open Algorithms for Development" at the 4th *UN-World Bank Big Data for Official Statistics Conference*, Bogota, Colombia |
| January 2017 | Opening Keynote on "Big Data and Open Algorithms for Sustainable Development", inaugural *United Nations World Development Forum*, Cape Town, South Africa |
| September 2016 | Keynote on "Could Open Algorithms Revive Democratic Principles and Processes?" at the *Oxford Internet Institute Big Data and Human Development Symposium*, Oxford, UK |
| August 2016 | Keynote on "The Ethics of Cell-Phone Data Analytics" at the 3rd *UN-World Bank Big Data for Official Statistics Conference*, Dublin, Ireland |
| June 2016 | Opening Keynote on "Big Data and the SDGs in the Age of Inequalities" at the *Open Data in Europe and Central Asia Conference*, Istanbul, Turkey |

## TEACHING AND TRAINING (SELECTED)

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| October 2022 | Inaugural Lecture of the 2022-23 academic year of the Engineering Department of UPF, Spain on "Data and AI for a Sustainable and Peaceful Future" |
| 2015 – 2019 | As Director of Data-Pop Alliance, I gave about 30 keynote lectures during 3-day trainings on "Big Data for Sustainable Development" to officials in 20+ countries |
| 2015 – 19 | Bi-yearly lectures on "Big Data and AI for Good: A Global South Perspective" in the MIT Media Lab Human Dynamics's Entrepreneurship Program (about 40 students per year) |
| 2008 – 2019 | Guest Lectures in graduate programs and seminars on migration, conflict, crime, Big Data and AI for research and policy, etc., at Columbia University (2009, 2010, 2011), Harvard (2014, 2016), MIT (2015-19), UC Berkeley (2009, 2016), The New School (2013) |
| 2012 – 2013 | Teaching Assistant, Economic Demography PhD class (2hrs/w), UC Berkeley, USA |
| 2005 – 2006 | Teaching Assistant, Advanced Economics MA class (4hrs/w), Columbia U., USA |

## REVIEWING ACTIVITIES

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|---|---|
| 2023 | Program Committee Member, 15th ACM (Association for Computing Machinery) Web Science Conference 2023 |
| 2022 – | Founding Editorial Board member and reviewer, Data Analytics for Social Impact, "Frontiers in Big Data" Journal |
| 2022 | Proposals reviewer for ELLIS Doctoral Symposium, Alicante, Spain (40 proposals) |
| 2017 – 2018 | Proposals reviewer of the 1st and 2nd edition of the United Nations World Data Forum 2017 and 2018 (Cape Town and Dubai; > 50 workshop proposals per edition) |

## KEY INTERNATIONAL ACADEMIC COLLABORATIONS AND COLLABORATORS

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| 2022 – | Co-Founded the NAIXUS network (Network on AI for Sustainable Development) with John Shawe-Taylor (Professor, University College London; *h-index 82*) and Nuria Oliver (Scientific Director and cofounder, ELLIS Alicante Unit, Spain; *h-index 69)* |
| 2013 – | Co-Founded Data-Pop Alliance with Patrick Vinck (Associate Professor at Harvard, *h-index 36)* and Alex Pentland (Toshiba Professor of Arts and Sciences, MIT, *h-index 147)* |
| 2017- 19 | Co-organized the "Data for Refugees challenge" (D4R) on Syrian refugees in Turkey with Albert Ali Salah (Prof., Utrecht University; h-index 41), Bruno Lepri (Head of Lab, FBK, Italy; *h-index 42),* Patrick Vinck and Alex Pentland |
| 2016 – | Co-Founded the Open Algorithms (OPAL) project with Alex Pentland and Yves-Alexandre de Montjoye (Associate Professor, Imperial College London, *h-index 24)* |

## INTERNATIONAL FIELDWORK EXPERIENCE

- Latin America and the Caribbean: Haiti (2002; 2 months), Mexico (2015, 2016, 2017, 2018, 2019; 3 months total), Colombia (2013-2020; 4 months), Brazil (2000, 2013-2020, 1 month), Ecuador (2015, 1 week), Chile (2016, 2018; 2 weeks)
- Sub-Saharan Africa: Senegal (2000, 2015-19; 9 months), Liberia (2008, 2009; 1 month), Ghana (2012, 2013; 2 weeks), Sierra Leone, (2008; 2 weeks); Togo (2015; 1 week), Mauritania (1999; 3 weeks); Kenya (2013, 2015, 2017; 3 weeks), Rwanda (2016; 3 weeks), South Africa (2017; 1 week)
- Middle-East and North Africa: Tunisia (2018, 2022; 2 weeks), Morocco (2022; 1 week), Iran (2004; 3 weeks); Lebanon (2017, 1 week); Jordan (2002, 1 week), Egypt (2018, 1 week), UAE (2018; 1 week)
- Asia and Oceania: Vietnam (2000-20004, 3.5 years total), Cambodia (2002, 1 week), Thailand (2003, 2004; 3 weeks total), Australia (2015, 2017; 1 week
- Lived in Sweden (1986-88), Kuwait (1988-90); traveled to about 90 countries

## INDIVIDUAL* RESEARCH GRANTS RECEIVED

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|---|---|
| July 2022 | **Amazon Research Award Recipient 2021,** University Pompeu Fabra, Spain<br>*USD 72,000 to study on ""Leveraging Digital Data for Monitoring Human Rights and Social Dynamics Along and Around Value Chains"* |
| 2022 | **United Nations Development Program, Sierra Leone Country Office**<br>*$40,000 research contract to analyze gender-based violence in Sierra Leone, including fieldwork* |
| 2022 | **United Nations Development Program and UNICEF, Haiti Country Office**<br>*$30,000 research contract to analyze SDGs status and gaps including gang violence* |
| 2021 – 2023 | **Marie Skłodowska Curie individual fellowship**, University Pompeu Fabra, Spain<br>*Two-year EUR172,000 fellowship to develop a project on crime in Latin America and the Caribbean* |
| 2013– 2014 | **University of California Dean's Normative Time Fellowship**, UC Berkeley, USA<br>*Full-tuition research fellowship woth about $100,000* |
| 2010 – 2013 | **University of California Regents' Intern Doctoral Fellowship**, UC Berkeley, USA<br>Full-tuition research fellowship worth about $250,000 |

*\* in addition, I have overseen fundraising for Data-Pop Alliance of about $8m since 2013; details can be provided as needed.*

## POLITICAL CARTOONING

- Invited Member of *The Cartoon Movement* since 2012
- Panelist with Art Spiegelman and François Mouly at "After Charlie Hebdo" Conference, Alliance Française, NY, February 2015
- Solo show at The Invisible Dog (ID), Brooklyn, NY, on October 7—9, 2011
- Editorial cartoonist for *Rue89* (one of France's leading news websites) since 2011
- Cartoonist for Columbia University *Journal of International Affairs* (2004-2006)
- Editorial staff cartoonist for French regional daily *L'Union* (1997-2004)—over 350 front page cartoons published
- Cartoonist for weekly national political magazine *Politis* (1998-2000)

## LANGUAGES

French (native); English (bilingual level); Spanish (advanced), German (intermediate), Vietnamese, Arabic (basic, 4 years of studies). Proficiency in R and Stata, basic knowledge of Python.