Bastiaan Koster

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Skills

Academic skills ☻ ☻ ☻ ☻ ☻

Teaching ☻ ☻ ☻ ☻ ☺

Programming ☻ ☻ ☻ ☻ ☺

Statistics ☻ ☻ ☻ ☺ ☺

Languages

Dutch ☻ ☻ ☻ ☻ ☻

English ☻ ☻ ☻ ☻ ☺

Profile

I would describe myself as a curious and motivated person who wants to understand how natural processes function and what underlying principles are responsible for it. For this reason, I have a profound interest in cell biology. Subjects I am working on, I want to understand very thoroughly. For solving problems, solitary work suits me best.

Education

BSc Biology: Molecular Cell Biology and Bioinformatics,
Cell biology, bioinformatics, mathematical modelling, laboratory work
Universiteit van Amsterdam,
Graduated 2010

MSc Bioinformatics: Systems Biology,
Programming, mathematical modelling, data analysis
Vrije Universiteit van Amsterdam,
Graduated 2017

Skills and Competences:

Programming
Skilled usage: R, MatLab
Able to use: Mathematica, Python

Biomolecular Simulation
Half the courses in my Msc curriculum and an internship focused on building mathematical models and using them to simulate cellular processes.

Academic skills
Critically reading scientific literature and utilize it to construct a clear and convincing argument suits me. My mind is very creative and I have a strong long-term memory. Because of this, I can integrate new information with a lot of previous knowledge and imagine how a hypothesis can be tested. I like to get to the bottom of things.

Teaching
I enjoy explaining things to my colleagues. When I am learning a new topic, I try to imagine how I would explain this as clear and short as possible. Teachers and fellow students have often told me that my presentations were markedly clear and easy to follow from start to end. As a volunteer, I explain science to visitors of two museums.

Statistics
Half the courses in my Msc curriculum and an internship focused on the statistical analysis of omics data. I can use advanced statistical methods to mine large multilevel datasets. Some of these methods I have programmed myself.

Work Experience

BSc Internship, Modelling of gene expression control

Universiteit van Amsterdam, Regulatory Networks Group at CWI

01-04-2009/31-06-2009

Supervisor: prof. dr. F.J. Bruggeman

Created small models in Mathematica to simulate epigenetic mechanisms for gene expression control e.g. nucleosome modification and border formation.

MSc Internship 1, Modelling and simulation of Glucose Metabolism

Vrije Universiteit van Amsterdam, Molecular Cell Physiology

01-06-2011/31-03-2012

Supervisor: dr. D. Molenaar

Started with a mathematical model (created in Mathematica) of glycolysis, glucose fermentation and cellular respiration. I edited and extended the model such that it simulated these processes in yeast (*S. cerevisiae*). This model could be used to make inferences about how and when yeast 'chooses' between fermentation and respiration.

MSc Internship 2, Multivariate analysis of metabolic effects by spironolactone treatment

Universiteit van Amsterdam, Biosystems Data Analysis Group

17-09-2012/10-03-2013

Supervisor: dr. J.A. Westerhuis

Analysing medical (NMR) data in MathLab and R using statistical tools based on linear regression (PLS-DA), Principal Component Analysis (ASCA) and Between Metabolite Ratios (SCA-IND).

Hobbies and interests

Citizen science projects

To get more hands-on experience in these topics, and to contribute to science, I prepare dinosaur fossils at the Oertijd Museum in Boxtel as a volunteer. At the Hunebedcentrum in Borger, I educate museum visitors about life in prehistoric times. I have also joined multiple online citizen science projects on Zooniverse. For example, putting the data of plants from loose notes (scans) neatly into a database.

I have also made many contributions to Wikipedia.

Sport

Since I work mainly with my mind, I think it is important to exercise multiple times a week. A healthy mind in a healthy body. I practice group sports like judo, CrossFit and Bootcamp.