

Ghent University  
Faculty of Economics and  
Business Administration

## Matthias Bogaert (PhD)

**Assistant Professor at UGent**

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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

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1. Janssens, B., Bogaert, M., & Van den Poel, D. (2021). *Evaluating the influence of Airbnb listings' descriptions on demand*. International Journal of Hospitality Management, 99, 103071.
2. Bogaert, M., Ballings, M., Van den Poel, D., & Oztekin, A. (2021). *Box office sales and social media: A cross-platform comparison of predictive ability and mechanisms*. Decision Support Systems, 147, 113517.
3. Schetgen, L., Bogaert, M., & Van den Poel, D. (2021). *Predicting donation behavior: Acquisition modeling in the nonprofit sector using Facebook data*. Decision Support Systems 141, 133446.
4. Bogaert, M., Ballings, M., Bergmans, R., & Van den Poel, D. (2021). *Predicting Self-declared Movie Watching Behavior Using Facebook Data and Information-Fusion Sensitivity Analysis*. Decision Sciences, 52(3), 776–810.
5. 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.
6. Bogaert, M. 2018. *Harnessing the Power of Social Media in Predictive Analytics*. Doctoral Dissertation UGent.
7. 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.
8. 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.
9. 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.
10. 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.

## Conference Proceedings

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1. Janssens, B., & Bogaert, M. (2021). *Imputation of non-participated race results*. 8th Workshop on Machine Learning and Data Mining for Sports Analytics, ECML/PKDD 2021 Workshop.

## Academic Teaching

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### Business analytics and big data (course organizer, 3ECTS)

Université de Namur, 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**

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**Postgraduate in Big Data and Analytics (3 sessions)***KU Leuven, November 2019 – present**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\***

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\*Only presentations that I presented myself are included.

**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

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**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

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**PhD Supervisor: Shimanto Rahman**

*September 2021 – Present*

*Title: Applications of Data Analytics in B2B Marketing*

**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*

## PhD Committee Member

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### Giselle Van Dongen

October 2021

Title: *Open Stream Processing Benchmark: an Extensive Analysis of Distributed Stream Processing Frameworks*

## Awards

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### Winner Lazaridis 2021 Most Promising Research Award

November 2021

Paper: *Text mining customer experience with covid-19 events: A longitudinal and cross-industry analysis of the impact on customer well-being.*

### Runner-up INFORMS Social Media Analytics Best Student Paper Award

November 2021

Paper: *Developing a detection and interpretation tool for rumors regarding COVID-19 on Twitter using deep learning.*

### 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

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### 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)

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### 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

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### Commission Scientific Research, Faculty of Economics and Business Administration, Ghent University

September 2020 – Present

### Follow-up Scientific council Alpha-group, Ghent University

September 2020 – September 2021

### 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

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### 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

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### 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 <sup>a</sup>	***	***
French	**	**
German	*	*

<sup>a</sup>Holder of ITACE certificate for CEFR C1-level of Academic English