Thies Gehrmann PhD Curriculum Vitæ

(email): thiesgehrmann@gmail.com
(https): thiesgehrmann.github.io
(tel NL): +31 (0)640 175 860

D.O.B. April 8th 1989
Nationality: German

Private address:
Morskade 14
2332 GB Leiden
The Netherlands

Last updated July 31, 2019.

Personal profile

Currently, I am a Postdoc in the department of Molecular Epidemiology at the Leiden University Medical Centre, working on translational research of healthy ageing. Bioinformatics is a constantly developing field, with continuously evolving measurements that presents a splendid opportunity to develop and apply novel methods. It also requires the practitioner to develop multidisciplinary skills from the statistical, computational and biological domains. I am excited to be part of this field, where my knowledge and competences are constantly challenged, humbled and developed.

Employment

Jan. 2018 - Present	Postdoc at Department of Molecular Epidemiology, Leiden University Medical Centre *Bioinformatician on healthy ageing, together with Max Plank Institute of Biological Ageing.*
Nov. 2016 - 2017	Postdoc at KNAW/Westerdijk Institute of Fungal Biodiversity *Embedded bioinformatician.*
Nov. 2012 - 2016	PhD Candidate *Conducted research and performed teaching.*

Education

2012-2018	Pattern Recognition and Bioinformatics group, TU Delft, The Netherlands *PhD in Bioinformatics.* *Bioinformatic Analysis of Genetic and Transcriptomic Variation in Fungi.*
2010-2012	Leiden University, Leiden, The Netherlands (In cooperation with TU Delft) *MSc Computer Science Track Bioinformatics.* *Thesis on protein function prediction using Conditional Random Fields.*
2008-2010	Heriot Watt University, Edinburgh, Scotland *BSc (Ord) Computer Science* *Graduated with distinction.*
2007-2008	Napier University, Edinburgh, Scotland *Certificate of Higher Education* *Completed year 1 of Computer Studies, then transferred to Heriot Watt University.*

Skills

Technical Skills	Python, Scala, C/C++, Java, Shell, Matlab, R Experience with schedulers (SLURM, PDB) and version control software, (SVN, Git). SQL, XML (and related technologies), LaTeX. Pipeline development and management (Snakemake, Anaconda, Jupyter Notebook). Experienced with Unix environments (primarily Linux). Machine learning, statistical genetics, comparative genomics, transcriptomic and metabolomic analysis and algorithm development.
Languages	Fluent in Norwegian, German and English. High level Dutch. Beginners French.

Referees

Upon request	Contact Thies for referee contact details.

Teaching

MSc Courses	*Functional Genomics and Systems Biology* Lecturer and teaching assistant. Fall 2014, 2015, and 2016 at TU Delft
	Computational Molecular Biology Teaching assistant. Spring 2012 at Leiden University
BSc Courses	*Life Science and Technology Bioinformatics* Teaching assistant. Spring 2016 at TU Delft.
	Clinical Biotechnology: Bioinformatics Teaching assistant. Fall 2018, 2019 at TU Delft.
	Molecular Data Science Teaching assistant. Spring 2018 at Leiden University Medical Center
	Genome Scale Data Analysis Lecturer and teaching assistant. Fall 2014 at TU Delft
External Courses	*Quantitative biology summer school* Lectured on computational aspects of synteny and alternative splicing in fungi. Summer 2015 at Utrecht University.

Student Supervision

Myrthe de Haan	B.Sc student 2019-2020 *Using the drug-gene interactome to predict intervention-mimicing drugs.*
Jet Beekwilder	B.Sc Student 2017-2018 *Comparison of DNA extraction methods from fungi for Nanopore sequencing.*
André Vollering	M.Sc Student 2014-2015 *Heterosis: Finding Associated Genomic Regions. (Under embargo)*
Valerie Pourquie	B.Sc Student 2015 *Conservation of polarization proteins in yeast and fungi.*
Dimitris Palachanis	M.Sc Student 2013-2014 *Using the Multiple Instance Learning framework to address differential regulation.*

Other activities/skills/information

Awards	Nature Ageing, Rejuvination and Health Conference 2019, 'Best Poster' award. ECCB 2016 Student Symposium, 'Best Oral Presentation' award. Benelux Bioinformatics Conference 2015 Student Symposium,, 'Best Oral presentation'. TU Delft Graduate School, 'Best poster presentation' award 2013. Scott Logic Computer Science Prize 2010.
Reviewing	Publons profile Nature Scientific Reports (2019) FEMS Yeast Research (2018) Nucleic Acid Research (2016)
Volunteering	International Student Network (Leiden) 2013-2019. Set construction and management. Dutch Red Cross (Den Haag) 2014-2015. First Aid (EHBO) at events and refugee centers.
Hackathons	Hackathon for Good 2019, The Hague: Translators Without Borders challenge Hackathon for Good 2018, The Hague: Asser Lang-grabbing challenge

Publications

Google Scholar profile

Journal publications

[1] Vladimiro Guarnaccia, Thies Gehrmann, Geraldo J. Silvia-Junior, Paul H. Fourie, Sajeet Haridas, Duong Vu, Joseph Spatafora, Francis M Martin, Vincent Robert, Igor V. Grigoriev, Johannes Z. Groenewald, and Pedro W. Crous. Phyllosticta citricarpa and sister species of global importance to citrus. *Molecular Plant Pathology*, 2019

[2] D Vu, Marizeth Groenewald, M De Vries, T Gehrmann, B Stielow, U Eberhardt, A Al-Hatmi, JZ Groenewald, G Cardinali, J Houbraken, et al. Large-scale generation and analysis of filamentous fungal dna barcodes boosts coverage for kingdom fungi and reveals thresholds for fungal species and higher taxon delimitation. *Studies in mycology*, 92:135–154, 2019

[3] Eveline T Diepeveen, Thies Gehrmann, Valérie Pourquié, Thomas Abeel, and Liedewij Laan. Patterns of conservation and diversification in the fungal polarization network. *Genome biology and evolution*, 10(7):1765–1782, 2018

[4] Thies Gehrmann, Jordi F Pelkmans, Robin A Ohm, Aurin M Vos, Anton SM Sonnenberg, Johan JP Baars, Han AB Wösten, Marcel JT Reinders, and Thomas Abeel. Nucleus-specific expression in the multinuclear mushroom-forming fungus agaricus bisporus reveals different nuclear regulatory programs. *Proceedings of the National Academy of Sciences*, 115(17):4429–4434, 2018

[5] Francine Boonekamp, Sofia Dashko, Marcel Van den Broek, Thies Gehrmann, Jean-Marc Daran, and Pascale Daran-Lapujade. The genetic makeup and expression of the glycolytic and fermentative pathways are highly conserved within the saccharomyces genus. *Frontiers in genetics*, 9:504, 2018

[6] Abigail L Manson, Thomas Abeel, James E Galagan, Jagadish Chandrabose Sundaramurthi, Alex Salazar, Thies Gehrmann, Siva Kumar Shanmugam, Kannan Palaniyandi, Sujatha Narayanan, Soumya Swaminathan, et al. Mycobacterium tuberculosis whole genome sequences from southern india suggest novel resistance mechanisms and the need for region-specific diagnostics. *Clinical Infectious Diseases*, 64(11):1494–1501, 2017

[7] Jordi F Pelkmans, Mohini B Patil, Thies Gehrmann, Marcel JT Reinders, Han AB Wösten, and Luis G Lugones. Transcription factors of schizophyllum commune involved in mushroom formation and modulation of vegetative growth. *Scientific reports*, 7(1):310, 2017

[8] Thies Gehrmann, Jordi F Pelkmans, Luis G Lugones, Han AB Wösten, Thomas Abeel, and Marcel JT Reinders. Variants in rna-seq data show a continued mutation rate during strain preservation of schizophyllum commune. *BioRxiv*, page 201012, 2017

[9] Jordi F Pelkmans, Aurin M Vos, Karin Scholtmeijer, Ed Hendrix, Johan JP Baars, Thies Gehrmann, Marcel JT Reinders, Luis G Lugones, and Han AB Wösten. The transcriptional regulator c2h2 accelerates mushroom formation in agaricus bisporus. *Applied microbiology and biotechnology*, 100(16):7151–7159, 2016

[10] Thies Gehrmann and Marcel JT Reinders. Proteny: discovering and visualizing statistically significant syntenic clusters at the proteome level. *Bioinformatics*, 31(21):3437–3444, 2015

Conference

[11] Thies Gehrmann, Marco Loog, Marcel JT Reinders, and Dick de Ridder.

publications	Conditional random fields for protein function prediction. In *IAPR International Conference on Pattern Recognition in Bioinformatics*, pages 184–195. Springer, Berlin, Heidelberg, 2013
Under Review	[12] Design and experimental evaluation of a minimal, innocuous watermarking strategy to distinguish near-identical DNA and RNA sequences. (*Under review in ACS Synthetic Biology*)
In Progress	[13] Lifestyle Intervention sensitizes the pro-homeostasis blood transcriptomic response to nutrient intake (*In progress*)
	[14] Characterization of genetic variants in RAS/MEK/ERK Pathway in exceptionally long-lived Dutch families (*In progress*)
	[15] Archana Tare, Seungjin Ryu, Cristina Giuliani, Thies Gehrmann, Gil Atzman, Nir Barzilai, Daniela Mari, Giuseppe Passarino, Claudio Franceschi, Eline P Slagboom, Yousin Suh. Genetic landscape of GDF11 and MSTN in human longevity revealed by high-throughput sequencing in a multi-cohort study (*In progress*)
	[16] Antonis Somarakis, Manolis Fragkiadakis, Marios Kefalas, Stelios Paraschiakos, Michaelis Vrachasotakis, Thies Gehrmann. On the global prediction of land grabbing risk. (*In progress*)
	[17] Annick Lang, Thies Gehrmann, Nils Cronberg. Genetic diversity in bryophyte population with facultative nannandry (*In progress*)
	[18] Lizel Mostert, Thies Gehrmann, Duong Vu, Vincent Robert. Genomic analysis of the Grape vine pathogen *Phaeoacremonium* in South African vineyards. (*In progress*)

Conference Talks

2019	LANDac 2019: Panel organizer and presenter *Uniting Global and Hyper-Local Data for Land: The use of global and local data for land grabbing risk prediction*
	European Dialogue on Internet Governance, EuroDIG 2019: Panel organizer and presenter *Digital cooperation in action - A collaborative case study: Predicting Land Grabbing*
	BioSB 2019: Presenter *Nutrient challenge exposes transcriptomic shift by lifestyle intervention in healthy participants*
2016	ECCB Student Symposium 2016: Presenter *Karyollele specific expression in Agaricus bisporus*
2015	BBC Student Symposium 2015: Presenter *Alternative Splicing in mushrooms from RNA-Seq*
2013	Pattern Recognition in Bioinformatics 2013: Presenter *Conditional Random Fields for protein function prediction*

Conference Organization

2019	LANDac 2019: Panel organizer *Uniting Global and Hyper-Local Data for Land*
	European Dialogue on Internet Governance, EuroDIG 2019: Panel organizer *Digital cooperation in action - A collaborative case study*