

Dana R. Thomson

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danathomson.com

My work improves measurement of vulnerable and mobile populations in low- and middle-income country data. I developed GridSample.org, a free easy-to-use web tool for selecting household survey locations from gridded population data; and I coordinate communities, local governments, researchers, and other stakeholders in the IDEAMAPS Network in order to model deprived "slum" areas routinely and accurately at scale.

Education

- 2016 – 2020 PhD, Department of Social Statistics, University of Southampton (Advisers: Nikos Tzavidis, Andrew Tatem and Tomas Bird)
Dissertation: Evaluating the accuracy and feasibility of gridded population sampling to overcome bias due to missing populations in household surveys
- 2015 – 2016 MS, Department of Social Statistics, University of Southampton (Adviser: Nikos Tzavidis)
Thesis: Impact of Zanmi Lasante/Partners-in-Health's Community-Based Programmes on Maternal and Child Health in Rural Haiti
- 2009 – 2011 MS, Department of Global Health and Population, Harvard School of Public Health (HSPH), (Advisers: Nancy Krieger and Marcia Castro)
Thesis: Fertility and Unmet Need for Contraception on Idjwi Island, D.R. Congo
- 2004 – 2008 BA, Department of Geography & GIS, George Washington University, *Summa Cum Laude* (Mentor: Elizabeth Chacko)
Independent research and website: Geography of HIV/AIDS in the Washington, DC metropolitan area with Whitman-Walker Clinics, 2007. dchiv aids.wordpress.com

Employment

- 05/2020 – current IDEAMAPS Coordinator, African Population & Health Research Center, Nairobi, Kenya
- Coordinate communication and activities among teams who are engaging stakeholders, developing frameworks, and creating a pilot data ecosystem
 - Contribute to the core leadership team, strategize how to scale and sustain the Network, and contribute substantially to grant planning and proposal development
 - Organize regular webinar, administer online surveys, and engage IDEAMAPS' diverse, global membership via social media, our blog, and online meetings
- 12/2019 – current Independent Research Consultant, London, UK
- UN-Habitat, Participatory Slum Upgrading Programme: Developing and evaluating a Participatory Slum Upgrading Index (PSUI) using GIS and statistical methods
 - University of Columbia, Center for International Earth Science Information Network (CIESIN): Evaluating the accuracy of 9 gridded population data sources in slums and informal settlements in Nigeria and Kenya
 - Flowminder Foundation: Oriented a newly hired survey expert to gridded population sampling, GridSample.org, and provided input to define Flowminder's research agenda

- 04/2018 – 12/2019 Senior Analyst (GridSample Project Manager), Flowminder Foundation, Southampton, UK
- Project management for the GridSample.org project to support LMIC survey practitioners to select and implement gridded population surveys from open data
 - Perform user needs assessment and usability testing with LMIC survey practitioners
 - Develop detailed technical requirements for the GridSample 2.0 algorithm
 - Draft detailed web interface requirements for GridSample.org
 - Manage sub-contracts with programmer and web development teams
- 01/2014 – 08/2015 Visiting Lecturer, National University of Rwanda-College of Medicine and Health Sciences-School of Public Health and Harvard Medical School, Kigali, Rwanda
- Facilitate faculty development seminars supporting a research-to-publication workflow
 - Teach advanced interactive, hands-on Survey Data Analysis course
 - Teach introductory course to Stata and other statistical software
 - Manage the university statistical analysis help desk
- 07/2012 – 12/2013 Research Associate, Global Health Research Core, Department of Global Health and Social Medicine, Harvard Medical School, Boston, MA USA
- Support NGOs and Ministries of Health in LMICs to perform national and district health system evaluations using household survey data
 - Perform various statistical and geographic analysis in SAS, Stata, and ArcGIS, selecting appropriate models (e.g. logistic, longitudinal) and approaches (e.g. DID)
 - Coordinate inter-disciplinary, multi-national teams to write scientific articles
- 07/2011 – 06/2012 Research Assistant, Global Health Research Core, Department of Global Health and Social Medicine, Harvard Medical School, Boston, MA USA
- Perform statistical and geographic analysis as directed by senior researchers
 - Perform peer-review literature reviews
 - Contribute to writing and analysis of inter-disciplinary, multi-national scientific articles
- 02/2009 – 08/2009 Junior Professional Associate, Spatial and Local Development Team, World Bank, Washington, DC USA
- Coordinated quarterly GIS trainings for World Bank staff
 - Performed spatial analysis and generated maps for researchers
 - Organized and generated ISO-compliant metadata in World Bank data repository
- 06/2008 – 01/2009 GIS Officer, USAID | MeasureDHS Project, Macro International, Calverton, MD USA
- Investigated and corrected errors in Demographic and Health Survey GPS field data
 - Produced atlases of select demographic and health indicators for Country Managers
- 12/2007 – 03/2009 Contractor, Census Plus project, Brookings Institution, Washington, DC USA
- Performed calculations with American Community Survey data and prepared hundreds of reports for the Census Plus Cities and State of Metropolitan America websites
- 08/2004 – 05/2007 Operations Specialist, USAID | DELIVER Project, John Snow Inc., Washington, DC USA
- Routinely issued contraceptive shipments, monitored warehouse stock, generated reported, and exported files from procurement databases
 - Interfaced daily with USAID offices, manufacturers, and freight companies

Skills

Technical: Stata, R, ArcGIS, QGIS, SPSS, SAS, MS Office, OpenOffice

Field tools: GridSample, ODK, OMK, GeoODK, Kobo Toolbox, OSM, OSMAnd, SW Maps, MAPS.ME

Personal: Interdisciplinary, organized, collaborative, independent, innovative, motivated

Teaching Experience

Courses & Workshops

Instructor, *Area Observation Survey Training*. IDEAMAPS Project for Justice & Empowerment Initiative and University of Lagos, (remote) Lagos, Nigeria (Nov 2020)

Instructor, *Gridded Population Surveys Field Course for Planners and Implementers*. National Bureau of Statistics, Abjua, Nigeria (Nov-Dec 2019)

Instructor, *Gridded Population Survey ToTs*. ORB International, Charlottesville, VA USA (Nov 2019)

Instructor, *SUE Survey Planning Team Training*. Survey for Urban Equity Project. HERD International, Kathmandu, Nepal (Summer 2017)

Instructor, *Population Survey Analysis Workshop*. Nuffield Centre for International Health and Development, University of Leeds, Leeds, UK (Summer 2016)

Instructor, *Population Survey Analysis*. University of Rwanda-College of Medicine and Health Sciences-School of Public Health, Kigali, Rwanda (Fall 2014, Spring 2015)

Instructor, *Computing in Stata*. University of Rwanda-College of Medicine and Health Sciences-School of Public Health, Kigali, Rwanda (Nov 2014)

Co-Instructor, *Deliverable-Driven Faculty Research Seminar*. University of Rwanda-College of Medicine and Health Sciences-School of Public Health, Kigali, Rwanda (Jun 2014 – Dec 2014)

Co-Instructor, *Integrated DHS Analysis Training and Mentorship Opportunity*. Co-sponsored by the Rwanda Ministry of Health, National Institute of Statistics-Rwanda, Rwanda Biomedical Center, Partners in Health-Rwanda, Centers for Disease Control and Prevention-Rwanda, University of Rwanda School of Public Health, Harvard Medical School, Rwinkwavu, Rwanda (May 2013 – Jun 2013)

Teaching Assistant, *Harvard-Brazil Field Course in Infectious Disease*. Harvard School of Public Health, Salvador, Brazil (Jan 2011)

Guest lecturer

Measuring vulnerable and mobile populations in LMICs with greater accuracy. Harvard Medical School, Boston MA (Spring 2019)

Improving accuracy and feasibility of population surveys in low-resourced countries with Gridded Population Sampling and OpenStreetMap Enumeration. University of Louisville, Louisville KY (Fall 2016)

Introduction to Spatial Methods for Public Health. Harvard School of Public Health, Boston MA (Spring 2015, 2013, 2012, and 2011)

Field Methods in Humanitarian Crises. Harvard School of Public Health, Boston MA (Spring 2013)

(Re)Mapping Health: Interdisciplinary Workshop on Innovative Methods for Representing Spatial Data. Harvard Graduate School of Design, Boston MA (Winter 2013)

Publications

Citations on Google Scholar as of 19 Jan 2021 indicated in brackets. 683 total citations with an h-index of 16.

Survey methods / vulnerable populations

- Miller AC, Rohloff P, Blake A, et al. including **Thomson DR**. Feasibility of satellite image and GIS sampling for population representative surveys: A case study from rural Guatemala. *Int J Health Geogr* 2020; DOI:10.1186/s12942-020-00250-0. [1 citation]
- Amer S, **Thomson DR**, Chew R, et al. Worldwide population estimates for small geographic areas: Can we do a better job? In: *Big Data Meets Survey Science*. Wiley: Hoboken NJ. 2020: 597-624. ISBN:978-1-118-97632-6. [0 citations]
- Thomson DR**, Bhattarai R, Khanal S, et al. Addressing unintentional exclusion of vulnerable and mobile households in traditional surveys in Kathmandu, Dhaka and Hanoi: A mixed methods feasibility study. *J Urb Health* 2020; DOI:10.1007/s11524-020-00485-z. [1 citation]
- Thomson DR**, Rhoda DA, Tatem AJ, et al. Gridded population survey sampling: A systematic scoping review of the field and strategic research agenda. *Int J Health Geogr* 2020; DOI:10.1186/s12942-020-00230-4. [3 citations]
- Boo G, Darin E, **Thomson DR**, et al. A grid-based sample design framework for household surveys. *Gates Open Res* 2020; DOI:10.12688/gatesopenres.13107.1. [1 citation]
- Kuffer M, **Thomson DR**, Boo G, et al. The role of Earth Observation in an integrated deprived area mapping “system” for LMICs. *Remote Sensing* 2020; DOI:10.3390/rs12060982. [5 citations]
- Thomson DR**, Kuffer M, Boo G, et al. Need for an integrated deprived area “slum” mapping system (IDEAMAPS) in low and middle-income countries (LMICs). *Soc Sci* 2020; DOI:10.3390/socsci9050080 [9 citations]
- Ensor T, Bhattarai R, Manandhar S, et al. including **Thomson DR**. From rags to riches: Assessing poverty and vulnerability in urban Nepal. *Plos One* 2020; DOI:10.1371/journal.pone.0226646. [3 citations]
- Thomson DR**, Linard C, Vanhuyse S, et al. Extending data for urban health decision-making: A menu of new and potential neighborhood-level health determinants datasets in LMICs. *J Urb Health* 2019; DOI:10.1007/s11524-019-00363-3. [10 citations]
- Thomson DR**, Kools L, Jochem WC. Linking synthetic populations to household geolocations: A demonstration in Namibia. *Data* 2018; DOI:10.3390/data3030030. [2 citations]
- Eley H, Poudel AN, Ensor T, et al. including **Thomson DR**. Improving household surveys and use of data to address health inequities in three Asian cities: Protocol for the Surveys for Urban Equity (SUE) study. *BMJ Open* 2018; DOI:10.1136/bmjopen-2018-024182 [16 citations]
- Thomson DR**, Stevens FR, Ruktanonchai NW, et al. GridSample: An R package to generate household survey primary sampling units (PSUs) from gridded population data. *Int J Health Geogr* 2017; DOI:10.1186/s12942-017-0098-4. [36 citations]
- Eley H, **Thomson DR**, Lin R-Y, et al. Addressing inequities in urban health: Do decision-makers have the data they need? Report from the Urban Health Data Special Session at International Conference on Urban Health Dhaka 2015. *J Urb Health* 2016; DOI:10.1007/s11524-016-0046-9. [27 citations]

Teng JE, **Thomson DR**, Schiff A, et al. Using mobile health (mHealth) and geospatial mapping technology in a mass campaign for reactive oral cholera vaccination in rural Haiti. *PLoS Negl Trop Dis* 2014; DOI:10.1371/journal.pntd.0003050. [30 citations]

Thomson DR, Shitole S, Shitole T, et al. A system for household enumeration and re-identification in densely populated slums to facilitate community research, education, and advocacy. *PLoS One* 2014; DOI:10.1371/journal.pone.0093925. [7 citations]

Thomson DR, Hadley MB, Greenough PG, et al. Modelling strategic interventions in high fertility, low resource populations: A cross-sectional study of Idjwi, DRC. *BMC Public Health* 2012; DOI:10.1186/1471-2458-12-959. [15 citations]

Program Evaluation

Miller AC, Tuiz E, Shaw L, et al. including **Thomson DR**. Population estimates of glomerular filtration rate and risk factors for chronic kidney disease in the lowlands and highlands of Guatemala: Results from a representative survey. *Kidney Int* 2020; DOI: 10.1016/j.ekir.2020.12.015. [0 citations]

McIntosh AI, Jenkins HE, White LF, et al. including **Thomson DR**. Using routinely collected laboratory data to identify high rifampicin-resistant tuberculosis burden communities in the Western Cape Province, South Africa: a retrospective spatiotemporal analysis. *PLOS Medicine* 2018; DOI:10.1371/journal.pmed.1002638. [5 citations]

Miller AC, Garchitorena A, Rabeza V, et al. including **Thomson DR**. Cohort Profile: Ifanadiana Health Outcomes and Prosperity Longitudinal Evaluation (IHOPE). *Int J Epidemiol* 2018; DOI:10.1093/ije/dyy099. [8 citations]

Garchitorena A, Miller AC, Cordier LF, et al. including **Thomson DR**. Early changes in intervention coverage and mortality rates following the implementation of an integrated health system intervention in Madagascar. *BMJ Global Health* 2018; DOI:10.1136/bmjgh-2018-000762. [12 citations]

Thomson DR, Drobac P, Murray M, et al. Impact of health system strengthening intervention on maternal and child health outputs and outcomes in rural Rwanda 2005-2010. *BMJ Public Health* 2018; DOI:10.1136/bmjgh-2017-000674. [14 citations]

Ndenga E, Uwizeye G, **Thomson DR**, et al. Assessing the twinning model in the Rwandan Human Resources for Health Program: Goal setting, satisfaction and perceived skill transfer. *Glob Health* 2016; DOI:10.1186/s12992-016-0141-4. [23 citations]

Ly J, Sathananthan V, Griffiths T, et al. including **Thomson D**. Facility-based delivery during the Ebola virus disease epidemic in rural Liberia: Analysis from a cross-sectional, population-based household survey. *Plos Medicine* 2016; DOI:10.1371/journal.pmed.1002096. [43 citations]

Miller AC, Murray MB, **Thomson DR**, et al. How consistent are associations between stunting and child development? Evidence from a meta-analysis of associations between stunting and multidimensional child development in fifteen low- and middle-income countries. *Public Health Nutr* 2015; DOI:10.1017/S136898001500227X. [54 citations]

Johnson AD, **Thomson DR**, Atwood S, et al. Assessing early access to care and child survival during a health system strengthening intervention in Mali: A repeated cross sectional survey. *PLoS One* 2013; DOI:10.1371/journal.pone.0081304. [37 citations]

Drobac PC, Basinga P, Condo J, et al. including **Thomson D**. Comprehensive and integrated district health systems strengthening: The Rwanda Population Health Implementation and Training (PHIT) Partnership. *BMC Health Serv Res* 2013; DOI:10.1186/1472-6963-13-S2-S5. [73 citations]

Thomson DR, Rich ML, Kaigamba F, et al. Community-based accompaniment and psychosocial health outcomes in HIV-infected adults in Rwanda: A prospective study. *AIDS Behav* 2013; DOI:10.1007/s10461-013-0431-2. [34 citations]

Research capacity-strengthening

Amoroso CL, Nisingizwe MP, Rouleau D, et al. including **Thomson DR**. Next wave of interventions to reduce under-five mortality in Rwanda: A cross-sectional analysis of demographic and health survey data. *BMC Pediatrics* 2018; DOI:10.1186/s12887-018-0997-y. [5 citations]

Mukabutera A, **Thomson DR**, Hedt-Gauthier BL, et al. Exogenous factors matter when interpreting the results of an impact evaluation: a case study of rainfall and child health programme intervention in Rwanda. *Trop Med Int Health* 2017; DOI:10.1111/tmi.12995. [2 citation]

Ndayambaje A, Anderson R, Yoder C, et al. including **Thomson D**. Human Resources for Health midwifery in-service mentoring and episiotomy rate at Muhima Hospital, Rwanda. *Rwanda Med J* 2017; 74(2): 7-11. [5 citations]

Remera E, Boer K, Umuhiza SM, et al. including **Thomson DR**. Fertility and HIV following universal access to ART in Rwanda: a secondary analysis of 2010 Demographic and Health Survey. *Reprod Health* 2017; DOI:10.1186/s12978-017-0301-x. [5 citations]

Thomson DR, Semakula M, Hirschhorn LR, et al. Applied statistical training to strengthen analysis and research capacity in Rwanda. *Implementation Science. Health Res Pol Syst* 2016; DOI:10.1186/s12961-016-0144-x. [14 citations]

Mukabutera A, Basinga P, **Thomson DR**, et al. Rainfall variation and child health: Effect of rainfall on diarrhea among under 5 children in Rwanda, 2010. *BMC Public Health* 2016; DOI:10.1186/s12889-016-3435-9. [25 citations]

Mukabutera A, **Thomson D**, Hedt-Gauthier BL, et al. Risk factors associated with underweight status in children under five: An analysis of the 2010 Rwanda Demographic Health Survey (RDHS). *BMC Nutrition* 2016; DOI:10.1186/s40795-016-0078-2. [25 citations]

Rwabufigiri BN, Mukamurigo J, Hedt-Gauthier B, et al. including **Thomson DR**. Factors associated with postnatal care utilisation in Rwanda. *BMC Pregnancy Childbirth* 2016; DOI: 10.1186/s12884-016-0913-0. [28 citations]

Kiregu J, Murindahabi NK, Tumusiime D, et al. including **Thomson DR**. Socioeconomics and major disabilities: Characteristics of working-age adults in Rwanda. *PLoS One* 2016; DOI:10.1371/journal.pone.0153741. [6 citations]

Harerimana JM, Nyirazinyoye L, **Thomson DR**, et al. Social, economic and environmental risk factors for acute lower respiratory infections among children under five years of age in Rwanda. *Arch Public Health* 2016; DOI:10.1186/s13690-016-0132-1. [30 citations]

Ndagijimana A, Mugenzi P, **Thomson DR**, et al. PrePex male circumcision: Follow-up and outcomes during the first two years of implementation at the Rwanda Military Hospital. *PLoS One* 2015; DOI:10.1371/journal.pone.0138287. [8 citations]

Thomson DR, Diallo A, Rubanzana W, et al. Correlates of intimate partner violence against women during a time of rapid social transition in Rwanda: Analysis of the 2005 and 2010 Demographic and Health Surveys. *BMC Women's Health* 2015; DOI:10.1186/s12905-015-0257-3. [27 citations]

Ndahindwa V, Kamanzi C, Semakula M, et al. including **Thomson DR**. Determinants of fertility in Rwanda in *preReprod Health* 2014; DOI:10.1186/1742-4755-11-87. [28 citations]

Manzi A, Munyaneza F, Mujawase F, et al. including **Thomson DR**. Assessing predictors of delayed antenatal care visits in Rwanda: A secondary analysis of Rwanda Demographic and Health Survey 2010. *BMC Pregnancy Childbirth* 2014; DOI:10.1186/1471-2393-14-290. [62 citations]

Pre-prints and final drafts

Thomson DR, Gaughan A, Stevens F, et al. Evaluating the accuracy of gridded population estimates in slums: A case study in Nigeria and Kenya.

Abascal A, Rothwell N, Shonowo A, et al. including **Thomson DR**. "Domains of Deprivation Framework" for mapping slums, informal settlements, and other deprived areas in LMICs to improve urban planning and policy: A scoping review.

Thomson DR, Maviti J, Ndugwa R, et al. Defining "slum households" and "slum areas" in geo-referenced household survey data.

Grants and projects

2020 – 2021 Integrated Deprived Area Mapping System (IDEAMAPS) Network

UN Research and Innovation (UKRI) – Economic and Social Research Council (ESRC)

Named Researcher (GBP £149,990)

Through this networking grant, the project aims to establish strong relationships among stakeholders in three cities and achieve scalable proof-of-concept frameworks and techniques to map deprivation across LMIC cities. I am one of four members who conceived of the project and drafted the proposal.

2019 – 2020 Pilot improved household survey and microcensus tools/methods and compare a standard household survey with gridded population survey

Bill and Melinda Gates Foundation

Project Manager (USD \$199,822)

The goals of this project were to (1) improve free open-source survey tools, then (2) compare a gridded population to a census-based survey in Nigeria in collaboration with the National Bureau of Statistics. I scoped this project, contracted the Humanitarian OpenStreetMap Team to extend open-source tools, and oversaw requirements gathering, development, and piloting in Nigeria.

2017 – 2019 Surveys for Urban Equity (SUE)

UK Medical Research Council (MRC) Grand Challenges Research Fund (GCRF)

Researcher (PI: Helen Elsey) (GBP £606,548)

This grant collected data on neglected non-communicable illnesses in LMIC urban settings and work with decision-makers to make better use of such data. I drafted and coordinated 1 of 6

work packages involving the design and implementation of household surveys in three cities: Kathmandu (1200 HHs), Dhaka (400 HHs), and Hanoi (400 HHs), as well as a feasibility study.

- 2017 – 2019 **GridSample** work package in Geo-Referenced Infrastructure and Demographic Data for Development (GRID3) Programme
Bill and Melinda Gates Foundation, and UK Department of International Development
Project Manager (GridSample budget: USD \$172,242)
GridSample.org is a free, easy-to-use website for survey practitioners to select household surveys from preloaded gridded population data. I conceived and managed this project, including development of detailed requirements and prototypes, hired contractors to develop the code and revise the interface, and generated all text, image, and video content. Code is at: <https://github.com/Flowminder/GridSample2.0>, and the website is <http://GridSample.org>.
- 2016 – 2017 **GridSample.org BETA**
Flowminder Foundation Seed Grant
Project Manager (GBP £30,000)
This project developed a BETA version of GridSample.org based on features of the previously developed GridSample R algorithm. The aim of GridSample BETA was to make gridded population sampling accessible by LMIC survey practitioners who do not have programming or GIS skills. I developed the requirements and prototypes, hired contractors to program the algorithm and interface, and generated all content.
- 2014 – 2015 **Population Survey Analysis Online Learning**
Harvard Medical School, Department of Global Health and Social Medicine, Research Core Fund
Project lead (USD \$3,850)
This project produced just-in-time learning materials to support public health practitioners located in resource-limited settings to utilize existing survey data to answer their own research and evaluation questions. I developed 20 free, short videos, with handouts, quizzes, and practicals to walk a practitioner through their first research project from question-to-manuscript: www.populationsurveyanalysis.com. The videos have been collectively viewed more than 200,000 times on YouTube, and I routinely receive messages from users.
- 2010 **Baseline health needs assessment of Idjwi Island**
Harvard Humanitarian Initiative Award
Co-I (PI: Michael Hadley) (USD \$25,000)
The aim of this study was to collect demographic and health information about the population of Idjwi, D.R. Congo, population 220,000, at the invitation of local government officials to inform health system planning. I developed an innovative method to select representative household survey samples from gridded population data in the absence of census data, prepared field maps, trained field survey teams, and supported data quality assessment. Following the survey of 2,078 households in 50 clusters, I processed and summarized data, and drafted short reports of key results for Idjwi leaders and local NGOs.

Invited Presentations

- Thomson DR.** GridSample: Sampling vulnerable and mobile populations in LMIC household surveys with greater accuracy and feasibility. Invited speaker, NatCen ESS & City University Methods Seminar. London, UK. Sep 12, 2019.
- Thomson DR.** Improving coverage of vulnerable and mobile populations in household surveys: Tools, methods, and experiences with gridded population surveys. Invited speaker, U.S. Department of State analytic exchange. Washington, DC USA. Aug 28, 2019.
- Thomson DR.** Improving coverage of vulnerable and mobile populations in household surveys: Tools, methods, and experiences with gridded population surveys. Presentation, Measure DHS Project. Rockville, MD USA. Aug 29, 2019.
- Thomson DR.** “Gridded population household surveys.” Presentation, GRID3 Global Use Case Meeting. Abuja, Nigeria. Apr 8-10, 2019.
- Thomson DR, Bird T, Power D, Tatem A, Bengtsson L.** “Understanding Urban Populations: Gridded Population Data and Methods.” Presentation, World Food Programme. Rome, Italy. Jan 24-25, 2017.
- Thomson DR.** “DHS GPS Coordinates: Methods for Mapping & Analysis.” Presentation, DHS User Group, Harvard Center for Population and Development Studies. Cambridge MA: 23 Feb, 2011 and 21 Mar, 2012.

Conference Posters and Presentations

- Thomson DR.** “Integrated Deprived Area ‘Slum’ Mapping System.” Presentation, UN International Conference on Big Data for Official Statistics. Online. 1 Sep, 2020.
- Thomson DR.** “Integrated Deprived Area Mapping System (IDEAMAPS).” Presentation, International Seminar on United Nations Global Geospatial Information Management. Online. 18 Jun, 2020.
- Thomson DR, Kools L, Jochem WC.** “Linking synthetic populations to household geolocations: Namibia.” Poster, Population Association of American. Austin, TX USA. 10-13 Apr, 2019. [Won best poster award.]
- Thomson DR.** “Spatial models for slum area mapping.” Presentation, International Seminar on United Nations Global Geospatial Information Management. Nairobi, Kenya. 6-7 Dec, 2018.
- Thomson DR, Baral S, Saidur M, et al.** “Novel survey methods to more accurately sample poor and vulnerable households in complex urban settings.” Presentation, International Conference on Urban Health. Kampala, Uganda. 27-30 Nov, 2018.
- Thomson DR, Linard C, Vanhuyse S, et al.** “Area-level indicators for urban health: A menu of new and potential health determinants datasets in LMICs.” Presentation, International Conference on Urban Health. Kampala, Uganda. 27-30 Nov, 2018.
- Thomson DR, Hesse JB.** “GridSample: Tool for gridded population sampling.” Session: Novel methods to improve the representation of the urban poor in censuses and surveys. Presentation, World Data Forum. Dubai, UAE. 22-24 Oct, 2018.
- Thomson DR, Bhattarai R, Baral S, et al.** “Practical survey methods to more accurately sample poor and vulnerable households in complex urban settings.” Session: Innovate or Perish! Household Surveys in a Changing Data Landscape. Presentation, World Data Forum. Dubai, UAE. 22-24 Oct, 2018.
- Thomson DR.** “Defining slum households vs. areas, and data to map different slum constructs.” Presentation, Bellagio Conference on Making People Who Live in Slums Count. Bellagio, Italy. 20-23 Nov, 2017.

- Thomson DR**, Ah Poe C, Regi S, et al. “GridSample: A Tool to Generate Survey Sampling Areas from Gridded Population Data when Census Data is Outdated or Inaccurate.” Presentation, International Conference on Urban Health. Coimbra, Portugal. 25-30 Sep, 2017.
- Thomson DR**, Elsey H, Bhattarai R, et al. “Feasibility of survey methods aimed at better representing the urban poorest: Kathmandu, Nepal.” Presentation, International Conference on Urban Health. Coimbra, Portugal. Sep 25-30, 2017.
- Thomson DR**. “CDRs in Urban Settings.” Presentation, World Food Programme. The Hague, Netherlands. 6-9 Mar, 2017.
- Thomson DR**, Stevens F, Tatem A, et al. “Gridded population sampling to better capture the urban poor.” Presentation, International Conference on Urban Health. Dhaka, Bangladesh. 24-27 May, 2015.
- Thomson DR**, Harerimana JD, Mukabutera A. “Flipping classes to improve instructor-student mentorship in Rwanda.” Presentation, eLearning Africa. Addis Ababa, Ethiopia. 20-22 May, 2015.
- Thomson DR**, Stevens FR, Tatem AJ, et al. “Selecting population survey samples cheaper, faster, and easier for health system evaluations using gridded population data and satellite imagery.” Presentation, Global Symposium on Health Systems Research. Capetown, South Africa. 31 Sep-3 Oct, 2014.
- Thomson DR**. “Rwandan HIV-Infected Adults Experience Sizable Psychosocial Health Gains in Community-Based Accompaniment Program versus Clinical-Care-Only Program.” Presentation, NIH Summit on the Science of Eliminating Health Disparities. National Harbor, MD USA. 31 Oct – 2 Nov, 2012.
- Subbaraman R, Shitole T, **Thomson DR**. “Community-Based Approaches to Studying Health in Urban Slums in India: Methods, Findings, and Policy-Level Response.” 90-minute Integrated Panel Presentation, NIH Summit on the Science of Eliminating Health Disparities. National Harbor, MD USA. 31 Oct – 2 Nov, 2012.
- Thomson DR**. “Simple, Affordable Methods to Map and Analyze Health Data in a Densely Populated Slum.” Presentation, International Conference on Urban Health. Belo Horizonte, Brazil. 1-4 Nov, 2011.
- Thomson DR**. “Frontiers: Survey Selection and Mapping on Idjwi Island.” Poster, Annual CGA Conference on Geospatial Collaboration. Cambridge, MA USA. 6-7 May, 2011.
- Thomson DR**. “Expanded Surveillance to Better Address HIV/AIDS in Washington, DC and Beyond.” Presentation, ESRI Health GIS Conference. Denver CO: 18-20 Oct, 2010.
- Thomson DR**. “Democratizing Health Data with HealthLandscape, A Free Online Mapping Tool.” Presentation, Towson University Geographic Information Systems Conference. Towson, MD USA 17 Mar, 2008.
- Thomson DR**. “Spatiality of Race and HIV/AIDS in Washington, DC.” Presentation, Annual Meetings of the Association of American Geographers. Boston, MA USA. 19 Apr, 2008.
- Thomson DR**. “A Critical Look at HIV/AIDS Data Reporting.” Poster, American Public Health Association Annual Conference. Washington, DC USA. 6 Nov, 2007.

Editorial activities

Guest editor

Remote Sensing

Ad hoc reviewer

AIDS and Behavior

BMJ Global Health

BMJ Open

Computer, Environment and Urban Systems

Field Methods

International Health

International Journal of Behavioral Medicine

International Journal of Health Geographics

Malaria Journal

PLoS One

Rwanda Medical Journal

Sustainable Cities and Society

Wellcome Open Research

Scholarships

2015 – 2019 Economic and Social Research Council, Doctoral Training Centre grant, University of Southampton (full tuition + £17,553/year stipend)

2009 – 2011 Charles Downer Scholarship, Harvard University (\$25,000/year)

Honors

2018 PGR Social Impact Prize, Social Impact Lab, University of Southampton

2011 Best Thesis Award, Department of Global Health and Population, Harvard School of Public Health

2011 Garreth Green Award for Excellence in Public Health Practice, Harvard School of Public Health

2008 Distinguished Scholar Award, George Washington University

2008 Golden Key International Honour Society, George Washington University

2008 Phi Beta Kappa, George Washington University

1999 Page, United States Senate, Senator Patrick Leahy's office

1997 Page, Vermont State House, Representative Robert Rusten's office

Volunteer

2020 – present Board member, Community Mappers, Kibera Nairobi Kenya

2006 – 2009 Treasurer, Arlington Green Party, Arlington VA USA

2003 – 2004 AmeriCorps Health Worker, PCC Community Health Center, Chicago IL USA

2001 – 2002 HIV/AIDS Coordinator, Ajuda de Desenvolvimento de Povo para Povo, Benguela Angola

1998 – 2001 Emergency Medical Technician, Deerfield Valley Rescue, Wilmington VT USA