

### Personal data

Born: August 5, 1964.  
Family: Married, 3 children;  
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### Education

1991 Master Degree in Engineering,  
Technical University of Denmark  
1995 Ph.D.,  
Faculty of Health, University of Copenhagen

### Current and previous positions held

1987-88 University of Pennsylvania, USA.  
1989-90 CNES (Centre National d'Etudes Spatiales), France.  
1991-94 Research assistant, Department of Biostatistics, Copenhagen University.  
1994-97 PhD student, Department of Biostatistics, Copenhagen University.  
1997-01 Assistant Professor, Department of Biostatistics and Dept. of  
Growth and Reproduction  
2001- Associate Professor, Department of Biostatistics and Dept. of  
Growth and Reproduction

### Research bibliometry

H-index: 59 (Google Scholar, Oct 27, 2019)

Peer-reviewed publications: 154

Times cited: 11649

[https://biostat.ku.dk/staff\\_/?pure=en%2Fpersons%2Fjoergen-holm-petersen\(33c1c5b2-2e1e-4259-b4d7-04657a2bdb9b\)%2Fpublications.html](https://biostat.ku.dk/staff_/?pure=en%2Fpersons%2Fjoergen-holm-petersen(33c1c5b2-2e1e-4259-b4d7-04657a2bdb9b)%2Fpublications.html)

### Supervision of students

Supervisor of 5 Ph.D. students, many master and bachelor students.

### Scientific focus areas and research collaborations

Keyword: risk assessment, inter-rater agreement, reference curves, latent variable models, variance components models, conditional inference.

My focus has been statistical analysis of data related to scientific projects focusing on research

within genetic, epigenetic, life style as well as environmental factors and their association to hormone-dependent disease traits. I have contributed actively with statistical expertise related to the scientific projects within EDMarC Endocrine Disruption of Male Reproduction and Child Health <http://www.edmarc.net/> located at the Department of Growth and Reproduction at Rigshospitalet, Region Hovedstaden. I have also contributed with statistical expertise to clinicians, in which we analysed diagnostic markers for reduced fertility and male reproductive levels of which we investigated secular trends in relation to lifestyle factors.

I have also developed non-parametric statistical methods for detection of anomalies in the endogenous hormone systems, especially the hypothalamic-pituitary-gonadal hormone axis, where the problem with measurements under a detection limit needs to be addressed. These methodological issues also triggered and inspired the development of methods for analyzing time-to-pregnancy (TTP) where long TTP is considered an indicator of reduced fertility. The analysis of this type of data needs to address right censoring, left truncation and correlation from multiple births from the same couple.

I have participated in several national and international (nationally and EU funded, cf. section D. Additional information) research projects on endocrine disruption and its effects on semen quality. In addition, I have had an ongoing collaboration with Professor Anders Juul and Dr. Anna- Maria Andersson for several years, which has resulted in numerous high impact publications. In the proposed project, I will lend statistical expertise and implement all statistical analyses in close collaboration with Brent Coull, Harvard, T.H. Chan. I will also participate in the preparation of all peer-reviewed publications.

### **Professional memberships and other experiences**

2007-2008: Chairman of The Danish Society for Theoretical Statistics (vice chair 2004-2007)  
Since 2005: Associate Editor Biometrical Journal, Member of American Statistical Association, Member of Danish Society of Theoretical Statistics

### **Miscellaneous**

Referee for many both statistical and medical journals. Associate editor of Biometrical Journal since 2007. Vicepresident (2004-7) and president (2008) of Danish Society of Theoretical Statistics. Taught and organized several pre- and postgraduate courses and international workshops. Evaluated dissertations.

### **Selected Publications related to endocrine-disrupting chemicals since 2010**

1. Kristensen DM, Hass U, Lesné L, Lottrup G, Jacobsen PR, Desdoits-Lethimonier C, Boberg J, Petersen JH, Toppari J, Jensen TK, Brunak S, Skakkebaek NE, Nellesmann C, Main KM, Jégou B, Leffers H. Intrauterine exposure to mild analgesics is a risk factor for development of male reproductive disorders in human and rat. *Hum Reprod* 2011; 26(1): 235-244
2. Assens M, Frederiksen H, Petersen JH, Larsen T, Skakkebaek NE, Juul A, Andersson AM, Main KM: Variations in repeated serum concentrations of UV filters, phthalates, phenols and parabens during pregnancy. *Envir Int* 2019; 123: 318-324

3. Rehfeld A, DL Egeberg, Kristian Almstrup, JH Petersen, Steen Dissing, and Niels Erik Skakkebak. Edc impact: Chemical uv fillters can ect human sperm function in a progesterone-like manner. *Endocrine connections*, 7(1):16{25, 2018.
4. Priskorn L, Jørgen H Petersen, Niels Jørgensen, Henriette B Kyhl, Marianne S Andersen, Katharina M Main, Anna-Maria Andersson, Niels E Skakkebaek, and Tina K Jensen. Anogenital distance as a phenotypic signature through infancy. *Pediatric research*, 83(3):573, 2018.
5. Krause M, Hanne Frederiksen, Karin Sundberg, Finn Stener Jørgensen, Lisa Neerup Jensen, Pernille Nørgaard, Connie Jørgensen, Pia Ertberg, JH Petersen, Ulla Feldt-Rasmussen, et al. Maternal exposure to uv filters: associations with maternal thyroid hormones, igf-i/igfbp3 and birth outcomes. *Endocrine connections*, 7(2):334{346, 2018.
6. Zhang Sand Jørgen Holm Petersen. Quantifying rater variation for ordinal data using a rating scale model. *Statistics in medicine*, 37(14):2223 {2237, 2018.
7. Nordstrøm Joensen U, Niels Jørgensen, Jacob P Thyssen, Pal Bela Szecsi, Steen Stender, Jørgen Holm Petersen, Anna-Maria Andersson, and Hanne Frederiksen. Urinary excretion of phenols, parabens and benzophenones in young men: Associations to reproductive hormones and semen quality are modied by mutations in the laggrin gene. *Environment international*, 121:365{374, 2018.
8. Egeberg Palme DL, Trine Holm Johannsen, Jørgen Holm Petersen, Niels E Skakkebak, Anders Juul, Niels Jrgensen, and Kristian Almstrup. Validation of image cytometry for sperm concentration measurement: Comparison with manual counting of 4010 human semen samples. *Clinica Chimica Acta*, 468:114{119, 2017.
9. Joensen UN, Niels Jørgensen, Jacob P Thyssen, Jørgen Holm Petersen, Pal B Szecsi, Steen Stender, Anne-Maria Andersson, Niels E Skakkebak, and Hanne Frederiksen. Exposure to phenols, parabens and uv filters: Associations with loss-of-function mutations in the laggrin gene in men from the general population. *Environment international*, 105:105{111, 2017.
10. MG Mieritz, A Juul, LL Raket, CP Hagen, JE Nielsen, ML M Talman, JH Petersen, SH Sommer, KM Main, N Jørgensen, et al. The development of pubertal gynaecomastia and the association to endogenous hormones, growth, and body composition. *Birth Defects Research*, 109(9), 2017.
11. Petersen JH. Semi-parametric estimation of random effects in a logistic regression model using conditional inference. *Statistics in medicine*, 35(1):41 {52, 2016.
12. Lawaetz JG, Casper P Hagen, Mikkel Grunnet Mieritz, Martin Blomberg Jensen, Jørgen Holm Petersen, and Anders Juul. Evaluation of 451 danish boys with delayed puberty: diagnostic use of a new puberty nomogram and effects of oral testosterone therapy. *The Journal of Clinical Endocrinology & Metabolism*, 100(4):1376{1385, 2015.

13. Lassen TH, Hanne Frederiksen, Tina Kold Jensen, Jørgen Holm Petersen, Ulla N Joensen, Katharina M Main, Niels E Skakkebaek, Anders Juul, Niels Jørgensen, and Anna-Maria Andersson. Urinary bisphenol a levels in young men: association with reproductive hormones and semen quality. *Environmental health perspectives*, 122(5):478{484, 2014.
14. Lassen TH, Hanne Frederiksen, Tina Kold Jensen, Jørgen Holm Petersen, Katharina M Main, Niels E Skakkebæk, Niels Jørgensen, Selma Kløve Kranich, and Anna-Maria Andersson. Temporal variability in urinary excretion of bisphenol a and seven other phenols in spot, morning, and 24-h urine samples. *Environmental research*, 126:164{170, 2013.
15. Jørgensen N, Ulla Nordstrøm Joensen, Tina Kold Jensen, Martin Blomberg Jensen, Kristian Almstrup, Inge Ahlmann Olesen, Anders Juul, Anna-Maria Andersson, Elisabeth Carlsen, Jørgen Holm Petersen, et al. Human semen quality in the new millennium: a prospective cross-sectional population-based study of 4867 men. *BMJ open*, 2(4):e000990, 2012.
16. Frederiksen H, K Sørensen, A Mouritsen, L Aksglaede, CP Hagen, Jørgen Holm Petersen, NE Skakkebaek, A-M Andersson, and A Juul. High urinary phthalate concentration associated with delayed pubarche in girls. *International journal of andrology*, 35(3):216{226, 2012.
17. Frederiksen H, Selma K Kranich, Niels Jørgensen, Olivier Taboureau, Jørgen H Petersen, and Anna-Maria Andersson. Temporal variability in urinary phthalate metabolite excretion based on spot, morning, and 24-h urine samples: considerations for epidemiological studies. *Environmental science & technology*, 47(2):958{967, 2012.
18. Jensen HK, Flemming Konradsen, Erik Jørs, Jørgen Holm Petersen, and Anders Dalsgaard. Pesticide use and self-reported symptoms of acute pesticide poisoning among aquatic farmers in phnompenh, cambodia. *Journal of toxicology*, 2011, 2011.
19. Juul A, Hanne Frederiksen, Mikkel Grunnet Mieritz, Anna-Maria Andersson, Kaspar Sørensen, Lise Aksglæde, Annette Korsholm Mouritsen, Casper Hagen, Niels Erik Skakkebk, and Jørgen Holm Petersen. Undersøgelse af sammenhæng mellem phthalateksponering og tidspunkt for brystudvikling hos piger/gynækomasti hos drenge. Rapport til Miljøstyrelsen, 2011.