philipp**bayer**

bioinformatician

contact

philippbay@gmail.com
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languages

German: mother tongue
English: fluent
French & Japanese:
advanced

programming

Python
Go, Perl, Bash, Java
Ruby on Rails, HTML

edu**cation**

2012–12/2014	**PhD** Applied Bioinformatics	University of Queensland, Brisbane

Working in the applied bioinformatics group on the use of genotyping by sequencing to improve the genome assembly of canola

2010–2012	**Master** of IT	Bond University, Gold Coast

Graduated with Honours

2006–2009	**Bachelor of Science** Biology	University of Münster, Germany

Thesis: Analysis of splicing in two populations of marine plants using bioinformatic approaches

exp**erience**

2013–Current	**Software Carpentry instructor**	Australia

Certified Software Carpentry instructor. Software Carpentry is a Mozilla/Alfred P. Sloan Foundation funded non-profit organization which teaches best programming practices (structured programming, reproducible research, version control etc.) in bootcamps to scientists around the world

2012–2012	**Research exchange** at Bayer CropScience	Ghent, Belgium

For 4 weeks, worked on the assembly of the *Brassica napus* genome. Learned to work in a corporate science environment

2011–Now	**Co-founder openSNP.org**	Germany/Australia

A project for costumers of genotyping companies like 23andMe to share their data with scientists around the world, for free.
Responsibilities:
- Partially wrote and still maintain the site's Ruby on Rails code-base
- Interact with the community of 1500 users
- System administration of the site's server

awa**rds**

2014	**SAFS Travel Award**	University of Queensland

$2500 travel cost scholarship

2011–2014	**Two postgraduate scholarships**	University of Queensland

For the work on genotyping by sequencing, covers tuition and living costs.

2012	**First place in PLOS/Mendeley Binary Challenge**	Won with openSNP.org

Won first price in a competition aimed towards the advancement of open science

2009-2011	**Master IT**	Bond University

5x Top of class, 3x Vice-Chancellor's List for Academic Excellence, 1x IT Award Academic Excellence. Graduated with honours. Recipient of John Oglethorpe Medal for highest GPA of all IT students graduating that semester

communication skills

2015   **Presentation** Plant and animal genome conference, San Diego
Assessing and validating the amphidiploid genome of *Brassica napus* using genotyping by sequencing

2014   **Presentation** University of Queensland, GenGen Seminar Series
Assembling and validating the genome of the *Brassica napus* using skim-based genotyping by sequencing

2013   **Poster** Plant and animal genome conference, San Diego
Genome Assembly Validation and Trait Association using Skim Based Genotyping by Sequencing in Canola

2013–2014   **Software Carpentry** Adelaide/Melbourne
Assisted Software Carpentry bootcamp in Adelaide, taught basic to intermediate Python as well as documentation and assisted at bootcamp in Melbourne. Currently organizing a bootcamp in Brisbane in July 2014.

2009–2011   **Tutoring** Bond University
Tutored students in Intro to Programming (Java), Database Management (Oracle/MySQL) and Networks & Applications, held several all-day refresher courses before exams

interests

professional: genotyping by sequencing, genome refinement, programming, machine learning, teaching
personal: literature, running, travel

publications

articles in peer-reviewed journals

Early allopolyploid evolution in the post-Neolithic Brassica napus oilseed genome.
Boulos Chalhoub, France Denoeud, Shengyi Liu, Isobel A P. Parkin, Haibao Tang, Xiyin Wang, Julien Chiquet, Harry Belcram, Chaobo Tong, Birgit Samans, Margot Corréa, Corinne Da Silva, Jérémy Just, Cyril Falentin, Chu Shin Koh, Isabelle Le Clainche, Maria Bernard, Pascal Bento, Benjamin Noel, Karine Labadie, Adriana Alberti, Mathieu Charles, Dominique Arnaud, Hui Guo, Christian Daviaud, Salman Alamery, Kamel Jabbari, Meixia Zhao, Patrick P. Edger, Houda Chelaifa, David Tack, Gilles Lassalle, Imen Mestiri, Nicolas Schnel, Marie-Christine Le Paslier, Guangyi Fan, Victor Renault, **Bayer, Philipp E.** al.
Science *345.6199 (Aug. 2014) pp. 950–953. 2014*

Identification and characterization of more than 4 million intervarietal SNPs across the group 7 chromosomes of bread wheat.
Kaitao Lai, Michał T. Lorenc, Hong Ching Lee, Paul J. Berkman, **Bayer, Philipp E.** Paul Visendi, Pradeep Ruperao, Timothy L. Fitzgerald, Manuel Zander, Chon-Kit Kenneth Chan, Sahana Manoli, Jiri Stiller, Jacqueline Batley, David Edwards
Plant Biotechnol J *(Aug. 2014). 2014*

High-resolution molecular karyotyping uncovers pairing between ancestrally related Brassica chromosomes.
Annaliese S. Mason, Jacqueline Batley, **Bayer, Philipp E.** Alice Hayward, Wallace A. Cowling, Matthew N. Nelson
New Phytol *(Jan. 2014). 2014*

Improving the assembly of the Brassica napus cultivars Darmor and Tapidor using genotyping by sequencing
Bayer, P. E. A. A. Golicz, C.-K. K. Chan, J. Stiller, J. Batley, D. Edwards
Plant Biotechnol J (in preparation) *(2014). 2014*

High resolution skim genotyping by sequencing reveals the distribution of crossovers and gene conversions in chickpea and canola
Bayer, P. E. P. Ruperao, A. S. Mason, J. Stiller, C.-K. K. Chan, S. Hayashi, Y. Long, J. Meng, T. Sutton, P. Visendi, R. K. Varshney, J. Batley, D. Edwards
TAG (submitted) *(2014). 2014*

Acclimation to different depths by the marine angiosperm Posidonia oceanica: transcriptomic and proteomic profiles.
Emanuela Dattolo, Jenny Gu, **Bayer, Philipp E.** Silvia Mazzuca, Ilia A. Serra, Antonia Spadafora, Letizia Bernardo, Lucia Natali, Andrea Cavallini, Gabriele Procaccini
Front Plant Sci *4 (2013) p. 195. 2013*