



# Chaïm De Mulder

## Experience

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



### Project

Model-based decision support, knowledge build-up and advanced modeling of 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 Data Analysis and Mathematical Modeling, 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.
- Implementing a model for the simulation of the High Rate Activated Sludge Process, based on two previously described models.

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

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

### IWA involvement.



- Active YWP member in the board of directors of the Belgian branch of IWA (BIWA), 2015–present
- Organising Committee member of the IWA YWP Benelux Conference, Gent, Belgium, July 2017

## Education

2012–2014 **Master in Bio-Science Engineering: Environmental Technology**, *Ghent University.*

2009–2012 **Bachelor in Bio-Science Engineering: Environmental Technology**, *Ghent University.*

Kettingstraat 9/301 – 9000 Gent

☎ +32 479 74 55 02 • ✉ [chaim.demulder@ugent.be](mailto:chaim.demulder@ugent.be)

Born 27/3/1991 in Ghent

## Extra-curricular



IAESTE

### IAESTE

(International Association for the Exchange of Students for Technical Experience)

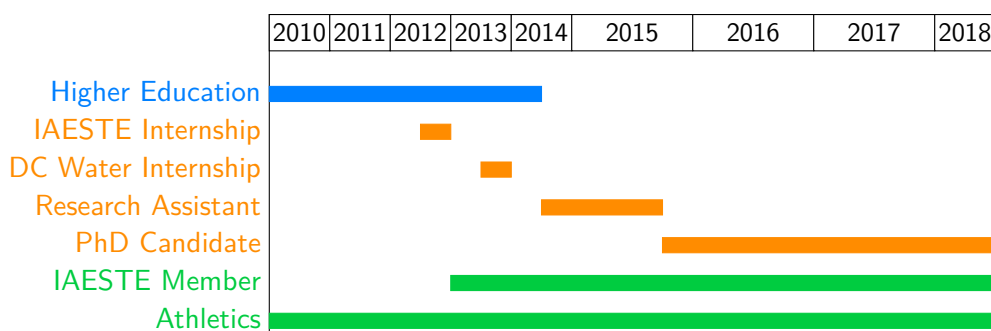
- 2017–2018 **Connect Region Project Coordinator:** Member of the Regional Management team of western Europe, day-to-day management of regional affairs. Responsible for several projects with participants from across the region.
- 2016–2017 **LC Ghent Exchange Coordinator:** Board member of the Local Committee of Ghent, day-to-day management of a 25-person team of students. Responsible for international internship exchange and networking, jobraising.
- 2015–2016 **LC Ghent Vice-President & Summer Reception Officer:** General support on local level (team management) and within international IAESTE groups (Region of western Europe). Jobraising and organizing activities for incoming trainees.
- 2014–2015 **LC Ghent supporting member & Summer Reception Officer:** Design of PR materials, presenting IAESTE to companies, jobraising. Organizing activities for incoming trainees.
- 2013–2014 **LC Ghent Secretary:** Responsible for meeting reports, jobraising.

### Sports and general interests

- 2006–present Athletics (recreational and competition), music, board games, climate related, environmental and social issues, Nordic culture

## Skills

- Software
- o Advanced: WEST (Mike by DHI), Python, GitHub,  $\LaTeX$
  - 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



Kettingstraat 9/301 – 9000 Gent

☎ +32 479 74 55 02 • ✉ [chaim.demulder@ugent.be](mailto:chaim.demulder@ugent.be)

Born 27/3/1991 in Ghent

## References

- [1] **C. De Mulder**, T. Flameling, J. Langeveld, Y. Amerlinck, S. Weijers, and I. Nopens. Automating the raw data to model input process using flexible open source tools. In *Proceedings of the Frontiers International Conference on Wastewater Treatment*, 2017.
- [2] **C. De Mulder**. wwdata: Data analysis package aimed at data obtained in the context of (waste)water, 2017. DOI:10.5281/zenodo.1035738.
- [3] D. Seuntjens, M. Han, F-M. Kerckhof, Boon, A. Al-Omari, I. Takacs, F. Meerburg, **C. De Mulder**, B. Wett, C. Bott, S. Murthy, J.M. Carvajal Arroyo, H. De Clippeleir, and S.E. Vlaeminck. Pinpointing wastewater and process parameters controlling the aob to nob activity ratio in sewage treatment plants. *Water Research*, 138:37–46, 2018.
- [4] **C. De Mulder**, T. Flameling, J. Langeveld, S. Weijers, I. Nopens, and Y. Amerlinck. From online data to model input: a flexible open source data analysis tool. In *Proceedings of the IWA 2017 Conference on Sustainable Wastewater Treatment and Resource Recovery: Research, Planning, Design and Operation*, Chongqing, China, 2017.
- [5] **C. De Mulder**, U. Rehman, W. Audenaert, Y. Amerlinck, T. Flameling, S. Weijers, and I. Nopens. Sensor location in WRRFs: easy change, big win. In *Proceedings of the 12<sup>th</sup> IWA Specialized Conference on Instrumentation, Control and Automation*, Québec, Canada, 2017.
- [6] **C. De Mulder**, T. Flameling, J. Langeveld, Y. Amerlinck, S. Weijers, and I. Nopens. Automating the raw data to model input process using flexible open source tools. In Giorgio Mannina, editor, *Proceedings of the Frontiers International Conference on Wastewater Treatment*, pages 92–97, Palermo, Italy, 2017.
- [7] **C. De Mulder**, S. Van Hoey, S. Van Hulle, S.N. Agathos, P. Cauwenberg, P. Mergen, P. Seuntjens, I. Smets, G. De Guedre, A. Mouton, D. Schowanek, B. Meesschaert, W. Verstraete, and I. Nopens. Pressing topics in the belgian water sector anno 2015. *Sustainability of Water Quality and Ecology*, 2016.
- [8] D. Seuntjens, B.L.M. Bundervoet, H. Mollen, **C. De Mulder**, E. Wypkema, A. Verliefde, I. Nopens, J.G.M. Colsen, and S.E. Vlaeminck. Energy efficient treatment of a-stage effluent: pilot-scale experiences with shortcut nitrogen removal. *Water Science and Technology*, 2016.
- [9] D. Seuntjens, B.L.M. Bundervoet, H. Mollen, **C. De Mulder**, E. Wypkema, A. Verliefde, I. Nopens, J.G.M. Colsen, and S.E. Vlaeminck. Energy efficient treatment of A-stage effluent: pilot-scale experiences with shortcut nitrogen removal. In *IWA Nutrient removal and recovery conference, papers*, Gdansk, Poland, 2015.
- [10] **C. De Mulder**. The impact of intrinsic and extrinsic parameters on the oxygen kinetic parameters of ammonia and nitrite oxidising bacteria. Master's thesis, Ghent University, Coupure Links 653, 9000 Gent, 2014.
- [11] U. Rehman, Y. Amerlinck, M. Arnaldos, J. Porro, **C. De Mulder**, and I. Nopens. 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*, Gold Coast, Queensland, Australia, June 2015. IWA.
- [12] D. Seuntjens, **C. De Mulder**, H. De Clippeleir, S. Murthy, Z. Li, K. Chandran, I. Nopens, and S.E. Vlaeminck. 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, September 2014.

Kettingstraat 9/301 – 9000 Gent

☎ +32 479 74 55 02 • ✉ [chaim.demulder@ugent.be](mailto:chaim.demulder@ugent.be)

Born 27/3/1991 in Ghent