

# Milan MALFAIT

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## EXPERIENCE

- 2019 - 2022      **Research & Teaching assistant - Ghent University**  
Developing robust and scalable methods for analyzing single-cell 'omics data and implementing them as open-source software packages. Developing course material and assisting with the teaching of various courses in statistics:  
- *Introduction to Biostatistics*  
- *High-Dimensional Data Analysis*  
- *Practical Statistics in the Life Sciences*
- 2018 - 2019      **Bioinformatician - Lab of Stem Cells and Cancer (ULB)**  
Analysis of (single-cell) transcriptomics, micro-array, and epigenomics data: clustering, differential expression analysis, inference of gene regulatory networks, etc. Close collaboration with experimental biologists in the lab.
- 2015 - 2016      **President at Wetenschappelijke Kring VUB (student organization)**
- 2014 - 2015      **Vice-President at Wetenschappelijke Kring VUB**
- 2014 - 2015      **Tutoring mathematics and chemistry**  
High school and first-year university level.
- 2012 - 2015      **Sailing instructor at Sport Vlaanderen**

## EDUCATION

- 2017 - 2018      **Master of Science in Bioinformatics and Modelling - ULB**  
*Greatest Distinction (GPA: 89%)*  
Master thesis: "*Modelling Tumor Heterogeneity*". Implemented a new computational model to simulate intra-tumor heterogeneity in a Python OOP environment.  
<https://github.com/milanmlft/Master-Thesis>
- 2012 - 2017      **Master of Science in Bioengineering sciences - VUB**  
*Great Distinction (GPA: 83%)*  
Medical Biotechnology, Master thesis in structural biology.

## SKILLS

**Programming**  
R, Python, C++, RMarkdown, Shiny, shell, LaTeX

**Software development**  
Git, Docker, GitHub Actions, Bioconductor

**Data Science**

## LANGUAGES

Dutch (native)

English (fluent)

French (fluent)

## PERSONAL INTERESTS

**Sports**  
Climbing, cycling, scuba diving, snowboarding

**Travel**  
Always eager to learn new languages and cultures. Fond of backpacking and trekking.

## PUBLICATIONS

Aragona, M., Sifrim, A., **Malfait, M.** *et al.* “Mechanisms of stretch-mediated skin expansion at single-cell resolution”. *Nature* 584, 268-273 (2020). <https://doi.org/10.1038/s41586-020-2555-7>

Dekoninck, S., Hannezo E., ..., **Malfait, M.** *et al.* “Defining the Design Principles of Skin Epidermis Postnatal Growth”. *Cell* 181, 604-620.e22 (2020). <https://doi.org/10.1016/j.cell.2020.03.015>

Centonze, A., Lin, S., ..., **Malfait, M.** *et al.* “Heterotypic cell-cell communication regulates glandular stem cell multipotency”. *Nature* 584, 608-613 (2020). <https://doi.org/10.1038/s41586-020-2632-y>

De Bruyn, P., Prolič-Kalinšek, M., ..., **Malfait, M.** *et al.* “Nanobody-aided crystallization of the transcription regulator PaaR2 from *Escherichia coli* O157:H7. *Acta Crystallographica Section F: Structural Biology Communications* 77, 374-384 (2021). <https://doi.org/10.1107/s2053230x21009006>