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Profile

Stijn Vansteelandt (born April 1, 1976; Ostend, Belgium) graduated as Master in Mathematics at Ghent University in 1998, and obtained a PhD in Mathematics (Statistics) in 2002 at the same university. After postdoctoral research at the Department of Biostatistics of the Harvard School of Public Health, he returned to Ghent University in 2004, where he is now Full Professor in the Department of Applied Mathematics, Computer Science and Statistics. He is furthermore Professor of Statistical Methodology in the Department of Medical Statistics at the London School of Hygiene and Tropical Medicine.

Stijn Vansteelandt is a leading expert in causal inference: a fast-growing field within statistics, which focuses on the development of statistical methods for inferring the causal effect of an exposure on an outcome from experimental and observational data under minimal and well-understood assumptions. He has authored over 150 peerreviewed publications in international journals on a variety of topics in biostatistics, epidemiology and medicine, such as the analysis of longitudinal and clustered data, missing data, mediation and moderation/interaction, instrumental variables, familybased genetic association studies, analysis of outcome-dependent samples and phylogenetic inference. He is Co-Editor of Biometrics, the leading flagship journal of the International Biometrics Society, and has previously served as Associate Editor for the journals Biometrics, Biostatistics, Epidemiology, Epidemiologic Methods and the Journal of Causal Inference. His recent research is primarily aimed at making causal inferences less vulnerable to the weaknesses (imprecision, finite-sample bias and susceptibility to model misspecification) of simple inverse probability weighted estimators that dominate causal inference research. He aims to realise this either by improving inverse probability weighted estimation (see his work on bias-reduced double-robust estimation) or by popularising and extending alternative estimation methods, such as g-estimation, that avoid inverse weighting (see his work on additive hazard models and g-estimation).

Experience

PROFESSOR OF STATISTICAL METHODOLOGY (20%); LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE, U.K. (20%); 03/2017 -

PROFESSOR OF STATISTICS (80%); GHENT UNIVERSITY, BELGIUM; 03/2017 -

PROFESSOR OF STATISTICS; GHENT UNIVERSITY, BELGIUM; 10/2012 - 02/2017

HONORARY PROFESSOR, LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE, U.K.; 6/2010 - PRESENT

ASSOCIATE PROFESSOR OF STATISTICS; GHENT UNIVERSITY, BELGIUM; 10/2010 - 9/2012

ASSISTANT PROFESSOR OF STATISTICS; GHENT UNIVERSITY, BELGIUM; 10/2004 - 9/2010

RESEARCH FELLOW OF THE HARVARD SCHOOL OF PUBLIC HEALTH, HARVARD UNIVERSITY, U.S.A.; 1/2003 - 5/2003

POSTDOCTORAL FELLOW OF THE FUND FOR SCIENTIFIC RESEARCH; GHENT UNIVERSITY, BELGIUM; 10/2002 - 9/2004

RESEARCH ASSISTANT OF THE FUND FOR SCIENTIFIC RESEARCH; GHENT UNIVERSITY, BELGIUM; 10/1998 - 9/2002

Education

Ghent University, Ghent, Belgium - Master of Mathematics, 1998

Ghent University, Ghent, Belgium - PhD in Mathematics, 2002

Supervisor: Prof. Dr. Els Goetghebeur.

Title of thesis: Sense and sensitivity in the causal analysis of incomplete data.

Membership of Editorial Boards

Associate Editor of Biometrics (2006-2012)

Associate Editor of Biostatistics (2010-2015)

Associate Editor of Epidemiological Methods (2011-2015)

Associate Editor of the Journal of Causal Inference (2011-2015)

Associate Editor of Epidemiology (2013-2015)

Co-Editor of Biometrics (2016-)

Awards

Winner of the ISCB Student Conference Awards (1999). Regression Models for Disease Prevalence with Diagnostic Tests on Pooled Serum Samples. 20th Annual Conference of the International Society for Clinical Biostatistics, Heidelberg, Germany.

Winner of the ASA Student Paper Competition (2000). The Imputation towards Directional Extremes (IDE) Algorithm for Analyzing Sensitivity to Incomplete Outcomes. Joint Statistical Meetings, Indianapolis, U.S.A.

Prijs Ontwikkelingssamenwerking 2001 (Development Co-operation Prize 2001, Belgium).

Winner of the Quetelet Prize 2001-2002 (for a most outstanding Doctoral Thesis in Statistics).

Publications in books

Vansteelandt, S. and Goetghebeur, E. (2005). Maximum likelihood estimation. In Encyclopaedic Companion to Medical Statistics (eds. Everitt, B. and Palmer, C. R.), Ar nold Publishers.

Vansteelandt, S. and Goetghebeur, E. (2005). Least squares estimation. In Encyclopaedic Companion to Medical Statistics (eds. Everitt, B. and Palmer, C. R.), Arnold Publishers.

Goetghebeur, E. and **Vansteelandt, S.** (2005). Missing values. In Encyclopaedic Companion to Medical Statistics (eds. Everitt, B. and Palmer, C. R.), Arnold Publishers.

Vansteelandt, S. and Goetghebeur, E. (2010). Causal effect (direct and indirect). In Encyclopaedic Companion to Medical Statistics, 2nd edition (eds. Everitt, B. and Palmer, C. R.), Wiley.

Vansteelandt, S. and Goetghebeur, E. (2010). Inverse probability weighting. In Encyclopaedic Companion to Medical Statistics, 2nd edition (eds. Everitt, B. and Palmer, C. R.), Wiley.

Sjolander, A. and **Vansteelandt, S.** (2010). Marginal structural models. In Encyclopaedic Companion to Medical Statistics, 2nd edition (eds. Everitt, B. and Palmer, C. R.), Wiley.

Vansteelandt, S. (2012). Estimation of direct and indirect effects. Causal Inference: Statistical Perspectives and Applications, (C. Berzuini, P. Dawid and L. Bernardinelli, eds.). Wiley and Sons.

Vansteelandt, S. (2014). Semi-parametric sensitivity analysis. Handbook of Missing Data Methodology (eds. G. Molenberghs, G. Fitzmaurice, M.G. Kenward, A.A. Tsiatis and G. Verbeke). CRC Press.

Rotnitzky, A. and **Vansteelandt, S.** (2014). Double-robust methods. Handbook of Missing Data Methodology (eds. G. Molenberghs, G. Fitzmaurice, M.G. Kenward, A.A. Tsiatis and G. Verbeke). CRC Press.

Publications in scientific journals with peer review

Vansteelandt, S., Goetghebeur, E. and Verstraeten, T. (2000). Regression Models for Disease Prevalence with Diagnostic Tests on Pooled Serum Samples. Biometrics, 56, 1126-1133.

Vansteelandt, S. and Goetghebeur, E. (2001). Generalized Linear Models with Incomplete Outcomes: the IDE Algorithm for Estimating Ignorance and Uncertainty. Journal of Computational and Graphical Statistics, 10, 656-676.

Loeys, T., **Vansteelandt, S.** and Goetghebeur, E. (2001). Accounting for Correlation and Compliance in Cluster Randomised Trials. Statistics in Medicine, 20, 3753-3767.

Mwanyumba, F., Gaillard, P., Inion, I., Verhofstede, C., Claeys, P., Chohan, V., **Vansteelandt, S.**, Mandaliya, K., Praet, M. and Temmerman, M. (2002). Placental inflammation and Perinatal transmission of HIV-1. Journal of Acquired Immune Deficiency Syndromes, 29, 262-269.

De Vuyst, H., Steyaert, S., Van Renterghem, L., Claeys, P., Muchiri, L., Sitati, S., **Vansteelandt, S.**, Quint, W., Kleter, B., Van Marck, E. and Temmerman, M. (2003). Distribution Of Human Papillomavirus In A Family Planning Population In Nairobi, Kenya. Sexually Transmitted Diseases, 30, 137-142.

Vansteelandt, S. and Goetghebeur, E. (2003) Causal inference with generalized structural mean models. Journal of the Royal Statistical Society - Series B, 65, 817-835.

Harro, J., Fischer, K., **Vansteelandt, S.** and Harro, M. (2004). Both low and high activity of platelet monoamine oxidase increase the probability of becoming a smoker. European Neuropsychopharmacology, 14, 65-69.

Verstraelen, H., **Vansteelandt, S.** and Temmerman, M. (2004). Bacterial vaginosis: not a risk for preterm birth? British Journal of General Practice, 54, 547.

Vansteelandt, S. and Goetghebeur, E. (2004). Using potential outcomes as predictors of treatment activity via strong structural mean models. Statistica Sinica, 9, 891-909.

Vansteelandt, S. and Goetghebeur, E. (2005) Sense and sensitivity when correcting for observed exposures in randomized clinical trials. Statistics in Medicine, 24, 191-210.

Vansteelandt, S., Goetghebeur, E., Thomas, I., Mathys, E. and Van Loock, F. (2005). On the Safety of Plasma Pools and Derivatives. Statistics in Society, 168, 345-363.

Goetghebeur, E. and **Vansteelandt, S.** (2005) Structural mean models for compliance analysis in randomized clinical trials and the impact of errors on measures of exposure. Statistical Methods in Medical Research, 14, 397-416.

Verstraelen, H., Goetgeluk, S., Derom, C., **Vansteelandt, S.**, Derom, R., Goetghebeur, E. and Temmerman, M. (2005). Preterm birth in twins following subfertility treatment: a population-based cohort study. British Medical Journal, 331, 1173-1176.

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Carpenter, J., Kenward, M. and **Vansteelandt, S.** (2006). A comparison of multiple imputation and doubly robust estimation. Statistics in Society, 169, 571-584.

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Marcellino, V., Cnudde, V., **Vansteelandt, S.** and Caro, F. (2007). An evaluation of 2D-image analysis techniques for measuring soil micro-porosity. European Journal of Soil Science, 58, 133-140.

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Aerssens, A., Claeys, P., Garcia, A., Sturtewagen, Y., Velasquez, R., Vanden Broeck, D., **Vansteelandt, S.**, Temmerman, M., Cuvelier, C. A. (2008). Lesson of the Month - Natural history and clearance of HPV after treatment of precancerous cervical lesions. Hispathology, 52, 381-386.

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VanderWeele, T.J. and **Vansteelandt, S.** (2010). Odds ratios for mediation analysis for a dichotomous outcome. American Journal of Epidemiology, 172, 1339-1348.

Vansteelandt, S. (2010). Estimation of controlled direct effects on a dichotomous outcome using logistic structural direct effect models. Biometrika, 97, 921-934.

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Sjolander, A. and **Vansteelandt, S.** (2011). Doubly robust estimation of attributable fractions. Biostatistics, 12, 112-121.

Bowden, J., and **Vansteelandt, S.** (2011). Mendelian randomisation analysis of case-control data using Structural Mean Models. Statistics in Medicine, 30, 678-694.

Hoffmann, T.J., **Vansteelandt, S.**, Lange, C., Silverman, E.K., DeMeo, D.L. and Laird, N.M. (2011). Combining Disease Models to Test for Gene-Environment Interaction in Nuclear Families. Biometrics, 67, 1260-1270.

Hollevoet, K., Van Cleemput, J., Thimpont, J., De Vuyst, P., Bosquée, L., Nackaerts, K., Germonpré, P., **Vansteelandt, S.**, Kishi, Y., Delanghe, J.R., van Meerbeeck, J.P. (2011). Serial Measurements of Mesothelioma Serum Biomarkers in Asbestos-exposed Individuals: A Prospective Longitudinal Cohort Study. Journal of Thoracic Oncology, 6, 889-895.

Baele, G., van de Peer, Y. and **Vansteelandt, S.** (2011). Context-dependent codon partition models provide significant increases in model fit in atpB and rbcL protein-coding genes. BMC Evolutionary Biology, 11, Article 145.

Baert, B., **Vansteelandt, S.** and De Spiegeleer, B. (2011). Ion mobility spectrometry as a high-throughput technique for in vitro transdermal Franz diffusion cell experiments of ibuprofen. Journal of Pharmaceutical and Biomedical Analysis, 55, 472-478.

Delva, W., Beauclair, R., Welte, A., **Vansteelandt, S.**, Hens, N., Aerts, M., du Toit, E., Beyers, N. and Temmerman, M. (2011). Age-disparity, sexual connectedness and HIV infection in disadvantaged communities around Cape Town, South Africa: A study protocol. BMC Public Health, 11, Article 616.

VanderWeele, T.J. and **Vansteelandt, S.** (2011). A weighting approach to causal effects and additive interaction in case-control studies: marginal structural linear odds models. American Journal of Epidemiology, 174, 1197-1203.

Martinussen, T., **Vansteelandt, S.**, Gerster, M. and Hjelmborg, J.v.B. (2011). Estimation of direct effects for survival data using the Aalen additive hazards model. Journal of the Royal Statistical Society - Series B, 73, 773-788.

Vansteelandt, S., Bowden, J., Babanezhad, M. and Goetghebeur, E. (2011). On Instrumental Variables Estimation of Causal Odds Ratios. Statistical Science, 26, 403-422.

Comté, L., **Vansteelandt, S.**, Rode, R.A. and Vrijens, B. (2011) Estimation of HIV treatment-efficacy by combining structural nested mean models with pharmacokinetic models of antiretroviral drug exposure. Statistics and its Interface, 4, 511-520.

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Vansteelandt, S., VanderWeele, T. and Robins, J.M. (2012). Semiparametric tests for sufficient cause interaction. Journal of the Royal Statistical Society - Series B, 74, 223-244.

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Vermeulen, K. and **Vansteelandt, S.** (2015). Bias-Reduced Doubly Robust Estimation. Journal of the American Statistical Association, 110, 1024-1036.

Vermeulen, K., Thas, O. and **Vansteelandt, S.** (2015). Increasing the power of the Mann-Whitney test in randomized experiments through flexible covariate adjustment. Statistics in Medicine, 34, 1012-1030.

Tchetgen Tchetgen, E.J., Walter, S., **Vansteelandt, S.**, Martinussen, T. and Glymour, M. (2015). Instrumental variable estimation in a survival context. Epidemiology, 26, 402-410.

De Frène V., Gerris, J., Weyers, S., Dhont, M., **Vansteelandt, S.**, Annemans L., De Sutter P. (2015). Gonadotropin therapy versus laparoscopic ovarian drilling in clomiphene citrate resistant polycystic ovary syndrome patients: a retrospective cost-effectiveness analysis. Gynecologic and Obstetric Investigation, 80, 164-169.

Josephy, H., Loeys, T. and **Vansteelandt, S.** (2015). Within-subject mediation analysis in AB/BA crossover designs. The International Journal of Biostatistics, 11, 1-22.

Bijlsma, M.J., Janssen, F., Bos, J., Kamphuisen, P.W., **Vansteelandt, S.** and Hak, E. (2015). Association between statin use and cardiovascular mortality at the population level in the Netherlands 1994-2010: an ecological study. Epidemiology, 26, 6, 802-805.

Neupane, J., Ghimire, S., Vandewoestyne, M., Lu, Y.C., Gerris, J., Van Coster, R., Deroo, T., Deforce, D., **Vansteelandt, S.** and De Sutter, P. (2015). Cellular Heterogeneity in the

Level of mtDNA Heteroplasmy in Mouse Embryonic Stem Cells. Cell Reports, 13, 1304-1309.

Zetterqvist, J., **Vansteelandt, S.**, Pawitan, Y. and Sjolander, A. (2016). Doubly robust methods for handling confounding by cluster. Biostatistics, 17, 264-276.

Vermeulen, K. and **Vansteelandt, S.** (2016). Data-Adaptive Bias-Reduced Doubly Robust Estimation. International Journal of Biostatistics, 12, 253-282.

Vandecandelaere, M., **Vansteelandt, S.**, De Fraine, B., Van Damme, J. (2016). The effects of early grade retention: Effect modification by prior achievement and age. Journal of School Psychology, 54, 79-U101.

Talloen, W., Moerkerke, B., Loeys, T., van Keer, H. and **Vansteelandt, S.** (2016). Estimation of indirect effects in the presence of unmeasured confounding for the mediator-outcome relationship in a multilevel 2-1-1 mediation model. Journal of Educational and Behavioral Statistics, 41, 359-391.

Vandecandelaere, M., **Vansteelandt, S.**, De Fraine, B. and Van Damme, J. (2016). Timevarying Treatments in Observational Studies: Marginal Structural Models of the Effects of Early Grade Retention on Math Achievement. Multivariate Behavioral Research, 51, 843-864.

Vandecandelaere, M. and **Vansteelandt, S.** (2016). Rejoinder: Remaining Challenges in Investigating Grade-Retention Effectiveness. Multivariate Behavioral Research, **51**, 877-880.

Vansteelandt, S. and Sjolander, A. (2016). Revisiting g-estimation of the effect of a time-varying exposure subject to time-varying confounding. Epidemiologic Methods, 5, 37-56.

Bijlsma, M.J., **Vansteelandt, S.**, Janssen, F. and Hak, E. (2016). The effect of adherence to statin therapy on cardiovascular mortality: quantification of unmeasured bias using falsification end-points. BMC Public Health, 16, Number 303.

Dolphens, M., **Vansteelandt, S.**, Cagnie, B., Vleeming, A., Nijs, J., Vanderstraeten, H. and Danneels, L. (2016). Multivariable modeling of factors associated with spinal pain in young adolescence. European Spine Journal, 25, 2809-2821.

Loeys, T., Talloen, W., Goubert, L., Moerkerke, B. and **Vansteelandt, S.** (2016). Assessing moderated mediation in linear models requires fewer confounding assumptions than assessing mediation. British Journal of Mathematical and Statistical Psychology, 69, 352-374.

Varewyck, M., **Vansteelandt, S**, Eriksson, M. and Goetghebeur, E. (2016). On the practice of ignoring center-patient interactions in evaluating hospital performance. Statistics in Medicine, **35**, 227-238.

Vandenberghe, S., **Vansteelandt, S.** and Loeys, T. (2017). Boosting the precision of mediation analyses of randomised experiments through covariate adjustment. Statistics in Medicine, **36**, 939-957.

Daniel, R.M., De Stavola, B.L. and **Vansteelandt, S.** (2016). The formal approach to quantitative causal inference in epidemiology: misguided or misrepresented? International Journal of Epidemiology, **45**, 1817-1829.

Steen, J., Loeys, T., Moerkerke, B. and Vansteelandt, S. (2017). Flexible mediation analysis with multiple mediators. American Journal of Epidemiology, **186**, 184-193.

Vansteelandt, S. and Daniel, R.M. (2017). Interventional effects for mediation analysis with multiple mediators. Epidemiology, **28**, 258-265.

Buyse, M. and **Vansteelandt, S.** (2017). The potential and perils of observational studies. Annals of Oncology, **28**, 182-182.

Sjolander, A. and **Vansteelandt, S.** (2017). Doubly robust estimation of attributable fractions in survival analysis. Statistical Methods in Medical Research, **26**, 948-969.

Steen, J., Loeys, T., Moerkerke, B. and **Vansteelandt, S.** (2017). medflex: An R Package for Flexible Mediation Analysis Using Natural Effect Models. Journal of Statistical Software, 76, Article 11.

Pouwels, K.B., Van Kleef, E., **Vansteelandt, S.**, Batra, R., Edgeworth, J.D., Smieszek, T. and Robotham, J.V. (2017). Does appropriate empiric antibiotic therapy modify ICU-acquired Enterobacteriaceae bacteraemia mortality and discharge? Journal of Hospital Infection, **96**, 23-28.

Martinussen, T., **Vansteelandt, S.**, Tchetgen Tchetgen, E.J. and Zucker, D.M. (2017). Instrumental variables estimation of exposure effects on a time-to-event endpoint using structural cumulative survival models. Biometrics, **73**, 1140-1149.

Vansteelandt, S. (2017). Asking too much of epidemiologic studies: the problem of collider bias and the obesity paradox. Epidemiology, **28**, E47-E49.

Amorim, G., Thas, O., Vermeulen, K., **Vansteelandt, S.** and De Neve, J. (2018). Small sample inference for probabilistic index models. Computational Statistics and Data Analysis, **121**, 137-148.

Seaman, S.R. and **Vansteelandt, S.** (2018). Introduction to Double Robust Methods for Incomplete Data. Statistical Science, **33**, 184-197.

Pouwels, K.B., **Vansteelandt, S.**, Batra, R., Edgeworth, J.D., Smieszek, T. and Robotham, J.V. (2018). Intensive care unit (ICU)-acquired bacteraemia and ICU mortality and discharge: addressing time-varying confounding using appropriate methodology. Journal of Hospital Infection, **99**, 42-47.

Vansteelandt, S., Walter, S. and Tchetgen Tchetgen, E. (2018). Eliminating Survivor Bias in Two-stage Instrumental Variable Estimators. Epidemiology, **29**, 536-541.

Dukes, O. and **Vansteelandt, S.** (2018). A Note on G-Estimation of Causal Risk Ratios. American Journal of Epidemiology, **187**, 1079-1084.

Keogh, R.H., Daniel, R.M.; VanderWeele, T.J. and **Vansteelandt, S.** (2018). Analysis of Longitudinal Studies With Repeated Outcome Measures: Adjusting for Time-Dependent Confounding Using Conventional Methods. American Journal of Epidemiology, **187**, 1085-1092.

Mertens, K. and **Vansteelandt, S.** (2018). Augmented and doubly robust G-estimation of causal effects under a structural nested failure time model. Biometrics, **74**, 472-480.

Vansteelandt, S. and Didelez, V. (2018). Improving the robustness and efficiency of covariate adjusted linear instrumental variable estimators. The Scandinavian Journal of Statistics, **45**, 941-961.

Vansteelandt, S., Dukes, O. and Martinussen, M. (2018). Survivor bias in Mendelian randomisation analysis. Biostatistics, **19**, 426-443.

Vandenberghe, S., Duchateau, L., Slaets, L., Bogaerts, J. and **Vansteelandt, S.** (2018). Surrogate marker analysis in cancer clinical trials through time-to-event mediation techniques. Statistical Methods in Medical Research, **27**, 3367-3385.

Benoit, D. D., Jensen, H.I., Malmgren, J., Metaxa, V., Reyners, A.K., Darmon, M., Rusinova, K., Talmor, D., Meert, A.P., Cancelliere, L., Zubek, L., Maia, P., Michalsen, A., Vanheule, S., Kompanje, E.J.O., Decruyenaere, J., Vandenberghe, S., **Vansteelandt, S.**, Gadeyne, B., Van den Bulcke, B., Azoulay, E. and Piers, R. D. (2018). Outcome in patients perceived as receiving excessive care across different ethical climates: a prospective study in 68 Intensive Care Units in Europe and the United States. Intensive Care Medicine, **44**, 1039-1049.

Van den Bulcke, B., Piers, R., Jensen, H.I., Malmgren, J., Metaxa, V., Reyners, A.K., Darmon, M., Rusinova, K., Talmor, D., Meert, A.P., Cancelliere, L., Zubek, L., Maia, P.,

Michalsen, A., Vanheule, S., Kompanje, E.J.O., Azoulay, E., Meganck, R., Van de Sompel, A., **Vansteelandt, S.**, Vlerick, P., Vanheule, S. and Benoit, D.D. (2018). Ethical Decision-Making Climate in the ICU: Theoretical Framework and validation of a self-assessment tool. British Medical Journal: Safety and Quality, 27, 781-789.

Druwé, P., Monsieurs, K., Piers, R., Gagg, J., Nakahara, S., Alpert, E., van Schuppen, E., Gábor, E., Truhlář, A., Huybrechts, S., Mpotos, N., Joly, L.-M., Xanthos, T., Roessler, M., Paal, P., Cocchi, M., Trenkler, S., Nurmi, J., Piñera Salmeron, P., Owczuk, R., Svavarsdóttir, H., Deasy, C., Cimpoiesu, D., BjØrshol, C., Ioannides, M., Aguilera Fuenzalida, P., Kurland, L., Raffay, V., Pachys, G., Gadeyne, B., Steen, J., **Vansteelandt, S.**, De Paepe, P. and Benoit, D.D. on behalf of the REAPPROPRIATE Investigators. (2018). Perception of inappropriate cardiopulmonary resuscitation by clinicians working in emergency departments and ambulance services: an international, multicentre, cross-sectional survey (the REAPPROPRIATE study). Resuscitation, **132**, 112-119.

Dukes, O., Martinussen, T., Tchetgen Tchetgen, E. and **Vansteelandt, S.** (in press). On Doubly Robust Estimation of the Hazard Difference. Biometrics.

Yende-Zuma, N., Mwambi, H. and **Vansteelandt, S.** (in press). Adjusting the effect of integrating antiretroviral therapy and tuberculosis treatment on mortality for non-compliance: an instrumental variables analysis of a time-varying exposure. Epidemiology.

Martinussen, T. and **Vansteelandt, S.** (in press). Instrumental variables estimation with competing risk data. Biostatistics.

Miscellaneous publications (invited commentaries, ...)

Vansteelandt, S., Goetghebeur, E. and Verstraeten, T. (1999). Adjusting for confounding when estimating a time trend in HIV prevalence based on pooled serum samples. Archives of Public Health, 57, 89-105.

Goetghebeur, E. and **Vansteelandt, S.** (2002). Discussion of `Clustered encouragement designs with individual noncompliance: Bayesian inference with randomization, and application to advance directive forms' by Frangakis, Rubin and Zhou. Biostatistics, 3, 169-171.

Robins, J.M., Rotnitzky, A. and **Vansteelandt, S.** (2007). Discussion on 'Principal Stratification Designs to Estimate Input Data Missing Due to Death'. Biometrics, 63, 650-653.

Vansteelandt, S. (2009). Discussion on `Identifiability and Estimation of Causal Effects in Randomized Trials with Noncompliance and Completely Non-ignorable Missing-Data'. Biometrics, 65, 686-689.

Bekaert, M., Benoit, D., Decruyenaere, J. and **Vansteelandt, S.** (2010). A note on statistical association and causality derived from epidemiological ICU data - Reply. Intensive Care Medicine, 36, 550.

VanderWeele, T.J. and **Vansteelandt, S.** (2010). VanderWeele and Vansteelandt Respond to "Decomposing With a Lot of Supposing" and "Mediation". American Journal of Epidemiology, 172, 1355-1356.

Vansteelandt, S. and Keiding, N. (2011). G-computation: lost in translation? American Journal of Epidemiology, 173, 739-742.

Billiet, J., Molenberghs, G. and **Vansteelandt, S.** (2012). De onzekerheid van politieke barometers. De Gids op Maatschappelijk Gebied, Nummer 3, 39-43.

Vansteelandt, S. (2012). Understanding counterfactual-based mediation analysis approaches and their differences. Epidemiology, 23, 889-891.

Vansteelandt, S. (2012). Discussion of "Bayesian Effect Estimation Accounting for Adjustment Uncertainty" by Wang, Parmigiani, and Dominic. Biometrics, 68, 675-678.

Vansteelandt, S. (2012). Discussion of 'Probabilistic index models' by Thas, O., De Neve, J., Clement, L. and Ottoy, J.-P. Journal of the Royal Statistical Society - Series B, 74, 656-657.

Doctoral theses

Promoter PhD student Sylvie Goetgeluk, IWT grant (defense date: 30/05/2008)

Title of thesis: From data clusters to causal inference: new methodology for the analysis of twin registers.

Promoter PhD student Guy Baele, Teaching Assistant (defense date: 12/12/2008)

Title of thesis: Detecting complex substitution patterns in non-coding sequences.

Promoter PhD student Manoochehr Babanezhad, Grant from the Iranian Government (defense date: 27/04/2009)

Title of thesis: Measurement error and causal inference with instrumental variables.

Promoter PhD student Wim Delva, IWT grant (defense date: 10/05/2010)

Title of thesis: Sexual behavior and the spread of HIV: statistical amd epidemiological modeling applications.

Promoter PhD student Maarten Bekaert, IWT grant (defense date: 22/12/2011)

Title of thesis: Do patients die from or with infection? Finding the answer through causal analysis of longitudinal intensive care unit data.

Promoter PhD student Fanghong Zhang, IAP and BOF grant (defense date: 13/12/2012)

Title of thesis: From parametric towards nonparametric mixed modeling of correlated data.

Promoter PhD student Karel Vermeulen, FWO grant (defense date: 29/05/2015)

Title of thesis: Bias-reduced Doubly Robust estimation.

Promoter PhD student Machteld Varewyck, IWT grant (defense date: 18/12/2015)

Title of thesis: On quantifying quality of care.

Promoter PhD student Maarten Bijlsma (Universiteit Groningen) (defense date: 11/03/2016)

Title of thesis: Age-period-cohort methodology.

Promoter PhD student Karl Mertens (defense date: 26/05/2016)

Title of thesis: Marginal Structural and Structural Nested Models for Causal Inference in Hospital Epidemiology.

Promoter PhD student Johan Steen (defense date: 23/11/2016)

Title of thesis: Flexible causal mediation analysis using natural effect models.

Promoter PhD student Sjouke Vandenberghe (defense date: 21/12/2017)

Title of thesis: Mediation analysis of randomised experiments.

Promoter PhD students Haeike Josephy (defense foreseen 2017), Oliver Dukes (defense foreseen 2019), Thang Tat Vo (defense foreseen 2019), Jospehina Argyrou (defense foreseen 2021), Oliver Hines (defense foreseen 2021).

Keynote lectures

Vansteelandt, S. (2013). Reflections on inverse probability weighting and G-estimation in causal inference. 1st UK-Causal Inference Meeting, Manchester, U.K.

Vansteelandt, S. (2013). On prediction and robustness in causal inference. 2nd VOC Conference, Antwerp, Belgium.

Vansteelandt, S. (2015). Inferring pathways from health registry data: pitfalls, cautions and some solutions. One-day seminar: Deriving causal information from Norwegian health registries - what are the challenges? Oslo, Norway.

Vansteelandt, S. (2015). Challenges and opportunities for causal analyses of time-varying exposures. One-day seminar: Deriving causal information from Norwegian health registries - what are the challenges? Oslo, Norway.

Vansteelandt, S. (2017). Inferring causal pathways from data: challenges and some solutions. CEN-ISBS meeting, Vienna, Austria.

Vansteelandt, S. (2017). Inferring causal pathways from data: challenges and some solutions. IARC, Lyon, France

Invited Presentations at Scientific Conferences and Workshops

Vansteelandt S and Goetghebeur E (2000). Sensitivity Analysis for Incomplete Data: Ignoring Bounds or Bounding Ignorance? Workshop on Sensitivity Analyses for Dropout Models, Leuven, Belgium.

Vansteelandt S and Goetghebeur E (2000). Sensitivity Analysis for Incomplete Data: Ignoring Bounds or Bounding Ignorance? Fifth International conference on social science methodology, Koln, Germany.

Vansteelandt S and Goetghebeur E (2001). Sensitivity analysis for generalized structural mean models. Symposium on Causal Inference, Ghent, Belgium.

Vansteelandt S and Goetghebeur E (2001). Drawing inference from a region of estimates: sensitivity analysis for missing data. 22nd Annual Conference of the International Society for Clinical Biostatistics, Stockholm, Sweden.

Vansteelandt S and Goetghebeur E (2002). Information-exchange in a sensitivity analysis: from local currencies to the (e)uro. 34th Journees de Statistique, Brussels, Belgium.

Vansteelandt S, Rotnitzky A and Robins J (2003). Sense and sensitivity in the analysis of longitudinal data with intermittent nonresponse. 2003 WNAR/IMS Annual Meeting, Golden, Colorado.

Vansteelandt S (2003). Invited discussant in the session `Causation and graphical models'. 54th session of the International Statistical Institute, Berlin, Germany.

Vansteelandt S, Rotnitzky A and Robins J (2004). Semiparametric regression for repeated outcomes with nonignorable intermittent nonresponse. ENAR Spring Meeting, Pittsburgh, U.S.A.

Vansteelandt S (2005). Invited discussant in the session `Statistics and twin studies: a double challenge'. 26th Annual Conference of the International Society for Clinical Biostatistics, Szeged, Hungary.

Vansteelandt S (2005). Emerging methods of causal inference open new ways to interpret dosing history data. Symposium on patient compliance and persistence, Liege, Belgium.

Vansteelandt S, Goetghebeur E, Kenward M and Molenberghs G (2006). Drawing inference from a region of estimates: Ignoring Bounds or Bounding Ignorance? ENAR Spring Meeting, Tampa, U.S.A.

Vansteelandt S, Rotnitzky A and Robins J (2006). Handling Non-Ignorable Non-Monotone Non-Response in Follow-up Studies. Recent developments in the analysis of repeated measurement studies in the presence of missing data. University Hospital Gasthuisberg, Leuven, Belgium.

Vansteelandt S, Babanezhad M and Goetghebeur E (2006). Correcting for Measurement Error in Compliance-adjusted Analyses of Randomized Clinical Trials. 23rd International Biometric Conference, Montreal, Canada.

Vansteelandt S (2006). Discussant in the invited session `Adjusting For Non-Compliance In Clinical Trials'. 23rd International Biometric Conference, Montreal, Canada.

Vansteelandt S and Lange C (2006). Gene-environment Interaction in Family-based Studies. European Science Foundation-IfW Conference on The Global Health Economy, Salzau, Germany.

Vansteelandt S and Goetgeluk S (2007). Causal diagrams, stratification, inverse probability weighting and the problem of inferring direct effects. First IBS Channel Network Conference, Rolduc, The Netherlands.

Vansteelandt S, Carpenter J and Kenward M (2007). Inverse Probability Weighting and Doubly Robust Estimation for Analyses With Missing Data. Fall Meeting of Netherlands Statistical Society -- Social Sciences Division, Tilburg, The Netherlands.

Vansteelandt S (2008). Estimation of controlled direct effects. 24th International Biometric Conference, Dublin, Ireland.

Vansteelandt S (2008). Estimating and modeling direct effects. 29th Annual Conference of the International Society for Clinical Biostatistics, Copenhagen, Denmark.

Vansteelandt S (2008). Epidemiologic data analysis with diagnostic group tests: can we get more by doing less? Workshop in Infectious Disease Epidemiology for Decision Making, Brussels, Belgium.

Vansteelandt S (2009). Estimating Controlled Direct Effects in Random and Outcomedependent Sampling Designs. ENAR Spring Meeting, San Antonio, U.S.A.

Vansteelandt S and Lange C (2009). On the Adjustment for Covariates in Genetic Association Analysis: A Novel, Simple Principle to Infer Causality. ENAR Spring Meeting, San Antonio, U.S.A.

Vansteelandt S (2009). Estimating direct effects in cohort and case-control studies. 40th Anniversary Meeting of the MSc in Medical Statistics at the London School of Hygiene and Tropical Medicine. London, U.K.

Vansteelandt S (2009). Estimating direct effects in cohort and case-control studies. 20th Open University Statistics Conference `Statistics for health registers and linked databases'. Milton Keynes, U.K.

Vansteelandt S, VanderWeele T and Robins J (2009). Semiparametric tests for sufficient cause Interactions. 2nd Nordic-Baltic Biometric Conference, Tartu, Estonia.

Vansteelandt, S., Bekaert, M. and Mertens, K. (2009). Adjusting for time-varying confounding in survival analysis with competing risks. Workshop on Causal Inference, Oslo, Norway.

Vansteelandt S, Babanezhad M and Goetghebeur E (2009). Correcting for Measurement Error in Compliance-adjusted Analyses of Randomized Clinical Trials. October joint meeting of the Biostatistics Group and the RSS Manchester Local Group, Manchester, U.K.

Vansteelandt S (2009). Estimating direct effects on a dichotomous outcome using logistic structural direct effect models. Annual Meeting of the Danish Society for Theoretical Statistics, Odense, Denmark.

Vansteelandt S (2009). On testing for statistical interactions and sufficient cause interactions. Workshop on mediation and interaction, Copenhagen, Denmark.

Vansteelandt S (2010). Recent advances in doubly robust estimation for missing data. RSS Medical Section meeting - 'Analysis of partially observed datasets: putting methodology into practice' - 30th March 2010, London, U.K.

Vansteelandt S (2010). Estimating Direct Effects on a Dichotomous Outcome Using Logistic Structural Direct Effect Models. Joint Statistical Meetings, Vancouver, Canada.

Vansteelandt S (2010). Testing for statistical and sufficient cause interactions. Causal Inference in Epidemiology: from theory to applied research. SISMEC-ICE, Florence, Italy.

Vansteelandt, S. (2011). Mendelian randomization analysis of case-control studies. ENAR Spring Meeting, Miami, U.S.A.

Vansteelandt, S. (2011). Mendelian randomization analysis of case-control studies. Atlantic Causal Inference Conference, Ann Arbor, U.S.A.

Vansteelandt, S. and Martinussen, T. (2011). Adjusting for time-varying confounding in survival analysis using structural nested additive hazards models. ISI satellite meeting, Copenhagen, Denmark.

Vansteelandt, S. and Martinussen, T. (2011). Estimation of direct effects for survival data using the Aalen additive hazards model. 58th session of the International Statistical Institute, Dublin, Ireland.

Vansteelandt, S. (2011). Instrumental Variables Estimation of Causal Odds Ratios. 5th IAP workshop, Louvain-la-neuve, Belgium.

Vansteelandt S (2011). Ignoring Bounds or Bounding Ignorance? Reflections on sensitivity analysis for missing data. QMSS2 workshop, Leuven, Belgium.

Vansteelandt S. (2012). Challenges for model selection in etiologic studies. International Biometric Society - British and Irish Region (IBS-BIR) Spring meeting and LSHTM Centre for Statistical Methodology Meeting `Model selection for genetic and epidemiological data', London, U.K.

Vansteelandt, S., Martinussen, T. and Tchetgen Tchetgen, E. (2012). Adjusting for time-varying confounding in survival analysis using structural nested cumulative failure time models. `Time for Causality'Sustain Workshop, Bristol, U.K.

Vansteelandt, S. (2012). Dealing with complex problems of confounding in mediation analysis. 46th meeting of the Italian Statistical Society, Rome, Italy.

Vansteelandt, S. (2012). Dealing with time-varying confounding in mediation analysis. Joint Statistical Meetings, San Diego, U.S.A.

Vansteelandt, S. (2013). Causal inference and gene-environment interaction testing in family studies. Leiden Family Lab meeting. Leiden, The Netherlands.

Vansteelandt, S. and Martinussen, T. (2013). Adjusting for time-varying confounding in survival analysis using structural nested cumulative failure time models. EMR-IBS meeting, Tel-Aviv, Israel.

Vansteelandt, S. and Vermeulen, K. (2013). A Doubly Robust Adaptation of the Mann-Whitney Test to Adjust for Measured Confounding. Joint Statistical Meetings, Montreal, Canada.

Vansteelandt, S., Bekaert, M. and Benoit, D. (2014). Handling time-varying confounding and competing risks: a case study on the attributable mortality of ventilator-associated pneumonia. 27th International Biometric Conference, Florence, Italy.

Vansteelandt, S. and VanderWeele, T. (2014). Natural Direct and Indirect Effects on the Exposed - Effect Decomposition under Weaker Assumptions. Biometrics Showcase Paper at the 27th International Biometric Conference, Florence, Italy.

Vansteelandt, S. and VanderWeele, T. (2014). Mediation analysis with multiple mediators. SER Meeting, Seattle, U.S.A.

Vansteelandt, S. and Vandenberghe, S. (2014). Mediation Analysis of Randomised Experiments. Joint Statistical Meetings, Boston, U.S.A.

Vansteelandt, S., Vermeulen, K. and Didelez, V. (2014). Improving the performance of double-robust IV estimators under model misspecification. CLAPEM, Cartegena, Colombia.

Vansteelandt, S. (2015). Time-dependent confounding, MSMs, G-computation. ERA-EDTA, London.

Vansteelandt, S. and Vermeulen, K. (2015). Bias-reduced Double-robust estimation. Nordic-Baltic IBS meeting, Reykjavik, Iceland.

Vansteelandt, S. and Vermeulen, K. (2015). Bias-reduced Double-robust estimation. European Mathematical Statistics conference, Amsterdam, The Netherlands.

Vansteelandt, S. and Joffe, M. (2015). Structural Nested Models and G-estimation: the partially realised promise. Joint Statistical Meetings, Seattle, U.S.A.

Vansteelandt, S. and Vermeulen, K. (2015). Bias-reduced Double-robust estimation. Annual Meeting of the Belgian Statistical Society, Antwerpen, Belgium.

Vansteelandt, S. (2016). Structural nested cumulative survival models. UK-Causal Inference Meeting, London.

Vansteelandt, S. (2016). Mendelian randomisation analysis of time-to-event endpoints. International Biometric Conference, Victoria, Canada.

Vansteelandt, S. (2016). Mediation analysis with multiple mediators. Half-day symposium of the Danish Society for Pharmaceutical Statistics, Copenhagen, Denmark.

Vansteelandt, S. (2016). Survivor bias in Mendelian randomisation analysis. IV meeting, Copenhagen, Denmark.

Vansteelandt, S. (2016). Bias-reduced double-robust estimation. CMStatistics 2016, Seville, Spain.

Vansteelandt, S. (2016). Bias-reduced double-robust estimation. 10th Conference of the International Chinese Statistical Association (ICSA), Shanghai, China.

Vansteelandt, S. (2017). Interventional Effects for Mediation Analysis with Multiple Mediators. Joint Statistical Meetings, Baltimore, U.S.A.

Vansteelandt, S. (2017). Quantitative approaches to combining evidence across evidence streams. EFSA workshop, Lisbon, Portugal.

Vansteelandt, S. (2017). Time-to-event mediation analysis with repeatedly measured mediators: the LEADER trial. CMStatistics, London, U.K.

Vansteelandt, S. (2017). Time-to-event mediation analysis with repeatedly measured mediators: the LEADER trial. Causal inference workshop, Columbia University, New York, U.S.A.

Vansteelandt (2018). How to obtain valid tests for treatment effects after confounder selection? Workshop on Causal Inference, University of Southampton, Southampton, U.K.

Vansteelandt, S. (2018). Time-to-event mediation analysis with repeatedly measured mediators: the LEADER trial. PSI meeting, Amsterdam, The Netherlands.

Invited Presentations at Seminars

Vansteelandt S and Goetghebeur E (2001). Combining correlation and causation with structural mean models. Limburgs Universitair Centrum, Belgium.

Vansteelandt S, Goetghebeur E, Thomas I, Mathys E and Van Loock F (2001). Group testing and the safety of plasma derivatives in Belgium. Université catholique de Louvain, Belgium.

Vansteelandt S, Goetghebeur E, Thomas I, Mathys E and Van Loock F (2001). Diagnostic testing for Hepatitis C risk in plasma derivatives: residual risk calculation and cost-efficient pool sizes. Scientific Institute of Public Health, Belgium.

Vansteelandt S and Goetghebeur, E (2002). Sensitivity analysis for Generalized Structural Mean Models. University of Tartu, Estonia.

Vansteelandt S (2004). Using pooled specimens in epidemiologic studies of diagnostic tests for rare infectious diseases. Prince Leopold Institute of Tropical Medicine, Belgium.

Vansteelandt S and Goetghebeur E (2005). Compliance-adjustment in randomized clinical trials using generalized linear structural mean models. Karolinska Institutet, Stockholm, Sweden.

Vansteelandt S, Rotnitzky A and Robins J (2006). Handling Non-Ignorable Non-Monotone Non-Response in Follow-up Studies. Université Libre de Bruxelles, Belgium.

Vansteelandt S, Rotnitzky A and Robins J (2006). Handling Non-Ignorable Non-Monotone Non-Response in Follow-up Studies. Erasmus Universiteit Rotterdam.

Vansteelandt S and Goetgeluk S (2007). Doubly robust estimators for direct effects. Copenhagen University, Dept. of Biostatistics.

Vansteelandt S, VanderWeele T and Robins J (2007). Semiparametric inference for statistical interactions. LUMC, Leiden, The Netherlands.

Vansteelandt S, Mertens K, Suetens C and Goetghebeur E (2008). Marginal Structural Models for the effect of ICU-acquired nosocomial pneumonia on survival. Freiburg Universitat, Germany.

Vansteelandt S, Rotnitzky A and Robins J (2008). Handling Non-Ignorable Non-Monotone Non-Response in Follow-up Studies. London School of Hygiene and Tropical Medicine, U.K.

Vansteelandt S, VanderWeele T and Robins J (2008). Multiply robust inference for statistical interactions. MRC Cambridge, United Kingdom.

Vansteelandt, S., Bekaert, M. and Mertens, K. (2009). Estimation of marginal structural survival models in the presence of competing risks. Université catholique de Louvain, Belgium.

Vansteelandt, S., Bekaert, M. and Mertens, K. (2009). Adjusting for time-varying confounding in survival analysis with competing risks. Copenhagen University, Dept. of Biostatistics.

Vansteelandt, S. (2010). On Instrumental Variables Estimation of the Effect of an Exposure on a Dichotomous Outcome. Katholieke Universiteit Leuven, Belgium.

Vansteelandt, S. (2010). Semiparametric tests for statistical and sufficient cause interactions. Katholieke Universiteit Leuven, Belgium.

Vansteelandt, S. (2010). On doubly robust estimation in causal inference and incomplete data analysis. University of Bristol, U.K.

Vansteelandt, S. (2010). Mendelian randomization analysis of case-control studies. LUMC, Leiden, The Netherlands.

Vansteelandt, S. (2010). Testing for statistical and sufficient cause interactions. Universita' Degli Stidu di Milano Bicocca, Milano, Italy.

Vansteelandt, S. (2011). Estimating direct effects on a survival outcome using the Aalen additive hazards model. London School of Hygiene and Tropical Medicine, U.K.

Vansteelandt, S. (2011). IV-estimation of causal odds ratios in cohort and case-control studies. LUMC, Leiden, The Netherlands.

Vansteelandt, S. (2011). Testing for statistical and sufficient cause interactions. The Johns Hopkins University, U.S.A.

Vansteelandt, S. (2011). Semi-parametric tests for gene-gene and gene-environment interactions. University of Maastricht, Maastricht, The Netherlands.

Vansteelandt, S. (2012). Semi-parametric tests for gene-gene and gene-environment interactions. Université de Liège, Liège, Belgium.

Vansteelandt, S. (2012). On estimation of nuisance working models in doubly robust estimators. The University of Pennsylvania, Philadelphia, U.S.A.

Vansteelandt, S. (2012). On estimation of nuisance working models in doubly robust estimators. The Johns Hopkins University, U.S.A.

Vansteelandt, S. (2014). Bias-Reduced Double-Robust Estimation. Karolinska Institutet, Stockholm, Sweden.

Vansteelandt, S. (2015). Structural nested cumulative survival models. University of Oslo, Norway.

Vansteelandt, S. (2016). Introduction to causal inference. IDDI, Ottignies, Belgium.

Vansteelandt, S. (2016). Instrumental Variable Estimation in a Survival Context. University Groningen, The Netherlands.

Vansteelandt, S. (2016). Assessing the effects of time-varying exposures: what is the attributable mortality of VAP? ICU UZGent, Belgium.

Vansteelandt (2017). Causation and causal inference in randomised experiments and observational studies. Luxembourg Statistical Society, Belval, Luxembourg.

Vansteelandt, S. (2017). Time-to-event mediation analysis with repeatedly measured mediators: the LEADER trial. Janssen Pharmaceuticals, Beerse, Belgium.

Vansteelandt (2018). How to obtain valid tests for treatment effects after confounder selection? University College London, London, U.K.

Vansteelandt (2018). How to obtain valid tests for treatment effects after confounder selection? London School of Hygiene and Tropical Medicine, London, U.K.

Vansteelandt (2018). How to obtain valid tests for treatment effects after confounder selection? University of Cardiff, Cardiff, U.K.

Contributed Presentations at Conferences

Not listed.

Teaching

I currently teach the following regular courses at Ghent University:

Statistics II, 2nd Ba Mathematics

Statistics III, 3rd Ba Mathematics

Statistics and Pharmaceutical Data Analysis, 2nd Ba Pharmacy

Causality and Missing Data, Master of Statistical Data Analysis and Master of Mathematics

Principles of Statistical Data Analysis, Master of Statistical Data Analysis (cotaught with Els Goetghebeur and Olivier Thas)

Longitudinal Data Analysis, Master of Statistical Data Analysis (co-taught with Theo Stijnen)

Since 2007, I also teach part of the following course at the London School of Hygiene and Tropical Medicine: Causal inference in epidemiology: recent methodological developments.

I teach short courses on Causality, on Missing Data and on Longitudinal Data Analysis on a regular basis. Below is an incomplete selection:

Vansteelandt S (2002, 2004-2008). Epidemiologic data analysis with diagnostic group tests: Can we get more by doing less? ½ day invited lecture in Course CE05 `Epidemiology of Infectious Diseases', Netherlands institute for health sciences, Amsterdam, The Netherlands.

Vansteelandt S (2004). Causal inference with observational data. ½ day invited lecture at the School of Biometrics, 2004 ITI Conference, Dubrovnic, Croatia.

Goetghebeur E, Vansteelandt S and Vrijens B (2005). Analysis of non-compliance in clinical trials. Full day invited lecturer at 26th Annual Conference of the International Society for Clinical Biostatistics, Szeged, Hungary.

Vansteelandt S (2006, 2009, 2012, 2014, 2016). Applied Longitudinal Analysis. Three day short course of the ICES, Faculty of Sciences, Ghent University.

Vansteelandt S (2007). Short Course on Statistical analysis of immuno-epidemiological data: `Causal Modeling'., LUMC, Leiden.

Vansteelandt S (2008). Missing Data. Three day short course of the ICES, Faculty of Sciences, Ghent University.

Vansteelandt S (2008, 2010, 2012). Mediation - intermediate variables, direct and indirect effects in epidemiology. Three day short course at the Department of Biostatistics, Copenhagen University.

Vansteelandt S, Sjolander A and Didelez V (2008). Causal Inference. Three day short course organized by the FP6 MOLPAGE program, Pavia, Italy.

Vansteelandt S (2009). Causal Inference. One-day short course at the 2nd Nordic-Baltic Biometric Conference, Tartu, Estonia.

Vansteelandt S and Didelez V (2010). Causal Inference. One-day short course at the 31st Annual Conference of the International Society for Clinical Biostatistics, Montpellier, France.

Vansteelandt S (2010). Causal Mediation Analysis. Three day short course of the ICES, Faculty of Sciences, Ghent University.

Goetghebeur E and Vansteelandt S (2011). Topics in causal inference for the health sciences. One-day short course at Universita degli Studi Milano-Bicocca, Italy.

Vansteelandt S (2014). Causal Inference. Albert Einstein University, New-York, U.S.A.

Rotnitzky, A. and Vansteelandt S. (2014). Causal Inference. Cison Di Valmarino, Treviso, Italy.

Vansteelandt S (2017). Mediation Analysis. Pavia, Italy.

Vansteelandt S and Loh WW (2018). Causal Inference. Pavia, Italy.

Academic Service

Member of the Scientific Committee of the 2nd, 4th and 5th Channel Network Conference (Ghent, Belgium 2009; St Andrews, U.K., 2013; Nijmegen, The Netherlands, 2015), of the International Biometric Conference (Florianopolis, Brazil 2010, Kobe, Japan 2012), of the Annual Meeting of the International Society for Clinical Biostatistics (Montpellier, France 2010, Bergen, Norway 2012).

Chair of the Scientific Committee of the 4th Channel Network Conference (St Andrews, U.K., 2013).

Chair of the Local Organizing Committee of the 2nd Channel Network Conference (Gent, Belgium 2009).

Member of the Program Committee, Master of Statistical Data Analysis (2005-present)

Member of the Program Committee, Mathematics (2011-2017)

Secretary of the Examination Committee, Master of Statistical Data Analysis (2005-2018)

Secretary of the Program Committee, Master of Statistical Data Analysis (2013-2018)

Chair of the Program Committee, Master of Statistical Data Analysis (2018-present)

Secretary of the Center for Statistics, Ghent University (2003-2017)

Chair of the COPSS Committee for the George W. Snedecor award (2018-2020)

Member of the examination committee for the doctoral thesis defence of: Ivy Jansen (Limburgs Universitair Centrum, 2005), An Vandebosch (Ghent University, 2005), Beatrijs Moerkerke (Ghent University, 2006), Lieven Clement (Ghent University, 2007), Heidi Wouters (Ghent University, 2007), Dave Fardo (Harvard University, 2008), Sylvie

Goetgeluk (Ghent University, 2008), Ella Roelant (Ghent University, 2008), Stanley Luchters (Ghent University, 2008), Guy Baele (Ghent University, 2008), Manoochehr Babanezhad (Ghent University, 2009), Thomas Hoffmann (Harvard University, 2009), Rhian Daniel (University of London, 2009), Susanne Rosthoj (Copenhagen University, 2009), Anagha Joshi (Ghent University, 2009), Willem van der Wal (University of Amsterdam, 2011), Maarten Bekaert (Ghent University, 2011), Bart Ampe (Ghent University, 2012), Fanghong Zhang (Ghent University, 2012), Kristof De Beuf (Ghent University, 2013), Jan De Neve (Ghent University, 2013), Yenehew Getachew (Ghent University, 2013), Emma Persson (Umea University, 2014), Bie Verbist (Ghent University, 2014), Filip Bielejec (KULeuven, 2015), Karel Vermeulen (Ghent University, 2015), Koen Pouwels (Universiteit Groningen, 2015), Machteld Varewyck (Ghent University, 2015), Maarten Bijlsma (Universiteit Groningen, 2016), Karl Mertens (Ghent University, 2016), Wenjing Zheng (Universite Paris Descartes, 2016), Veronique Storme (Ghent University, 2016), Yingjie Zhang (Ghent University, 2016), Johan Steen (Ghent University, 2016), Bart Jacobs (Ghent University, 2017), Sjouke Vandenberghe (Ghent University, 2017), Roxanne Beauclair (Ghent University, 2017), Ignace De Vos (Ghent University, 2018).

Funding and research grants

Funding for my position is fully covered by the university. In addition, I have acquired the following research grants:

2005-2006: Krediet aan Navorsers, F.W.O.: 5300 EUR

2006: BOF project 01J16607 `Powerful methods for the detection of gene-gene interaction' (promoter; co-promotor: Els Goetghebeur; 76.000 EUR)

2006: BOF project 01J13007 `Modelling of the impact of microbicides on HIV incidence and prevalence in Mombasa, Kenia ' (co-promoter; promoter Marleen Temmerman; 78.000 EUR)

Specialisatiebeurs IWT Maarten Bekaert `Causale modellering van longitudinale intensieve zorgen gegevens' - 4-year PhD grant

2008: BOF project 01J05809 'Semi-parametrische gemengde modellen voor de analyse van genoom-wijde expressie data' (promoter; co-promoters: Olivier Thas and Marnik Vuylsteke; 172.000 EUR)

2009: 3-year collaboration grant from the Swedish Research Council (Promoter Juni Palmgren): Causal inference for observational studies; Modelling genes and lifestyle as predictors for cancer risk and prognosis (1.900.000 SEK/year).

2009: FWO Onderzoeksproject G.0912.10 `Informatie-gestuurde modellering van de impact van vervroegde, grootschalige HIV behandeling op de HIV incidentie in Zuidelijk Afrika' (promoter: Marleen Temmerman; co-promoters: Stijn Vansteelandt and Marc Aerts)

2009: co-investigator on MRC grant G0900724 `Developing and disseminating robust methods for handling missing data in epidemiological studies' (Lead applicant: Kate Tilling - 2 postdoc positions).

2010: Co-promoter of Center of Excellence in Bio-informatics.

2010: UGent BOF PhD grant, Jan Buyse, Structural nested models for the effect of a time-varying exposure on dichotomous outcomes and survival outcomes, 2010-2013.

2011: FWO PhD grant, Karel Vermeulen, Optimal nuisance parameter estimation in causal inference, 2011-2014.

2011: Promoter of FWO-onderzoeksproject: Dealing with effect decomposition and intermediate confounding in causal mediation analysis (272250 EUR).

2012: partner in IAP `Developing crucial statistical methods for understanding major complex dynamic systems in natural, biomedical and social sciences' (500.000 EUR - UGent share).

2012: ICU-VAR project of the Scientific Institute of Public Health, Brussels, Belgium (Postdoc 3 months).

2014: Co-promoter of FWO-onderzoeksproject: Improved Inference for Probabilistic Index Models (329452 EUR).

2016: Promoter of FWO-onderzoeksproject G016116N: Bias-reduced double-robust estimation (250000 EUR).

2016: IWT PhD grant, Oliver Dukes, Offline And Online Evaluation Of Medical Treatment Decision Strategies Based On Large Scale Electronic Health Registers, 2016-2019.

2017: Co-promoter of FWO-onderzoeksproject: Dealing with multiple mediators in causal mediation analysis (297600 EUR).

2017: Promoter of 4-year BOF-onderzoeksproject BOF.24Y.2017.0004.01: Honest data-adaptive inference for treatment effects (197661 EUR)

2018: Co-promoter of FWO-onderzoeksproject: Het inzetten van Big Data tot de verbetering van besluitvorming in de gezondheidszorg (217350 EUR Leuven, 472000 EUR UGent).

2018: Co-investigator on MRC Methodology grant: Comparative Effectiveness Research using Observational Data:Methodological Developments and a Roadmap (CER-OBS) (P.I. Bianca De Stavola)

2018: Co-investigator on MRC Methodology grant: Data driven semi-automated approaches to comparative effectiveness research using electronic health record data (P.I. Elizabeth Williamson)