Alexandru CERNAT

Associate professor at the University of Manchester

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Education

Jan 2016	PhD in Survey Methodology	ISER, University of Essex
Jun 2011	MS in Social Policy Analysis	KU Leuven
Jun 2009	BA in Sociology	University of Bucharest

Employment

Aug 2020 – present	Associate professor in Social Statistics, University of Manchester.
Jul 2016 – Jul 2020	Assistant professor in Social Statistics, University of Manchester.
Oct 2015 – Jun 2016	<i>Research associate</i> Cathie Marsh Institute for Social Research, National Centre for Research Methods, University of Manchester.
Jul 2008 – Oct 2010	Research assistant for the Romanian Data Archive, University of Bucharest.

Research grants

2022 - 2023	PI: "Mobile Apps and Sensors in Surveys (MASS) Manchester" (£18,320) - Hallsworth Conference Fund, University of Manchester
2021 - 2023	COI: "Rigorous Training in Longitudinal Data Science (RADIANCE)" (£852,000) - <i>Medical Research Council</i>
2020 - 2022	COI: "Re-counting crime: New methods to improve the accuracy of estimates of crime" (£300,000) - ESRC - Secondary Data Initiative
2018 - 2019	PI: "Understanding mode switching and non-response patterns" (£40,000) - Under- standing Society Survey Methods Fellowship
2017 - 2019	PI: "Estimating and correcting for multiple types of measurement errors in longitudi- nal studies" (£107,000) - <i>National Center for Research Methods</i>
2018 - 2019	PI: "A simulation of the long term effects of an adaptive fieldwork design in longitudinal surveys " (£5,000) - <i>National Center for Research Methods</i>
2018 - 2019	PI: "Development of Sage Research Methods Foundations encyclopaedia" (£5,000) - <i>Sage publishing</i>

Publications

Books

- Cernat, A. (2023). Longitudinal Data Analysis Using R. Leanpub.
- Cernat, A., & Sakshaug, J. W. (Eds.). (2021). Measurement error in longitudinal data. Oxford University Press.
- Atkinson, P., Delamont, S., Cernat, A., Sakshaug, J. W., & Williams, R. W. (Eds.). (2021). Sage Research Methods Foundations. Sage Publications.

Papers in peer-reviewed journals

- 1. Cernat, A. & Oberski, D. (2022) Estimating Measurement Error in Longitudinal Data using the Longitudinal MultiTrait MultiError Approach. *Structural Equational Modeling Journal*. (6.181)
- 2. Cernat, A. & Sakshaug, W. J. (2022). The Impact of Mixing Survey Modes on Estimates of Change: A Quasi-Experimental Study. *Journal of Survey Statistics and Methodology*. (IF: 2.446)
- 3. Cernat, A., Sakshaug, W. J., Christmann , P. & Gummer, T. (2022). The Impact of Survey Mode Design and Questionnaire Length on Measurement Quality. *Sociological Methods & Research*. (IF 6.677)
- Pina-Sanchez, J., Buil-Gil, D., Brunton-Smith, I. & Cernat, A. (2022). The Impact of Measurement Error in Regression Models Using Police Recorded Crime Rates. *Journal of Quantitative Criminology*. (IF: 4.33)
- Keusch, F., Bach, R. & Cernat, A. (2022). Reactivity in measuring sensitive online behavior. *Internet Research*. (IF: 6.35)
- Chen., Z., Cernat, A. & Shlomo, N., (2022). Predicting Web Survey Breakoffs Using Machine Learning Models. Social Science Computer Review. (IF: 4.418)
- Cernat, A. & Toepoel, V. (2022) How do social and economic status impact measurement error? International Journal of Social Research Methodology. (IF: 3.468)
- Einarsson, H., Sakshaug, J. W., Cernat, A., Cornesse, C. & Blom, A. G. (2022) Measurement Equivalence in Probability and Nonprobability Online Panels. *International Journal of Market Research*. (IF: 2.513)
- Buil-Gil, D., Brunton-Smith, I., Pina-Sanchez, J. & Cernat, A. (2022). Comparing Measurements of Violent Crime in Local Communities: A Case Study in Islington, London. *Police Practice and Research*. (IF: 1.351)
- 10. Chen, Z., Cernat, A., Shlomo, N. & Eckman, S. (2022) Impact of question topics and filter question formats on web-survey breakoffs. *International Journal of Market Research*. (IF: 2.513)
- 11. Cernat, A., Buil-Gil, D., Brunton-Smith, I., Pina-Sanchez, J., & Murria-Sangenis, M. (2021). Estimating crime in: Moving beyond residence location. *Crime & Delinquency*. (IF: 3.776)
- 12. Watson, N. & Cernat, A. (2021). Simulating the consequences of adaptive survey design in two household panel studies. *Journal of Survey Statistics and Methodology*. (IF: 2.446)

- King, K., Allum, N., Stoneman, P., & Cernat, A. (2021). Estimating measurement equivalence of the 12-item General Health Questionnaire across ethnic groups in the UK. *Psychological Medicine*, 1-9. (IF: 7.723)
- 14. Sakshaug, J. W., **Cernat, A.**, Silverwood, J. R., Calderwood, L., & Ploubidis, B. G. (2021). Measurement Equivalence in Sequential Mixed-Mode Surveys. *Survey Research Methods*. (IF: 2.806)
- 15. Einarsson, H., Cernat, A. & Shlomo, N. (2021). Reducing Respondent Burden with Efficient Survey Invitation Design. *Survey Research Methods*. (IF: 2.806)
- 16. Cernat, A. & Sakshaug, J. W. (2021). Understanding the patterns of mode switching in longitudinal studies. *Survey Research Methods*. (IF: 2.806)
- 17. Cernat, A. & Oberski, L. D. (2021). Estimating stochastic survey response errors using the multitraitmultierror model. *Royal Statistical Society Journal A*. (IF: 2.483)
- Cernat, A. & Sakshaug, J. W. (2021). Interviewer effects in biosocial survey measurements. *Field Methods*. (IF: 1.413)
- 19. Cernat, A. & Vandenplas, C. (2020). An evaluation of mixture Confirmatory Factor Analysis for detecting social desirability Bias. *Journal of Survey Statistics and Methodology*. (IF: 2.446)
- 20. Cernat, A. & Keusch, F. (2020). Do surveys change behaviour? Insights from digital trace data. *International Journal of Social Research Methodology*. (IF: 3.468)
- Cernat, A., Sakshaug, J. W., Chandola, T., Nazroo, J., & Shlomo, N. (2020). Nurse effects on nonresponse in survey-based biomeasures. *International Journal of Social Research Methodology*, 0(0), 1–14. (IF: 3.468)
- 22. Cernat, A., & Sakshaug, J. (2020). The impact of nurse continuity on biosocial Survey Participation. *Survey Methods: Insights from the Field (SMIF)*.
- 23. Cernat, A., & Revilla, M. (2020). Moving from face-to-face to a web panel: impacts on measurement quality. *Journal of Survey Statistics and Methodology*. (IF: 2.446)
- 24. **Cernat, A.**, & Sakshaug, J. (2020). Nurse effects on measurement error in household biosocial surveys. *BMC Medical Research Methodology*, 20(1), 45. (IF: 4.615)
- 25. Cernat, A., & Sakshaug, J. (2020). The impact of mixed modes on multiple types of measurement error. *Survey Research Methods*, 14(1), 79–91. (IF: 2.806)
- 26. Antoun, C. & Cernat, A. (2019). Factors affecting response times: A comparative analysis of smartphone and PC Web surveys. *Social Science Computer Review*. (IF: 4.418)
- 27. Cernat, A., Sakshaug, J. & Jaramillo, C. J. (2018). The impact of interviewer effects on skin color assessment in a cross-national context. *International Journal of Public Opinion Research*. (IF 2.110)
- 28. Cernat, A. & Liu, M. (2018). Radio buttons in web surveys: searching for alternatives. *International Journal of Market Research*. (IF 2.513)
- 29. Sakshaug, J., **Cernat, A.** & Raghunathan, T.E. (2018) Do sequential mixed-mode surveys improve data quality? An experimental study. *Journal of Survey Statistics and Methodology*. (IF: 2.446)
- 30. Cernat, A. & Lynn, P. (2017) The role of email addresses and email contact in encouraging web response in a mixed mode design. *Field Methods*. (IF: 1.413)
- Liu, M., & Cernat, A. (2016). Item-by-item versus matrix questions a web survey experiment. Social Science Computer Review. (IF: 4.418)

- 32. Cernat, A., Couper, M. & Ofstedal, M.B. (2016). Estimation of mode differences using measurement models. *Journal of Survey Statistics and Methodology*. (IF: 2.446)
- 33. Cernat, A. (2015). Impact of mode design on measurement errors and estimates of individual change. *Survey Research Methods*, 9 (2), 83-99. ((IF: 2.806)
- 34. Cernat, A. (2015). The impact of mixing modes on reliability in longitudinal studies. *Sociological Methods & Research*, 44 (3), 427-457. (IF 6.677)
- 35. Barbulescu, M & Cernat, A. (2012). The impact of pictures on best-worst scaling in Web surveys. *International Review of Social Research*, 2(3), 79-92.

Book chapters

- Brunton-Smith, I., Buil-Gil, D., Pina-Sánchez, J., Cernat, A. & Moretti, A. (in press). Using synthetic crime data to understand patterns of police under-counting at the local level. In Huey, L. & Buil-Gil, D. (eds.) *The Crime Data Handbook*. Bristol: Policy Press
- Cernat, A., Lugtig, P., Uhrig, S. N., & Watson, N. (2021). Assessing and relaxing assumptions in quasi-simplex models. In A. Cernat & J. W. Sakshaug (Eds.), *Measurement Error in Longitudinal Data* (pp. 155–171). Oxford University Press.
- 3. Cernat, A. & Sakshaug, J. (2021) Estimating the measurement effects of mixed modes in longitudinal studies. Current practice and issues. In Lynn, P., et al. (Ed.), *Advances in Longitudinal Survey Methodology*. Wiley-Blackwell.
- Pashazadeh, F., Cernat, A. & Sakshaug, J. (2021) The effects of biological data collection in longitudinal surveys on subsequent wave cooperation. In Lynn, P., et al. (Ed.), Advances in Longitudinal Survey Methodology. Wiley-Blackwell.
- 5. Pashazadeh, F., **Cernat, A.** & Sakshaug, J. (2020) Investigating the Use of Nurse Paradata in Understanding Nonresponse to Biological Data Collection. In Olsen, K., et al. (Ed.), *Interviewers and Their Effects from a Total Survey Error Perspective*, CRC Press.
- 6. **Cernat, A.**, & Oberski, D. (2019). Extending the within experimental design. The Multi Trait Multi Error approach. In P. Lavrakas (Ed.), *Experimental Methods in Survey Research: Techniques that Combine Random Sampling with Random Assignment*. Wiley-Blackwell.

Working papers and reports

- 1. Cernat, A. & Keusch, F. (2022) Do surveys change behaviour? Evidence from digital trace data. *Significance*
- Cernat, A. & Sakshaug, J. W. (2021) Understanding the role of nurses and interviewers in biosocial surveys. *Significance*. https://doi.org/10.1111/1740-9713.01543.
- 3. Cernat, A., Sakshaug, J. W. & Castillo, J. (2019), Measurement error Skin colour and the role of the interviewer. *Significance*, 16: 10-11. doi:10.1111/j.1740-9713.2019.01293.x
- 4. Cernat, A., et al. (2016). Understanding Society Innovation Panel Wave 8: results from methodological experiments. *Understanding Society Working Paper Series*, (2016-02), 1–45.

- 5. Cernat, A. (2015). Using equivalence testing to disentangle selection and measurement in mixed modes surveys. *Understanding Society Working Paper Series*, (2015-01), 1–13.
- Al-Baghal, T., Bloom, A., Burton, J., Booker, C., Cernat, A., et al. (2015). Understanding Society Innovation Panel Wave 7: Results from Methodological Experiments. Understanding Society Working Paper Series, (2015-03), 1–62.
- 7. Tarek, A.B. & Cernat, A. (2015). A Methodological Critique of the Dignity in Dying Populus Poll of March 2015.
- 8. Vlasceanu, L. (ed.), Dusa, A. (ed.), Rughinis, A. (ed.) (2010) Science and Society. Interests and perceptions of the public regarding scientific research and scientific results. Bucharest.
- Dumitru, D. and Cernat, A. (2010) 'National survey of parents in Romania. In School Governance and Social Inclusion Involvement of Parents'. *South East Europe Countries Accounts of the Parents' Views* (pp. 65-69), University of Ljubljana, Faculty of Education, Center for Educational Policy.
- Cernat, A. et al. (2012) 'Romania country report'. In G. Extra and K. Yagmur (Eds.) Language Rich Europe. Trends in Policies and Practices for Multilingualism in Europe (pp. 187-193). Cambridge University Press.
- 11. Stoica, A., Wamsiedel, A., Cernat, A. and Gheorghiu, I. (2012) *Inequality and Inequality: Teacher Absenteeism, Romani Pupils, and Primary Schools in Romania,* Roma Education Fund, Budapest.

Presentations

Invited talks

- 1. City University/ESS/NatCen (16 Mar. 2021): Transition to multimode data collection: understanding the measurement dimension
- 2. Australian National University (13 Dec 2019): Estimating stochastic survey response errors using the multitrait-multierror model.
- 3. Swinburne University (10 Dec 2019): Introduction to measurement error in the social sciences.
- 4. University of Mannheim (23 Sep 2019): Measurement error in non-probability panels, a comparison.
- 5. Interviewer Workshop, University of Nebraska (27 Feb 2019): *Investigating the Use of Nurse Paradata in Understanding Nonresponse to Biological Data Collection*.
- 6. Utrecht university, Statistics and Methodology department (18 Feb 2019): Nurse effects on Nunresponse in Survey Based Bio-Measures
- 7. The Munich Center for the Economics of Aging, Max Planck Institute for Social Law and Social Policy (13 Feb 2019): *Nurse effects on Nonresponse in Survey Based Bio-Measures*.
- 8. Center for Big Data Research in Health Seminar, University of New South Wales (25 Jun 2018): Understanding Measurement Error in Survey Data.
- 9. Center for Health Economics Seminar, Monash University (6 Jun 2018): *Estimating stochastic survey response errors using the Multitrait-Multierror model.*
- 10. University Utrecht Methods seminar (19 Feb 2018): *Estimating systematic response errors using the multitrait-multierror model.*

- 11. University College London QSS seminar (16 Nov 2017): Implementing mixed modes in longitudinal studies: opportunities and challenges.
- 12. NCRM Autumn School Manchester (2 Sep 2016): Statistical challenges of measuring longitudinal and lifecourse biomarker data.
- 13. NCRM Methods Festival Bath (5 Jul 2016): *Missing Data in Bio-social Research: Issues, Practice and Recommendations.*
- 14. Keynote for North-West DTC Symposium Manchester (3 Nov 2015): From PISA to captain Picard: the impact of measurement error in the social sciences.

Teaching experience

Term courses

- Autumn 2016: SOST20031 Research Design and Statistical Inference (undergraduate);
- Spring 2017: SOST70292 Multilevel modeling (MSc convener);
- Spring 2017: SOST70022 Longitudinal Data Analysis (MSc convener);
- Autumn 2017: SOST70151 Statistical foundations (MSc);
- Spring 2018: SOST70022 Longitudinal Data Analysis (MSc convener);
- Summer 2018: SURV665 Real World Data Management (online course for the MSc: International Program in Survey and Data Science, University of Mannheim & University of Maryland);
- Summer 2019: SURV665 Real World Data Management (online course for the MSc: International Program in Survey and Data Science, University of Mannheim & University of Maryland);
- Spring 2020: SOST70022 Longitudinal Data Analysis (MSc convener);
- Spring 2020: DATA7854 Applied Data Science (MSc);
- Autumn 2020: SOST70151 Statistical foundations (MSc);
- Spring 2020: SOST70022 Longitudinal Data Analysis (MSc convener);
- Spring 2020: DATA7854 Applied Data Science (MSc);
- Spring 2022: SOST70022 Longitudinal Data Analysis (MSc convener);
- Spring 2022: DATA7854 Applied Data Science (MSc);
- Spring 2023: SOST70022 Longitudinal Data Analysis (MSc convener);

Short courses

I regularly teach for a number of different institutions such as: International Program in Survey and Data Science, Social Research Association, National Centre for Research Methods, GESIS Summer School, Methods@Manchester, Essex Summer School, American Association of Public Opinion Research, World Association of Public Opinion Research, African Institute of Mathematical Sciences.

I mostly teach on the following topics:

- introduction to statistics
- longitudinal data analysis
- latent variable modeling
- multilevel models
- programming with R
- reproducible research practices
- survey methodology

PhD Students

- Georgia Chatzi, University of Manchester Life course socioeconomic position effects on inflammatory biomarkers in English Longitudinal Study of Ageing: compensating for missing data graduated.
- Sofia Eleftheriadou Collaboration problem solving and Science teaching and learning graduated.
- Zeming Chan, University of Manchester *Using proactive approaches in preventing web survey break-offs* graduated.
- Hafsteinn Birgir Einarsson, University of Manchester Improving response rates and data quality through optimised survey invitation letters graduated.
- Matthew Cant, University of Manchester Understanding the links between individual socioeconomic status, area deprivation and mental health among older people.

Teaching positions

- Proposer and director of the "Data Analytics and Social Statistics" distance learning MSc (2021-present).
- Pathway lead for Social Statistic for the Masters in Data Science (2018-2022).
- Pathways lead for the Longitudinal Data stream of the NWSSDTP (2018).

Other consulting and research

Nov 2022 - Jan 2023 Consultant for NatCen;

Nov 2019 - Aug 2020Consultant for ProUnlimited @Facebook;

- 2017 2018 *Consultant* for IPSOS MORI and the European Agency for Fundamental Rights developing new European mixed mode survey on discrimination and human rights;
- Feb 2016 *Consultant* for a new European survey on human rights at the European Agency for Fundamental Rights;

May–Sep 2015	<i>Researcher</i> for Understanding Society at the Institute for Social and Economic Research, University of Essex.
Apr–Jun 2014	Researcher for the Student Satisfaction Survey at the University of Essex.
2012–2013	<i>Research assistant</i> at the 'Mapping the Cultural Authority of Science across Europe and India (MACAS)' project at London School of Economics;
Sep–Dec 2011	Consultant for RomaniCRISS;
Jun–Jul 2011	Consultant in the 'Language Rich Europe' project at Centrul Educatia 2000;
Aug 2010– Feb 2011	<i>Research assistant</i> in the 'PROMETEUS' project at The Research Institute of Quality of Life, Romanian Academy;
Mar–Nov 2010	<i>Consultant</i> in the 'Advancing Educational Inclusion and Quality in South-East Europe' project at the Centrul Educatia 2000;
Jun–Jul 2010	Consultant for RomaniCRISS;

Other appointments and professional activities

- Since 2022 Chair of the Social Statistics Committee at the Royal Statistics Society.
- Since 2020 Associate Editor for Journal of Royal Statistical Society Journal A.
- 2017-2022 Associate Editor for Survey Research Methods Journal.
- 2017-2019 Conference vice-chair European Survey Research Association.
- 2015-2020 Part of the European Survey Research Association steering committee.
- 2018-2021 Vice-chair of the Social Statistics committee at Royal Statistical Society.
- Since 2017 Part of the Social Statistics committee at Royal Statistical Society.
- **Referee** for: Sociological Methods & Research, Journal of the Royal Statistical Society: Series A, Journal of Survey Statistics and Methodology, Survey Research Methods, International journal of Public Opinion research, methods, data, analyses, BioMed Central Research Notes, Journal of Medical Internet Research.
- Teaching credential: Associate Fellow of the Higher Education Academy.
- 2017-2018 Head of the Survey Research Group at the Cathie Marsh Institute, University of Manchester.
- 2015 Deputy convener of the Methods Research Group, ISER, University of Essex.

Academic visits

- Oct-Nov 2019 University of Melbourne.
- Sep 2019 University of Mannheim (SFB founding).

- Sep 2019 Institute of Employment, Nuremberg, Germany (Institute of Employment funding).
- Feb 2019 University of Utrecht Statistics and Methodology Department (NCRM funding).
- Jan 2019 Institute of Employment, Nuremberg, Germany (Institute of Employment funding).
- Oct-Nov 2018 University of Utrecht Statistics and Methodology Department (NCRM funding).
- May-June 2018 Visiting researcher at the University of Melbourne (NCRM funding).
- **Sep–Dec 2014** Visiting researcher at the University of Michigan Program in Survey Methodology (ESRC funding).
- Jul 2012 Visiting researcher at GESIS Eurolab (Eurolab funding).

Computer skills

• Statistical packages: R, Mplus, Latent Gold, STATA, SPSS, AMOS;

Last update: February 17, 2023