



# Chaïm De Mulder

## Experience

15/10/2015– present **PhD Candidate**, Ghent University, Faculty of Bioscience engineering, Department of Mathematical Modeling, Statistics and Bioinformatics, BIOMATH group (Model based bioprocess analysis and optimisation).



**Project** Model-based decision support and knowledge build-up for the Wastewater Treatment Plant of Eindhoven, The Netherlands, in close collaboration with the operators (Waterboard De Dommel)

15/10/2014– 15/10/2015 **Research Assistant**, Ghent University, Faculty of Bioscience engineering, Department of Mathematical Modeling, Statistics and Bioinformatics, BIOMATH group (Model based bioprocess analysis and optimisation).

### Projects

- Coupling a hydrodynamic model (using CFD) and a biokinetic model (using established wastewater treatment models) for the Wastewater Treatment Plant of Breda, The Netherlands.
- Construct a model for the simulation of the High Rate Activated Sludge Process, based on two previously described models.

### Other responsibilities:



- Active member of the Belgian Division of the International Water Association (B-IWA):
  - Maintenance of [website](#), [LinkedIn](#)- and [Twitter](#)-account.
  - Coordinator of the first and second [B-IWA nocturnal](#)



- Co-organizer of an [IWA YWP Workshop](#) (Aug 29 - 30, 2015)
- Assist in the course Modeling and Control of Wastewater Treatment Plants, given at the Faculty of Bioscience Engineering, Ghent University.

15/7/2013– 6/9/2013 **Internship in combination with master thesis**, DC Water, Research and Development Department, Washington DC, USA.



**Project:** Batch experiments were conducted under different conditions to obtain AOB and NOB oxygen half-saturation constants through parameter estimation using a specific model describing the experimental procedure.

5/7/2012– 31/8/2012 **IAESTE Internship**, Aalto University, Department of Biotechnology and Chemical Technology, Espoo, Finland.



**Project:** Catalysts used in the dehydration of xylose to furfural were characterized using micro-scale reactors, titration experiments and sugar-adsorption measurements.

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Born 27/3/1991 in Ghent

## Education

- 2012–2014 **Master in Bio-Science Engineering: Environmental Technology, Ghent University.**  
**MSc Thesis:** Impact of intrinsic and extrinsic parameters on the oxygen kinetic parameters of Ammonia and Nitrite Oxidizing Bacteria
- 2009–2012 **Bachelor in Bio-Science Engineering: Environmental Technology, Ghent University.**  
**BSc Thesis:** Integrated grey water systems in city renovation and development projects

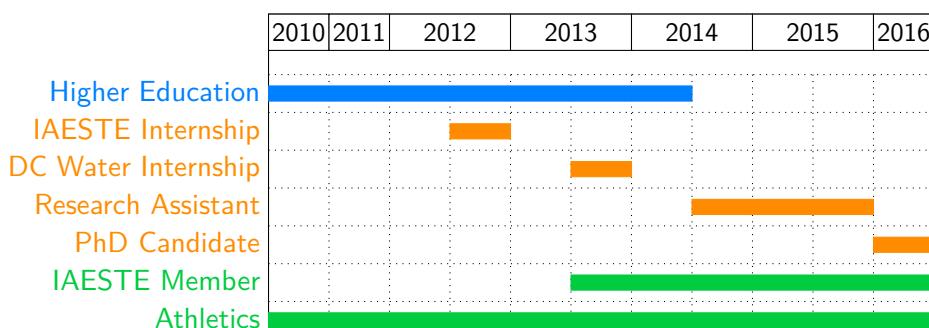
## Extra-curricular

### IAESTE

- 2015-2016 LC Ghent Vice-President & Summer Reception Officer  
Attending conferences, jobraising, support within international IAESTE groups (Connect Region), general support. Organizing activities for incoming trainees.
- 2014-2015 LC Ghent supporting member & Summer Reception Officer  
Design of IAESTE T-shirts, presenting IAESTE to companies, jobraising. Organizing activities for incoming trainees.
- 2013-2014 LC Ghent Secretary  
Responsible for making notes during meetings and writing the meeting reports, jobraising.
- ### Sports and general interests
- 2006-present Athletics (recreational and competition), music, climate related, environmental and social issues, Scandinavian culture

## Skills

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|-------------|---|
| Software    | o Advanced: WEST (Mike by DHI), Python, GitHub, L <sup>A</sup> T <sub>E</sub> X       |
|             | o Basic: MS Office, OpenFOAM, Matlab - Simulink, Inkscape, Drupal, command line tools |
| Soft skills | o Social and open-minded  |
|             | o Enthusiastic, engaged, motivated  |
| Languages   | o Native: Dutch   |
|             | o Fluent: English   |
|             | o Basic: French, Swedish  |



## References

- U. Rehman, Y. Amerlinck, M. Arnaldos, J. Porro, **De Mulder, Chaïm** & I. Nopens (2015). Computational fluid dynamic modeling of nitrous oxide in a full scale WWTP. In *Watermatex, 9<sup>th</sup> IWA Symposium on system analysis and integrated water management*. IWA, Gold Coast, Queensland, Australia.
- D. Seuntjens, B. Bundervoet, H. Mollen, **De Mulder, Chaïm**, E. Wypkema, A. Verliefde, I. Nopens, J. Colsen & S. E. Vlaeminck (2015). Energy efficient treatment of A-stage effluent: pilot-scale experiences with shortcut nitrogen removal. In *IWA Nutrient removal and recovery conference, papers*. IWA, Gdansk, Poland.
- D. Seuntjens, **De Mulder, Chaïm**, H. De Clippeleir, S. Murthy, Z. Li, K. Chandran, I. Nopens & S. E. Vlaeminck (2014). Investigating AOB and NOB kinetic parameters for oxygen under moderate climate wastewater conditions. In *ENC, 19<sup>th</sup> European Nitrogen Cycle Conference, Abstracts*. Ghent, Belgium.