Jolien Cremers

Applied statistician bridging the gap between mathematical statistics and applied researchers by bringing new methods to their (potential) users.

Current Position

08/2019 **Postdoctoral Researcher**, *University of Copenhagen / Danmarks Statistik*, Copenhagen.
Research aimed at modelling life trajectories in longitudinal data from the Danish population registries.

Experience

02/2019– **Research Assistant**, *University of Copenhagen / Danmarks Statistik*, 07/2019 Copenhagen.
Research aimed at modelling life trajectories in longitudinal data from the Danish population registries.

09/2014– **PhD Candidate**, *Utrecht University*, Utrecht.
01/2019 Title: One direction? Modelling Circular Data in the Social Sciences using the Embedding Approach.
Promotor: Prof. dr. I. Klugkist
Co-promotor: Prof. dr. H. Hoijtink
Date of defense: 24-05-2019

Research aimed at developing methods for circular data in the social sciences. Tasks include making ideas work in theory (statistical modelling) as well as in practice (developing software, applying methods to real data), speaking at major international conferences, publishing journal articles in peer-reviewed journals, collaborating with applied researchers, giving consultation on statistical methods, teaching and developing methods and statistics courses for (under) graduate students and the supervision of thesis students and research assistants.

09/2018– **Visiting Scholar**, *University of Copenhagen, Copenhagen Centre for Social* 01/2019 *Data Science*, Copenhagen.

10/2016– **Junior Policy Officer**, *NWO (The Netherlands Organization for Scientific* 03/2017 *Research)*, The Hague.
Tasks included finding reviewers for grant proposals and assisting at the organisation of committee meetings for the evaluation of grant proposals.

2013-2014 **Research & Teaching Assistant**, *Methodology and Statistics department of Utrecht University*, Utrecht.
Tasks included teaching a summerschool in multilevel modelling, assisting in the analysis of data from Utrecht University's matching project (large dataset of prospective students of Utrecht University) and developing materials for a research master course in multivariate statistics.

Education

2012–2014 **MSc.**, *Utrecht University*, Utrecht, *4.0/4.0 GPA*.
Methodology and Statistics of Behavioral and Social Sciences

2009–2012 **BA**, *University College Roosevelt (Utrecht University)*, Middelburg, *3.92/4.0 GPA, Summa Cum Laude*.
Liberal Arts and Sciences,
Major: Social Science, Tracks: Political Science, Global Studies
Minor: Methods and Statistics

Publications

- van der Lans, R.M., Cremers, J., Klugkist, I., & Zwart, R. (2020). How you say what you say: Teachers' interpersonal relations and their instructional quality. *Studies in Educational Evaluation*, doi:10.1016/j.stueduc.2020.100902.
- Cremers, J., Pennings, H.J.M & Ley, C. (2019). Regression Models for Cylindrical Data in Psychology. *Multivariate Behavioral Analysis*, doi:10.1080/00273171.2019.1693332.
- Cremers, J., Pennings, H.J.M., Mainhard, M.T. & Klugkist, I. (2019). Circular Modelling of Circumplex Measurements for Interpersonal Behavior. *Assessment*, doi:10.1177/1073191119858407.
- Cremers, J. & Klugkist, I. (2018) One direction? A tutorial for circular data with examples in cognitive psychology. *Frontiers in Psychology: Cognitive Science*, doi: 10.3389/fpsyg.201802040.
- Cremers, J., Mainhard, M.T. & Klugkist, I. (2018). Assessing a Bayesian Embedding Approach to Circular Regression Models. *Methodology*, *14*, 69-81, doi: 10.1027/1614-2241/a000147.
- Cremers, J. , Mulder, K.T. & Klugkist, I. (2018). Circular Interpretation of Regression Coefficients. *British Journal of Mathematical and Statistical Psychology*, *71*(1), 75-95, doi: 10.1111/bmsp.12108.
- Klugkist, I., Cremers, J. & Mulder, K.T. (2018). Bayesian analysis of circular data in social and behavioral sciences. In Ley, C & Verdebout, T. *Applied Directional Statistics: Modern Methods and Case Studies* (pp. 156 - 199). Chapman & Hall.
- Marchiori, D.R., Evers, C., Junghans, A.F., Cremers, J.& De Ridder, D.T.D. (2018). Citizen approval of nudging interventions promoting healthy eating: The role of intrusiveness and trustworthiness. *BMC Public Health*, 18:1182, doi: 10.1186/s12889-018-6097-y.
- Ketelaar, J., Cremers, J., Mulder, K.T. & Klugkist, I. (2015). Statistiek op de Cirkel. *STAtOR*, *3*, p. 24-27.

Working papers

- Cremers, J. waspr: an R package for computing Wasserstein barycenters of subset posteriors.
- Cremers, J., Mortensen, L.H. & Ekstrøm, C.T. (submitted). A Joint Model for Longitudinal and Time-to-Event Data in Life Course Research: Employment Status and Time to Retirement. *Sociological Methods & Research.*
- Cremers, J. & Hernandez-Stumpfhauser, D. Indicators for effects on mean and variance in projected normal regression models for a circular outcome.
- Cremers, J., Jansen, I., &, Klugkist, I.Bayesian Analysis of Circular Data Using the Wrapping Approach.
- Mulder, K., Cremers, J., & Klugkist, I. circbayes: An R Package for Bayesian Circular Statistics

Software

- *bpnreg: Bayesian Projected Normal Regression Models for Circular Data*, R-package available on CRAN.

Presentations

Conference Presentations

- *One Direction? On the Modelling of Circular Data Using Projected Normal Distributions.*, Joint Statistical Meetings, Vancouver, July 28 - August 2, 2018
- *One direction? On the modelling of circular data in psychology.*, Interational Meeting of the Psychometric Society, July 9-13, 2018
- *A Bayesian approach to circular regression type models.*, ISBA World Meeting, Edinburgh, June 25-29, 2018
- *One Direction? On the Modelling of Circular Data in Psychology.*, IOPS winter conference, Tilburg, December 14-15, 2017
- *Circular Interpretation of Regression Coefficients*, 9th International Conference of the ERCIM WG on Computational and Methodological Statistics, Sevilla, December 9-11 2016
- *Circular Interpretation of Projected Normal Regression Coefficients*, workshop on Circular Data Modelling, Utrecht, November 24-25 2016
- *Bayesian Longitudinal Modelling of Circular Data: Application and Interpretation*, 10th International Multilevel Conference, Utrecht, April 9-10 2015

Other Presentations

- *A Joint Model for Longitudinal and Time-to-Event Data in Life Course Research: Employment Status and Time to Retirement*, presented at the CPop research seminar, University of Southern Denmark, Odense, Febuary 28 2020
- *A Joint Model for Longitudinal and Time-to-Event Data in Life Course Research: Employment Status and Time to Retirement*, presented at the research seminar of the Section for Social Medicine, University of Copenhagen, October 10 2019

- *Circular Data in Social and Behavioural Sciences*, presented at the monthy 'power-snack' for researchers at the faculty of social and behavioural sciences, Utrecht University, May 3 2018
- *Circular Methods for Circumplex data (and other applications in psychology)*, presented at the weekly research meeting of the experimental psychopathology group, University of Groningen, May 2 2018 (part of a visit to Dr. Marije aan het Rot)

Posters

- *Circular Modelling of Circumplex Measurements for Teacher Behavior*, Advances in Directional Statistics (ADISTA17), Rome, June 8-9 2017
- *Evaluating Hypotheses and Fit in a Bayesian Circular Regression Model*, ISBA World Meeting, Sardinia, June 13-17 2016
- *Bayesian Longitudinal Modelling of Circular Data*, IOPS summer conference, Utrecht, June 18-19 2015
- *Circular Modelling of Teacher Behavior: Application and Interpretation of a Bayesian Longitudinal Model*, 11th International Workshop on Objective Bayes Methodology, Valencia, June 1-5 2015
- *Assessing a Bayesian Embedding Approach to Circular Regression Models*, BAYSM '14, Vienna, September 18-19 2014

Grants

- Travel Grant from the US National Science Foundation to attend the 11th International Workshop on Objective Bayes Methodology ($ 500)
- Travel support grant for the participation at the ISBA World Meeting 2016, funded bij Google ($ 400)

Research visits

- Prof. dr. Christophe Ley, Department of Applied Mathematics, Computer Science and Statistics, Ghent University, 15-26 January & 28 may - 2 June 2018
- Prof. dr. David Dreyer Lassen, Copenhagen Centre for Social Science Data Science (SODAS), University of Copenhagen, September 2018 - January 2019

Teaching

- *Life Course Influences on Health and Aging: Epidemiology and Theory*, 30 March 2020, MSc level, guest lecture on the use of register data in life course research
- *Basic Statistics*, 2020, PhD course, computer practicals
- *Statistical Programming in R*, Banja Luka, 9-13 December 2019, introduction into statistical programming in R for the statistical bureaus and central bank of Bosnia-Herzegovina
- *Statistical cafe*, 2019 – present, consultations for MSc. students and PhD candidates of the department of Public health

- *Methods and Statistics Consultation Shop*, 2014 – 2019, consultations for BSc. and MSc. students and PhD candidates of the faculty of social sciences
- *Multivariate Methods*, 2016 – 2018, MSc level, course development & lectures
- *Statistical Programming with R (part of Data Science track)*, 2015 – 2017, summer school course, MSc.+ level, lectures & computer practicals
- *Master thesis supervision*, 2016 – 2017, supervision for the MSc. thesis project of Inge Jansen
- *MTS1*, 2014 – 2016, introductory methods and statistics course, 1st year BSc. level, seminars/study groups and computer practicals
- *Multilevel Modeling*, 2014 – 2016, MSc. level, lectures & computer practicals
- *Course in Multilevel Modelling for the Dutch-Flemish Postgraduate School 'Experimental Psychopathology' (EPP)*, 2015, computer practicals
- *Introduction to Multilevel Analysis*, 2013, summerschool computer practicals

Courses

- *GGP Data Visualization Workshop*, INED – Institut national d'études démographiques, Paris, Oct 22-23 2019
- *Social Data Science*, Summerschool 2018, University of Copenhagen, Aug 13 - Sept 1 2018
- *Bayesian Clinical Trials*, Summerschool on Advanced Bayesian Methods, KU Leuven, Sept 14-15 2017
- *Meta-Analysis*, IOPS PhD student course, 1 EC, June 27-29 2016
- *Optimization and Numerical Methods*, IOPS PhD student course, 2 EC, November 18-19 2015
- *Advising on Research Methods*, IOPS PhD student course, 3 EC, March 2015
- *What is Psychometrics?*, IOPS PhD student course, 2 EC, February 17-19 2015
- *The Middle East in Global Politics*, London School of Economics (LSE) summerschool, 7.5 EC, July 2011

Languages

- Dutch, English (native/near native)
- Danish, Norwegian (working proficiency)
- German (limited working proficiency)
- Spanish, French (elementary proficiency)