UGent
Faculty of Economics and
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Matthias Bogaert (PhD)

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Summary

I am currently employed as an assistant professor of Data Analytics at the Research Group Data Analytics at UGent. My research focusses on applications of descriptive, predictive and prescriptive analytics in business. I see myself as an applied researcher that uses data mining and statistical methods to solve relevant business-related problems. My methodological interests are data mining, ensemble modelling, deep learning, text mining, and recommender systems. My theoretical interests are social media, CRM, finance, and online WOM.

Education

PhD in Business Economics
2014 – 2018 Ghent University

Title doctoral dissertation: Harnessing the Power of Social Media in Predictive Analytics.
Supervisors: Prof. Dr Dirk Van den Poel and Prof. Dr Michel Ballings
Examination Board: Prof. Dr Patrick Van Kenhove, Prof. Dr Dries Benoit, Prof. Dr Bart Larivière, Prof. Dr Bart Baesens, Prof. Dr Koen De Bock

Master of Science in Applied Economics: Business Engineering, Marketing Engineering /Data Analytics
2012 – 2014 Ghent University

Grade: Magna cum laude (800/1000)

Université des Sciences sociales
September 2012 – January 2013 Université Toulouse Capitole I

Bachelor of Science in Applied Economics: Business Engineering
2009 – 2012 Ghent University

Grade: cum laude (746/1000)

Employment

Assistant Professor in Data Analytics (BOF TT) at Ghent University (100%)
February 2020 – Current

Visiting Professor in Business Analytics and Big Data at Université de Namur (5%)
February 2020 – Current

Doctor-assistant at KU Leuven (100%)
September 2019 – September 2020

Visiting Professor in Social Media and Web Analytics at Ghent University (10%)
January 2019 – September 2020

Lecturer in Business Analytics at the University of Edinburgh Business School (100%)
September 2018 – September 2019

Research and teaching assistant at Ghent University (100%)
May 2016 – September 2018
Supervisor Prof. Dr Dirk Van den Poel, co-supervisor: Prof. Dr Michel Ballings

PhD researcher at Ghent University (100%)
September 2014 – May 2016
Supervisor Prof. Dr Dirk Van den Poel, co-supervisor: Prof. Dr Michel Ballings

Journal articles

Schetgen, L., Bogaert, M., & Van den Poel, D. (2020). Predicting donation behavior: Acquisition modeling in the nonprofit sector using Facebook data. *Decision Support Systems*. Forthcoming.

Bogaert, M., Ballings, M., Bergmans, R., Van den Poel, D., 2019. *Predicting Self-declared Movie Watching Behaviour Using Facebook Data and Information-fusion Sensitivity Analysis.* Decision Sciences. Forthcoming.

Bogaert, M., Lootens, J., Van den Poel, D., Ballings, M., 2019. *Evaluating Multi-label Classifiers and Recommender Systems in the Financial Service Sector.* European Journal of Operational Research 279 (2), 620-634.

Bogaert, M. 2018. *Harnessing the Power of Social Media in Predictive Analytics.* Doctoral Dissertation UGent.

Bogaert, M., Ballings, M., Van den Poel, D., 2018. *Evaluating the Importance of Different Communication Types in Romantic Tie Prediction on Social Media.* Annals of Operations Research 263, 501-527.

Bogaert, M., Ballings, M., Hosten, M., Van den Poel, D., 2017. *Identifying Soccer Players on Facebook Through Predictive Analytics.* Decision Analysis 14 (4), 274 -297.

Bogaert, M., Ballings, M., Van den Poel, D., 2016. *The Added Value of Facebook Friends Data in Event Attendance Prediction.* Decision Support Systems 82, 26–34.

Ballings, M., Van den Poel, D., Bogaert, M., 2016. *Social Media Optimization: Identifying an Optimal Strategy for Increasing Network Size on Facebook.* Omega – International Journal of Management Science, Business Analytics 59, Part A, 15–25.

Articles under review

Matthias Bogaert, Michel Ballings, Dirk Van den Poel, and Asil Oztekin. *Box Office Sales and Social Media: A Cross-Platform Comparison of Predictive Ability and Mechanisms.* Decision Sciences. Under review.

Academic Teaching

Business analytics and big data (course organizer, 3ECTS)
Université de Namure, February 2020 – August 2020
Msc in business engineering: analytics and digital business.

Social media and web analytics (course organizer, 6ECTS)
Ghent University, February 2020 – September 2020
Msc in business engineering: data analytics and Msc in marketing analysis.

Principles of Database Management (course organizer, 6ECTS)

KU Leuven, September 2019 – January 2020

Msc in Information Management and electives from Msc in business engineering and bioinformatics

Social media and web analytics (course organizer, 6ECTS)

Ghent University, February 2019 - March 2019

Msc in business engineering: data analytics and Msc in marketing analysis.

Data mining (co-lecturer, 8ECTS)

University of Edinburgh, January 2019 – May 2019

Optional course in the Msc in marketing and business analysis.

Business research methods 1: introduction to data analysis (co-lecturer, 10ECTS)

University of Edinburgh, September 2018-December 2018

Undergraduate course in business studies. I gave the lectures on parametric and non-parametric testing.

Predictive analytics and modelling of data (course organizer, 7.5ECTS)

University of Edinburgh, September 2018 – December 2018

Msc in business analytics.

Predictive and prescriptive analytics, advanced predictive analytics (assistant, 6ECTS)

Ghent University, January 2018 – June 2018

Msc in business engineering: data analytics and Msc in marketing analysis.

Predictive and prescriptive analytics, advanced predictive analytics (assistant, 6ECTS)

Ghent University, January 2017 – June 2017

Msc in business engineering: data analytics and Msc in marketing analysis.

Predictive and prescriptive analytics, advanced predictive analytics (assistant, 6ECTS)

Ghent University, January 2016 – June 2016

Msc in business engineering: data analytics and Msc in marketing analysis.

Predictive and prescriptive analytics, advanced predictive analytics (assistant, 6ECTS)

Ghent University, January 2015 – June 2015

Msc in business engineering: data analytics and Msc in marketing analysis.

Professional Teaching

Postgraduate in Big Data and Analytics (3 sessions)

KU Leuven, November 2020, February 2020, November 2019

Sessions: Text Mining I and II, Social Media Analytics

KBC ADAM Bootcamp (2 sessions)

KBC Bank NV, 4-5 November 2019

Session 3: Modeling and Evaluation, Session 4: Piloting and Deployment

Conference Presentations

Evaluating Multi-label Classifiers and Recommender Systems in the Financial Service Sector.

Matthias Bogaert, Justine Lootens, Dirk Van den Poel, and Michel Ballings.

30th European Conference on Operation Research (June 23-26, 2019). **Location**: Dublin, Ireland.

Session title: Business Analytics I. **Stream**: Business Analytics.

Comparing the Ability of Facebook and Twitter to Predict Box Office Sales.

Matthias Bogaert, Michel Ballings, Dirk Van den Poel, and Asil Oztekin.

29th European Conference on Operation Research (July 8-11, 2018). **Location**: Valencia, Spain.

Session title: Sales Forecasting. **Stream**: Business Analytics.

Predicting Movie Watching Behaviour Using Facebook Data and Information-fusion Sensitivity Analysis.
Matthias Bogaert, Michel Ballings, Rob Bergmans and Dirk Van den Poel.
39th ISMS Marketing Science Conference (June 7-10, 2017). **Location**: Los Angeles, California, USA.
Session title: New Product Diffusion: Movies.

Evaluating the Importance of Different Communication Types in Tie Strength Prediction on Social Media.
Matthias Bogaert, Michel Ballings and Dirk Van den Poel.
INFORMS annual meeting (November 13-16 2016). **Location**: Nashville, Tennessee, USA.
Session title: Business applications in social media analytics. **Cluster:** Social Media Analytics.

Predicting Buyer Behaviour Using Social Media Data.
Matthias Bogaert, Kelly Hewett, Michel Ballings and Dirk Van den Poel.
INFORMS annual meeting (November 1-4 2015). **Location:** Philadelphia, Pennsylvania, USA.
Session title: Predicting customer behaviour using Facebook data. **Cluster:** Social Media Analytics

The Added Value of Facebook Friends Data in Event Attendance Prediction.
Matthias Bogaert, Michel Ballings and Dirk Van den Poel.
PhD day Ghent University (May 27 2015). **Location:** Ghent, Belgium.

Projects

Actelligent (Scotland) Company Limited
May 2019 – September 2019
In collaboration with Dr. Rafaella Calabrese and Prof. Dr. Jonathan Crook.

Flemish government (Flemish Call Center 1700)
September 2014 – September 2016

PhD students

PhD Supervisor: Lisa Schetgen
April 2019 – Present
Title: Essays on Predictive and Prescriptive Analytics

PhD Supervisor: Bram Janssens
September 2018 – Present
Title: Essays on Big Data Analytics

Doctoral Advisory Committee: Rafael Van Belle
September 2018 – Present
Title: Scalable Node Representation Learning in Customer Networks (SCOREPLUS): New Techniques and Applications

Awards

Teaching Awards 19: Nominated for the Best Assessment Feedback
April 2019
Nominated by the students for most insightful feedback.

Runner-up INFORMS Social Media Analytics Best Student Paper Award
November 2016
Paper: Evaluating the Importance of Different Communication Types in Romantic Tie Prediction on Social Media

SAP Belux Big Data prize
September 2015
Prize for the best marketing engineering student over the two master years

Grants

The Data Lab Research Project Grant (£ 19,932.34)
April 2019
Funding for a research project with Actelligent about Sentiment Analysis (together with Dr. Rafaella Calabrese and Prof. Dr. Jonathan Crook)

Grant for participation in a conference abroad (FWO) + grant for participation in a conference (FEB UGent) (€600)
May 2018
Matthias Bogaert, Michel Ballings, Dirk Van den Poel, Asil Oztekin. Comparing the Ability of Facebook and Twitter in Predicting Box Office Sales. 29th European Conference on Operational Research (Valencia, SP).

Grant for participation in a conference abroad (FWO) + grant for participation in a conference (FEB UGent) (€750)
June 2017
Matthias Bogaert, Michel Ballings, Rob Bergmans and Dirk Van den Poel. Predicting Movie Watching Behaviour Using Facebook Data and Information-fusion Sensitivity Analysis. 39th ISMS Marketing Science Conference (Los Angeles, California, USA).

Grant for participation in a conference (FEB UGent) (€750)
November 2015
Matthias Bogaert, Kelly Hewett, Michel Ballings and Dirk Van den Poel. Predicting Buyer Behaviour Using Social Media Data. INFORMS annual meeting 2015 (Philadelphia, Pennsylvania, USA).

Refereeing (ad hoc)

Annals of Operations Research
2020 - Present

European Journal of Operational Research
2018 – Present

Journal of Interactive Marketing
2018 - Present

Decision Support Systems
2016 – Present

Service

Commission Scientific Research, Faculty of Economics and Business Administration, Ghent University
September 2020 – Present

Follow-up Scientific council Alpha-group, Ghent University
September 2020 – Present

Commission Scientific Research, Faculty of Economics and Business Administration, Ghent University
September 2020 – Present

Secretary Commission of Master of Data Science for Business
December 2019 – Present

Course Designer Distance Learning at Scale Micromasters
January 2019 – September 2019
Designing a course module (linear regressions) in the online Micromasters in Predictive Analytics

Software

R-package DecorateR: Fit and Deploy DECORATE Trees.
Matthias Bogaert (2017).

R-package AggregateR: Aggregate numeric, date and categorical variables by an ID.
Matthias Bogaert, Michel Ballings and Dirk Van den Poel (2015).

IT skills

Advanced knowledge:

- R
- Python
- SQL
- MS Office
- Latex

Intermediate knowledge:

- SPSS
- SAS

Basic knowledge:

- Matlab
- Java
- Eviews

Languages

	Spoken	**Written**
Dutch	Mother tongue	Mother tongue
English[a]	***	***
French	**	**
German	*	*

[a]Holder of ITACE certificate for CEFR C1-level of Academic English