Expert in Statistics and Methodology for Behavioral and Social Research

RESEARCH	KU Leuven

Post Doc @ Methodology of Educational Sciences Research Group (MESRG) — 18.05.15 - 27.07.15

Evaluation of bootstrap procedures for Meta-Analysis on Single Case data
Development of User Interface for the analysis of Single Case data

Post Doc @ Centre for Educational Effectiveness and Evaluation (CE&O) — multiple contracts
Statistical analyses of test data on mathematics and languages
13.10.13 - 20.12.13
19.05.14 - 08.06.14
15.12.14 - 31.12.14

Post Doc @ Interactive Technology (ITEC) — multiple contracts
Study of Adaptive Learning Environments for Language Learning; Methodology and Statistics — 01.06.10 - 31.10.11
Specific contributions (internal[1] and external[2]) — 01.02.12 - 14.02.12

Consultancy on statistics and methodology [1/2]	Managing exercise sessions in statistics [1]	10.12.12 - 15.03.13
Support in data analyses –and management [1/2]	Leading and assisting workshops [2]	05.06.13 - 04.09.13

Post Doc @ Research Group Quantitative Psychology and Individual Differences (OKP) — 01.11.08 - 31.12.09

Modeling the inter individually different evolution of naturalistically observed emotions: a dynamic systems approach

PhD student @ Methodology of Educational Sciences Research Group (MESRG) — 01.10.04 - 30.09.08

Study of Multilevel Design Efficiency using simulation (W. Van den Noortgate & P. Onghena) — *defense* 06/10/08

Research Fellow @ Centre for Sociology of Education — 01.01.00 - 31.08.01

Survey research on the perceived effectiveness of high-school mergers by the teaching staff.

CONSULTING in Methodology & Statistics

Development of an automatic scoring tool	05.12
Development of procedures for representing and statistically analyzing data	06.12
Data Analyses for scale development and IRT item calibration	02.12

STUDY		KU Leuven

Phd. in **Methodology of Educational Research**		04-08
Master in **Statistics**	Social & Behavioral Statistics	** 01-03
Master in **Artificial Intelligence**	Cognitive Sciences	98-99
Licentiate in **Psychology**	Theoretical Psychology	93-98
with **Teacher Training**		

SKILLS

Statistical Software : R / SAS, with additional experience in Statistica & MLwiN
Data Management : R, with first experience in SQL
Programming : R, with first experience in Java, Python & a general theoretical background
Languages : Dutch, English (expert), French (intermediate), Spanish & German (basic)

** 1 year program of Statistics spread over two years, combined with traveling.
Note: gaps are due to traveling / unemployment

OUTPUT

Articles

Cools, W., Van den Noortgate, W., & Onghena, P. (2009). Design efficiency for imbalanced multilevel data. *Behavior Research Methods, 41*, pp. 192-203.   DOI: 10.3758/BRM.41.1.192

Cools, W., De Fraine, B., Van den Noortgate, W., & Onghena, P. (2009). Multilevel design efficiency in educational effectiveness research. *School effectiveness and school improvement, 3*, 357-373. DOI: 10.1080/09243450902850176

Cools, W., Van den Noortgate, W., & Onghena, P. (2008). ML-DEs: Multilevel design efficiency using simulation. *Behavior Research Methods, 40*, pp. 236-249. DOI: 10.3758/BRM.40.1.236

Kadengye, D.T., Cools, W., Ceulemans, E., & Van den Noortgate, W. (2011). Simple Imputation Methods versus Direct Likelihood Analysis for Missing Item Scores in Multilevel Educational Data. *Behavior Research Methods, 44*, pp. 516-531, DOI: 10.3758/s13428-011-0157-x.

Tool

Cools, W., Van den Noortgate, W., & Onghena, P. (2006). *ML-DEs: MultiLevel Design Efficiency using simulation*. [http://ppw.kuleuven.be/cmes/ML-DEs.html] (scripts and manual).

Presentations

Cools, W., Tuerlinckx, F., Kuppens, P. (2009, July). *Modeling the individual specific oscillatory evolution of emotion in continuous time*. Paper presented at the 9th International Meeting of the Psychometric Society, Cambridge, United Kingdom.

Cools, W., Van den Noortgate, W., & Onghena, P. (2007, August). *Power and Accuracy in Multilevel Designs: An Application to Educational Research.* Paper presented at the 56th meeting of the International Statistical Institute, Lisbon, Portugal.

Cools, W., Van den Noortgate, W., & Onghena, P. (2007, October). *Design efficiency in estimation and statistical testing of multilevel variance parameters: A simulation study.* Paper presented at the 15th meeting of the Belgian Statistical Society, Antwerp, Belgium.

Cools, W., & Van den Noortgate, W. (2008, July). *Multilevel Design Efficiency using Simulation: Two Exemplary Studies.* Paper presented at the 3rd European Congress of Methodology, Oviedo, Spain.

Van den Noortgate, W., & Cools, W. (2008, July). *Sample-size requirements for a three-level meta-analysis.* Paper presented at the 3th European Congress of Methodology, Oviedo, Spain.

Van den Noortgate, W., & Cools, W. (2009, May). *Three level meta-analyses*. Paper presented at The Campbell Collaboration Colloquium, Oslo, Norway.

Poster

Cools, W., Desmet, P., & Van den Noortgate, W. (2012, June). *Learning to Conjugate Verbs in a Second Language, how to analyze it*. Poster presented at the Leuven Statistics Day, Leuven, Belgium.

External Workshops

Cools, W. & Van den Noortgate W. (2012, May) *Statistics for testing*. A four day workshop on a wide variety of methodological and statistical issues related to the testing of ability.

Van den Noortgate W. & Cools, W. (2011, June) *The use of R for doing meta analyses*. Campbell workshop in KU Leuven.