

jonasdegrave

PHD Researcher

contact

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github.com/317070
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languages

Dutch

mother tongue

English

near-native (C2)

French

professional (C1)

German, Chinese

basic (A2)

programming

I ♥ Python, Java & C
I have **XP** with PHP,
Shell, Javascript, C++,
C#, TeX, ASM,
Redcode, Ruby, Lua,
SQL, Delphi & Basic

platforms

Linux, Theano,
Lasagne, Apache,
PostgreSQL, Drupal,
Django, CSS3, HTML5,
jQuery, MPLab X

experience

- 2014–Now **Agency for Innovation by Science and Technology in Flanders** Ghent University, Belgium
Phd researcher
Developing stable gaits for quadrupedal robots and researching the extent to which you can use the morphology of the robot in order to compute the desired motor signals. This can be done with machine learning, where I focus on deep learning and reinforcement learning.
- 2012–2013 **AMARSi, European Community's FP7** Ghent University, Belgium
Phd researcher
Developing, testing and debugging both hardware, firmware and software of the compliant quadrupedal robot, 'Oncilla'.

education

- 2010–2012 **Masters of Science** in Electrical Engineering Ghent University, Belgium
With a specialization in information and communication technology and a focus on media and machine learning. I graduated on exploring whether a robot learns to run faster when it starts the learning process with an easier morphology.
- 2011 **Masters of Science** in Informatics Institut Polytechnique de Grenoble, France
Erasmus experience in order to further specialize in graphics, vision and robotics
- 2007–2010 **Bachelor of Science** in Electrical Engineering Ghent University, Belgium
Specialization in communication technology

awards

- 2016 **Kaggle's Second Data Science Bowl** National Heart, Lung, and Blood Institute, USA
Awarded \$50,000 to the team for developing the second best algorithm to measure the ventricle size in 4D MRI-data of the heart.
- 2015 **Kaggle's National Data Science Bowl** Oregon State University, USA
Awarded \$100,000 to the team for developing the best algorithm to classify images of plankton.
- 2009 **Marianne De Leenheer Prize** Ghent University, Belgium
Awarded € 1,250 to promote creativity in math, for solving the open Blacksburg Middle School problem in SIAM's Problems and Solutions.
- 2007 **First prize Geography Derby of the Low Countries** Texel, Netherlands
Awarded €250 on the written test in a competition between the best geography students in Flanders and the Netherlands
- 2005–2007 **7 times finalist in science Olympiads Flanders** Brussels, Belgium
Finished 7 times among the top 15 students for the Olympiads in mathematics, chemistry, physics and geography.

publications

I have authored 3 journal articles (of which 2 are under review) and 5 first author conference papers. I included a selection of my publications underneath. You may find a complete list of my publications on biblio.ugent.be/person/000070398859.

article in peer-reviewed journal

Transfer learning of gaits on a quadrupedal robot

Jonas Degraeve, Michaël Burm, Pieter-Jan Kindermans, Joni Dambre, Francis Wyffels
Adaptive Behavior. Sage, 2015

invited talk

Data Science for Social Good: How the Data Science Bowl Advanced the Field of Deep Learning and Ocean Science

Jonas Degraeve
IEEE Data Science and Advanced Analytics conference (DSAA), 2015

international peer-reviewed conferences & proceedings

Spatial Chirp-Z Transformer Networks

Jonas Degraeve, Sander Dieleman, Joni Dambre, Francis Wyffels
the European Symposium on Artificial Neural Networks (ESANN), 2016, Bruges, Belgium

Developing an Embodied Gait on a Compliant Quadrupedal Robot

Jonas Degraeve, Ken Caluwaerts, Joni Dambre, Francis Wyffels
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2015, Hamburg, Germany

Terrain Classification for a Quadruped Robot

Jonas Degraeve, Robin Van Cauwenbergh, Francis Wyffels, Tim Waegeman, Benjamin Schrauwen
International Conference on Machine Learning and Applications (ICMLA), 2013, Miami, Florida, USA

Comparing Trotting and Turning Strategies on the Quadrupedal Oncilla Robot

Jonas Degraeve, Michaël Burm, Tim Waegeman, Francis Wyffels, Benjamin Schrauwen
IEEE International Conference on Robotics and Biomimetics (ROBIO), 2013, Shenzhen, China

achievements

2015

LSD Neural Net artwork

Trbovlje, Slovenia

Exposition of my artwork based on artificial neural networks at the international new media festival 'Speculum Artium'. The work received critical acclaim from global media such as the New Scientist, The Guardian and Der Spiegel.

2012–2014

Co-President Pirate Party Belgium

Belgium

I was co-president of the Belgian section of the Pirate Party. I led the party from nothing to the 2012 and 2014 elections. When I left, the polls gave a voting intention of 1.4% for the party.

interests

professional: robotics, deep learning, reinforcement learning, machine learning, transfer learning, media processing, data mining, software development

personal: politics, the science of cooking, board games, producing music, running