MATHIJS SAEY

8 December 1991

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EDUCATION

Vrije Universiteit Brussel   September 2012 - July 2014

Master of Science in Applied Sciences and Engineering: Computer Science:
Languages and Software Engineering

Grote onderscheiding

Vrije Universiteit Brussel   September 2009 - July 2012

Bachelor of Science: Computer Sciences

Voldoening

EMPLOYERS

Software Languages Lab (SOFT)   October 2014 - Present

PhD Student   *Fulltime*

· Conducted research on real-time Big Data systems and applications
· Teaching assistant

Brusselse Tutoren voor Scholieren (BRUTUS)   September - December 2013

Tutor   *Student Job, 3h/week*

· Provide additional mathematics classes to underprivileged students

InSilico Genomics   July - August 2013

Programmer   *Summer Job, 3d/week*

· Summer job as a programmer

TEACHING EXPERIENCE

Structure of Computer Programs   2018 - Present

Teaching Assistant

· Gave exercises and lab sessions on the principles of programming to 1st Bachelor Computer Science students using Scheme
· Set up systems for automatically providing feedback on student code in the context of an education innovation project
· Drafted and graded exams and small programming assignments

Introduction to Computer Science   2014 - 2018

Teaching Assistant

· Gave exercises and lab sessions on programming in Python to Bachelor students in bioengineering, chemistry, geography and physics
· Drafted and graded exams and programming projects

RESEARCH

Experience

· Specialized in highly parallel, distributed and event-based systems
· Strong background in reactive programming and dataflow-like execution environments

Publications

Saey, Mathijs, Joeri De Koster, and Wolfgang De Meuter. "Skitter: A Distributed Stream Processing Engine with Pluggable Distribution Strategies". In: *Software: Practice and Experience* (submitted; under review).

Saey, Mathijs, Joeri De Koster, and Wolfgang De Meuter. "Skitter: A DSL for Distributed Reactive Workflows". In: *Proceedings of the 5th ACM SIGPLAN International Workshop on Reactive and Event-Based Languages and Systems*. REBLS 2018. New York, NY, USA: ACM, 2018, pp. 41–50. ISBN: 978-1-4503-6070-8. DOI: 10.1145/3281278.3281281.

Saey, Mathijs, Joeri De Koster, and Wolfgang De Meuter. "Skitter: A DSL for Distributed Reactive Workflows". Poster presented at the conference on Systems, Programming, Languages and Applications: Software for Humanity (SPLASH). 2018.

Saey, Mathijs, Joeri De Koster, Sartor Jennifer B., and Wolfgang De Meuter. "An Extensible Virtual Machine Design for the Execution of High-Level Languages on Tagged-Token Dataflow Machines". MoreVMs Workshop on Modern Language Runtimes, Ecosystems, and VMs. 2017.

Harnie, Dries, Mathijs Saey, Alexander E. Vapirev, Jorg Kurt Wegner, Andrey Gedich, Marvin Steijaert, Hugo Ceulemans, Roel Wuyts, and Wolfgang De Meuter. "Scaling Machine Learning for Target Prediction in Drug Discovery Using Apache Spark". In: *Future Generation Computer Systems* 67 (2017), pp. 409–417. ISSN: 0167-739X. DOI: https://doi.org/10.1016/j.future.2016.04.023.

Mossoux, Sophie, Mathijs Saey, Stefania Bartolini, Sam Poppe, Frank Canters, and Matthieu Kervyn. "Q-LAVHA: A Flexible GIS Plugin to Simulate Lava Flows". In: *Computers & Geosciences* 97 (2016), pp. 98–109. ISSN: 0098-3004. DOI: https://doi.org/10.1016/j.cageo.2016.09.003.

OTHER RELEVANT EXPERIENCE

· Hands-on experience with a variety of programming paradigms, such as Functional, Object-Oriented, Declarative and Reactive Programming
· Experience with programming languages, such as Elixir, Python, Scheme/Racket, Nim, Rust, Objective-C, Haskell, C, C++, Prolog, Smalltalk and others
· Working knowledge of various tools, such as git, vim and LaTeX
· Amateur Linux sysadmin

LANGUAGES

Dutch	Native proficiency
English	Full professional proficiency
French	Limited working proficiency
Mandarin	Elementary proficiency