

Prof. Christophe Dessimoz – Curriculum Vitae

Personal information

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Current Positions

2022-present *Executive Director*, Swiss Institute of Bioinformatics, CH
2021-present *Associate Professor*, Dept. of Computational Biology, University of Lausanne, CH

Previous Positions

2015-2021 *SNSF Professor*, University of Lausanne, CH
2013-2020 *Lecturer* (2013-2015), *Reader* (2015-2018), *Associate Professor* (2018-2020), *Professor* (2020-2022), University College London, UK
2012-2013 *Affiliated Teaching Staff*, University of Cambridge, UK
2011-2013 *SNSF Advanced Research Fellow*, EMBL-European Bioinformatics Institute, UK
2011-2011 *Senior Research Associate* (supervisor Prof. Gaston Gonnet)
Dept. of Computer Science, ETH Zurich, CH
2009-2010 *Postdoctoral associate* (supervisor: Prof. Gaston Gonnet)
Dept. of Computer Science, ETH Zurich, CH
2004-2008 *Research assistant* (supervisor: Prof. Gaston Gonnet)
Dept. of Computer Science, ETH Zurich, CH

Education

2004-2009 PhD of Science, ETH Zurich, Department of Computer Science
Title: Comparative Genomics Using Pairwise Evolutionary Distances
Supervisor: Prof. Gaston H. Gonnet; Co-examiners: Prof. Amos Bairoch,
Prof. Niko Beerenwinkel, Prof. Jörg Stelling, Prof. Martin Vingron
(defence date: 19 Dec 2008)
1999-2003 Diploma/Master of Science, ETH Zurich, Department of Biology
1996-1999 Swiss federal Matura, type XB (Latin/Maths), Gymnase de la Cité, Lausanne

Honours & awards

2022-present Honorary Professor, University College London, London, UK
2021 Award for Outstanding Achievements in Doctoral Education, Faculty of Biology and Medicine, University of Lausanne
2021 Optimus Agora Prize, Swiss National Science Foundation
2019 Overton Prize, International Society of Computational Biology
2017 Sentinel of Science Award (awarded by Publons for top 1% of peer reviewers)
2016 EMBO Young Investigator
2015 Google Faculty Research Award
2015 SNSF Professorship
2012 Early Career Bioinformatician award, Swiss Institute of Bioinformatics
2013 Best poster award (w/Nives Skunca) ISMB/AFP SIG 2013
2012 Best poster award (w/Nives Skunca) Biocuration 2012
2006 Best poster award, Swiss-Prot 20 Year Conference, Fortaleza, Brazil
2005 4 Awards with ETH Team at *iGEM* (synthetic biology), MIT (USA)
2005 *Dragon 100 Young Chinese Leader*, Hongkong and Shanghai
2002-2009 Fellow of the *Swiss Study Foundation* (for outstanding students)

Grants (total of CHF 14M, of which 7M as main PI)**Current**

- 2023-2027 Swiss National Science Foundation Sinergia grant, *Reconstructing the urmetazoan protein repertoire and interaction network: an integrative phylogenetic, proteomic, and biochemical approach* (CHF 2,813,066, PI: Dirk Fasshauer, other co-PI: Pedro Beltrao and Iñaki Ruiz-Trillo)
- 2022-2023 Research agreement with BASF CropScience (EUR 69,990)
- 2021-2025 Swiss National Science Foundation project grant, *Reconstructing ancestral microsynteny across the tree of life, and inferring their impact on gene function and species adaptation* (CHF 810,248)
- 2021-2024 Swiss Institute of Bioinformatics, *Swiss-Orthology* resource and infrastructure grant PI (co-PI: Prof. Evgeny Zdobnov, UNIGE, CHF 1,547,017)
- 2021-2024 Swiss National Science Foundation AGORA grant, *In the Light of Evolution* (CHF 199,702)

Completed

- 2021-2022 Swiss Bilateral Programme with Asia, Bridging Grant (CHF 24,912)
- 2021-2022 Research agreement with BASF CropScience (EUR 61,665)
- 2019-2022 Swiss National Science Foundation Sinergia, *An integrated evolutionary and functional characterisation of the Drosophila immune peptidic secretome*, (PI: Bruno Lemaitre; other co-I: Robert Waterhouse) (CHF 1,205,202)
- 2020-2021 Two research agreements with BASF CropScience (EUR 161,665)
- 2019-2021 Swiss National Science Foundation Professorship Extension, *Embracing Phylogenetic Incongruence Among Genetic Loci*, (CHF 587,696)
- 2019-2020 Research agreement with BASF CropScience (EUR 61,665)
- 2018-2021 Swiss Institute of Bioinformatics, *Swiss-Orthology* resource and infrastructure grant PI (co-PI: Prof. Evgeny Zdobnov, UNIGE, CHF 1,546,068)
- 2018-2019 CADMOS Grant, *Reconstructing biological networks using sparse inverse correlation phylogenetic profiling* (CHF 100,000, co-PI: Paulo de Los Rios, EPFL)
- 2018-2019 Research agreement with BASF CropScience (EUR 66,145)
- 2018 Seed Money Grant, Swiss-Latin America Center (CHF 15,000)
- 2017-2021 Swiss National Research Programme “Big Data”, *Efficient and accurate comparative genomics to make sense of high volume low quality data in biology*, co-I (PI: Nicolas Salamin, other co-I: Bastien Chopard & Marc Robinson-Rechavi) (CHF 573,911)
- 2017-2021 Swiss National Research Programme “Big Data”, *Bio-SODA: Enabling Complex, Semantic Queries to Bioinformatics Databases through Intuitive Searching over Data*, co-I (PI: Kurt Stockinger; other co-I: Heinz Stockinger, Maria Anisimova & Marc Robinson-Rechavi) (CHF 637,913)
- 2017-2020 Google Inc., *Enabling Progress in Genomic Research via Privacy-Preserving Genomic Data Sharing*, co-PI with Dr. Emiliano De Cristofaro, UCL (USD 70,625)
- 2017-2019 EMBO Young Investigator programme (EUR 15,000)
- 2017-2019 Interdisciplinary grant, Faculty of Biology and Medicine, University of Lausanne, *Uncovering the impact of long noncoding RNA turnover on regulatory networks via fine-grained orthology*, PI (co-PIs: Ana C Marques, Sven Bergmann, CHF 199,392)
- 2017-2018 Novartis Foundation for Medical-Biological Research, *The quest for the elusive vertebrate gamete cell fusion protein: an integrative bioinformatic approach* (CHF 60,000)
- 2017-2018 Research agreement with Bayer CropScience *OMA at Bayer* (EUR 110,000)
- 2017 Swiss Institute of Bioinformatics Technology Project, *Phylo.io 2.0* (0.6 FTE software developer over 6 month)
- 2015-2019 Swiss National Science Foundation Professorship, *Harnessing Phylogenetic Variation Among Genetic Loci to Unravel Species Phylogenies, Lateral Gene Transfer, and Recombination Hotspots*, PI (CHF 1,540,725)
- 2015-2019 UK Biotechnology and Biological Sciences Research Council, Industrial CASE studentship, *Computational Inference of Gene Function in Crop Genomes using Hierarchical Orthologous Groups*, PI (GBP 132,320)

2013-2017	Bayer CropScience NV (GBP 58,000) and UCL Impact Award (GBP 32,535), <i>Improving Plant Genome and Transcriptome Assembly and Annotation Using Orthologs</i> , PI
2014-2016	Plant Fellows Programme (FP7 Marie Curie COFUND) and Bayer CropScience NV, <i>Mapping knowledge across species by unravelling hierarchies of orthologous genes for enhanced agriculture</i> , co-PI with Dr. H Redestig, Bayer CropScience (EUR 164,020)
2014-2015	UK Biotechnology and Biological Sciences Research Council TRDF, <i>Automated identification of optimal data-specific organelle clusters using freely available protein annotations</i> , co-I (PI: Dr. L Gatto, University of Cambridge) (GBP 125,517)
2013-2014	Swiss National Science Foundation, Fellowship for Advanced Researchers, <i>The Million Protein, Thousand Species Tree(s) of Life</i> (extension), PI (CHF 77,500, declined)
2012-2017	Swiss Institute of Bioinformatics, Service and Infrastructure grant for OMA, co-PI with Prof. G. Gonnet (CHF 436,957)
2012-2013	University of Cambridge, doctoral training module Reviews in Computational Biology, Research Development Funds, co-PI with Dr. J. Smith (GBP 8,700)
2011-2013	Swiss National Science Foundation, Fellowship for Advanced Researchers, <i>The Million Protein, Thousand Species Tree of Life</i> , PI (CHF 154,430)
2011	European Science Foundation, Conference Quest for Orthologs 2011, co-PI with Prof. Erik Sonnhammer (Stockholm U), Dr. Javier Herrero (EBI) and Prof. David Roos (U. of Pennsylvania) (EUR 12,000).
2011-2013	ETH Independent Investigators' Research Award, <i>Unravelling the Evolutionary Relationships of 1,000 genomes</i> , co-I with Prof. G. Gonnet and Dr. M. Anisimova (CHF 147,000, augmented with CHF 98,000 departmental matching funds).

Research highlights

2023	Tree inference directly from raw sequencing reads (Nature Biotechnology)
2021	Ultrafast classification of genes into families and subfamilies (Bioinformatics)
2020	Annotations of absence of function to assess GO function prediction (ISMB)
2019	OMA most accurate marker genes for phylogenetic inference (Genome Res)
2017	Publication of <i>The Gene Ontology Handbook</i> (Springer Humana)
2016	Community-backed, continuous orthology benchmark service (Nat Methods)
2016	Evolutionary meaningful definition of <i>homoeology</i> (Trends in Plant Science)
2015	Large empirical study shows that alignment filtering worsens trees (Syst Biol)
2015	The evolutionarily correct guide tree yields the most correct alignments (PNAS)
2014	Comparative and functional genomics of the ferret genome (Nat Biotechnology)
2013	Arbitrary information storage in DNA (Nature)
2012	Resolution of the "Ortholog Conjecture" (PLOS Comp Biol)
2012	First use of time series to assess GO annotation quality (PLOS Comp Biol)
2011	Edition of a special issue on Orthology and Applications (Brief Bioinf)
2010	Species discordance test for multiple sequence alignments (Genome Biology)
2008	DLIGHT algorithm for lateral gene transfer inference (RECOMB)
2006	Introduction of the concept of "witnesses of non-orthology" (Nucl. Acid Res.)
2005	Introduction of the OMA algorithm (RECOMB Comparative Genomics)

Academic service and leadership

Editorships

2020-present	Managing board, <i>Peer Community in Mathematical and Computational Biology</i>
2019-present	Guest editor, <i>PLOS Computational Biology</i>
2014-2016	Editor of <i>The Gene Ontology Handbook, Methods in Molecular Biology</i> (Springer)
2013-present	Associate editor, <i>BMC Evolutionary Biology</i>
2012-present	Academic editor, <i>PeerJ</i>
2010-2011	Invited special issue editor, <i>Briefings in Bioinformatics</i> (Oxford Journals)

Steering and advisory boards

2023-present	Member of the Foundation Council, Swiss National Science Foundation
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2023-present	Scientific Advisory Board member, PANTHER resource
2022-present	Board member, BioMedIT
2022-present	National Steering Board member, Swiss Personalised Health Initiative
2021-2023	Board of Directors member, International Society of Computational Biology
2020-2022	Award Committee, Swiss Institute of Bioinformatics
2019-2022	President of the Bioinformatics Intersection, Life Science Switzerland (LS2)
2018-present	Scientific Advisory Board member, Gene Ontology Consortium
2018-2022	Chair of the Community of Interest on Evolutionary and Comparative Genomics, International Society of Computational Biology,
2018-2019	Steering group member, Digitalization Innovation Group, Swiss Food Research
2014-2017	eLife journal early careers advisory group
2009-present	Steering group member, Quest for Orthologs Consortium

Peer-review

2020	Grant reviewer for Institut Pasteur (F)
2020	Grant reviewer for the European Research Council (ERC)
2018-present	Multiple grants reviewed for Agence Nationale de la Recherche (France)
2017-present	Multiple fellowships reviewed for EMBO
2017-2019	F1000 faculty member
2016-present	Multiple grants and fellowship reviewed for the Wellcome Trust (UK)
2016-present	Multiple grants reviewed for the Israeli Science Foundation (Israel)
2016	Grant reviewer for US-Israel Binational Science Foundation (USA-Israel)
2015-present	Multiple grants reviewed for SNSF (Switzerland)
2015-present	Multiple grants reviewed for NSERC (Canada)
2014-present	Multiple grants reviewed for BBSRC (UK)
2015	Grant reviewer for French Institute of Bioinformatics
2013	Grant reviewer for the FWO (Belgium)
2012-present	Member of programme committee, ECCB 2012, ISMB AFP 2013, BC[2] 2015, AlCoB 2015, ISMB/ECCB 2015, ECCB 2016, ISMB AFP 2017, GenoPri'18, ISMB 2018, ISMB/ECCB 2019, ISMB 2020.
2007-present	Contributed >200 peer-reviews ¹ for <i>Science</i> , <i>Nature Review Genetics</i> , <i>Nature Methods</i> , <i>Nature Ecology and Evolution</i> , <i>PLOS Biology</i> , <i>Genome Research</i> , <i>Genome Biology</i> , <i>Molecular Biology and Evolution</i> , <i>Systematic Biology</i> , <i>Nucleic Acids Research</i> , <i>Nature Communications</i> , <i>Bioinformatics</i> , <i>PLOS Computational Biology</i> , <i>Briefings in Bioinformatics</i> , <i>Plant Cell Reports</i> , <i>FEBS Letters</i> , <i>Genome Biology and Evolution</i> , <i>Algorithms for Molecular Biology</i> , <i>Open Biology</i> , <i>BMC Bioinformatics</i> , <i>BMC Evolutionary Biology</i> , <i>BMC Genomics</i> , <i>Gene</i> , <i>Genomics</i> , <i>Giga Science</i> , <i>IEEE Transactions in Signal Processing</i> , <i>IEEE Transactions on Visualization and Computer Graphics</i> , <i>Information Science</i> , <i>PLOS One</i> , and <i>Trends in Evolutionary Biology</i> .

Conference & meeting organisation

2022	Proceedings co-chair and steering member , ISMB Madison 2022 (USA)
2021	Proceedings co-chair and steering member , ISMB Lyon 2021 (F)
2020	COSI co-chair (Evolution and Comparative Genomics), ISMB 2020
2019	EMBO YIP Workshop on Evolution and Computational Biology, Basel (CH)
2019	Co-organiser of Quest for Orthologs 6, Okasaki (Japan)
2019	COSI chair (Evolution and Comparative Genomics), ISMB/ECCB Basel (CH)
2019	Proceedings area co-chair (Population Genomics and Molecular Evolution), ISMB/ECCB Basel (CH)
2018	COSI chair (Evolution and Comparative Genomics), ISMB Chicago (USA)
2017	Workshop organiser at Basel Computational Biology Conference, Basel (CH)
2017	Co-organiser of Quest for Orthologs 5, Los Angeles (USA)
2016-present	Co-organiser of the Lausanne Computational Biology meeting series (3 meetings per year, each with 80-100 participants from UNIL and EPFL)
2016	Co-organiser of UCL Faculty of Life Science Research Day (attendance: 250)

¹ <https://publons.com/researcher/727758/christophe-dessimoz/>

2015	Proceedings area co-chair (Applied Bioinformatics), ISMB/ECCB 2015
2015	Co-organiser of Quest for Orthologs 4, 25-26 May, Barcelona (Spain)
2014	Lead organiser of UCL Faculty of Life Science Research Day (attendance: 280)
2014	Co-organiser of GNOME 2014, ETH Zurich (attendance: 100)
2013-present	Co-organiser of Fisher Centre for Computational biology meeting series (3 meetings per year, each with 80-100 participants from UCL and Crick Institute)
2013	Co-organiser of the EMBL postdoc retreat (80 participants, budget €30,000), Jesus College, Cambridge UK
2013	Co-organiser of SIB Days workshop “ <i>Difficult issues in phylogenomic data analyses: Where are we now and what's next?</i> ”
2011	Co-organiser of Quest for Orthologs 2, 17-19 Jun, Hinxton (UK)
2010-2011	Co-organiser of seminar series <i>Zurich Colloq. for Computational Molecular Evolution</i>

PhD thesis evaluations

2023	PhD examiner (internal) of Gilles Baud (University of Lausanne, CH)
2022	PhD examiner (internal) of Livio Ruzzante (University of Lausanne, CH)
2022	PhD examiner (external) of Eva Deutekom (Utrecht University, NL)
2022	PhD examiner (external) of Kyle Duyck (Open University, GB)
2022	PhD examiner (external) of Charles Bernard (Sorbonne University, F)
2021	PhD examiner (internal) of Anna Marcionetti (University of Lausanne, CH)
2021	PhD examiner (external) of DV Klopfenstein (Drexel University, USA)
2021	PhD examiner (internal) of Mattia Tomasoni (University of Lausanne, CH)
2021	PhD examiner (external) of Elise Parey (Ecole Normale Supérieure, F)
2020	PhD examiner (external) of Natalia Zajac (ETH Zurich, CH)
2020	PhD examiner (external) of Ilja Pljusnin (University of Helsinki, FI)
2020	PhD examiner (external) of Stuart Byma (EPFL, CH)
2019	PhD examiner (external) of Carine Rey (ENS Lyon, F)
2019	PhD examiner (external) of Alexandra Kalantzi (EPFL, CH)
2018	PhD examiner (external) of Yannis Nevers (University of Strasbourg, F)
2018	PhD examiner (external) of Djordje Grbic (University of Geneva, CH)
2017	PhD examiner (internal) of Chris Ruis (UCL, UK)
2017	PhD examiner (external) of Yoann Anselmetti (University of Lyon, F)
2017	PhD examiner (external) of Jananan Pathmanathan (U. Pierre et Marie Curie, F)
2017	PhD examiner (internal) of Trestan Pollen (University of Lausanne, CH)
2016	PhD examiner (external) of Mehmood Alam Khan (KTH Stockholm, SWE)
2016	PhD examiner (internal) of Stuart Tetchner (UCL, UK)
2015	PhD examiner (external) of Gabriel Renaud (University of Leipzig, D)
2015	PhD examiner (external) of Stephen Moss (University of Hull, UK)
2015	PhD examiner (internal) of David Dylus (UCL, UK)
2015	PhD examiner (external) of Cécile Pereira (University Paris-Sud, F)
2014	PhD examiner (external) of Olivier Poirion (Ecole Centrale de Lyon, F)

Faculty hiring & promotion committees

2021	External assessor for a promotion to full professor, University of Tel-Aviv, IL
2020	External assessor for a promotion to full professor, University of Haifa, IL
2020	External assessor for junior PI hiring at Pasteur Institute, France
2018	Hiring committee member for Quain Chair Professorship, UCL
2017	External assessor for 3 team leader promotions, EMBL-European Bioinformatics Institute, Cambridge UK
2015	External assessor for a promotion to associate professor, University of Ghent, BE
2015	External assessor for a group leader hiring committee, University of Copenhagen, DK

Other committees

2018-2022	UNIL School of Biology
2017-2021	UNIL BIG seminars organisation committee
2016-2017	UNIL DEE external seminar coordinator
2015-2022	UCL Biosciences IT committee

2014-2015	Athena Swan Divisional committee on equal opportunities, UCL
2014	Member of MPhil/PhD upgrade committee of Mark Hill, UCL
2013	Chair of MPhil/PhD upgrade committee of Konstantinos Angelis, UCL
2013	Member of MPhil/PhD upgrade committee of Bartłomiej Tomiczek, UCL
2012-2013	Sex in Science (Sanger Institute/EMBL-EBI committee on equal opportunities)
2012-2013	Co-chair of the EMBL-EBI postdoc association
2011	Member of PhD progress committee of Benjamin Linard (Strasbourg, F)

Consulting

2022	Expert witness for a US-based patent law firm.
2020	Expert witness for a UK-based patent law firm (France court case). Advice and production of an expert report.
2018-2020	Expert witness for Weil, Gotshal & Manges LLP (Client: Pacific Biosciences Inc, Redwood Shores, California, USA). Advice, production of reports, deposition, and testimony at trial.
2017-2018	Expert witness for a UK-based patent law firm. Advice and production of an expert report.

Invited talks

06/2023	Keynote talk , SwissText 2023, Workshop on Text Mining and Biodiversity Research Infrastructure, Neuchâtel (CH)
11/2022	ELIXIR data and interoperability platform, Geneva (CH)
10/2021	EMBO Young Scientists Forum, Warsaw, Poland (PL)
10/2021	TheBioNet, Switzerland (CH)
10/2021	International ITU Molecular Biology and Genetics Student Congress, Istanbul, Turkey (TR)
09/2021	Stowers Institute, Kansas (US)
09/2021	Award talk , AGORA Forum, Fribourg (CH)
08/2021	Moscow Conference on Computational Molecular Biology (RU)
06/2021	Keynote talk , Mathematical and Computational Evolutionary Biology, Porquerolles (F)
08/2020	EMBL-SCNAT workshop, Bern (CH)
11/2019	EMBL PhD Symposium, Heidelberg (DE)
10/2019	Basel University (CH)
07/2019	Keynote talk , Student council, ISMB/ECCB 2019, Basel (CH)
07/2019	Award talk , ISMB/ECCB 2019, Basel (CH)
07/2019	Plenary talk , JOBIM 2019, Nantes (FR)
09/2018	Keynote talk , Annual meeting of the Willi Hennig Society, Barcelona (ES)
06/2018	Plenary talk , SIB Days, Bienne (CH)
11/2017	Keynote talk , Center for Advanced Modeling Science Day 2017, UNIL (CH)
11/2017	Annual debate of the Linnaean Society of London, London (GB)
10/2017	International Symposium on Network and Evolution, Université Pierre et Marie Curie, Paris (F)
10/2017	Computational Biology symposium, EPFL (CH)
09/2017	SIB PhD training network, Bienne (CH)
09/2017	BC2 Conference workshop on Gene Ontology, Basel (CH)
08/2017	Keynote talk , Life in Numbers 3, ZHAW Wädenswil (CH)
06/2017	SMBE Symposium on Evolution of Gene Families, Los Angeles (US)
04/2017	Tokyo University, Tokyo (JP)
04/2017	Riken Institute, Kobe (JP)
01/2017	UCL Biology Society, Cumberland Lodge, Windsor (GB)
11/2016	Symposium on the Origins of Life, Dept. of Microbiology, University of Lausanne (CH)
11/2016	Colloquium on Algorithms in Molecular Biology (CLIMB), EPFL (CH)
10/2016	KTH Royal Institute of Technology, Stockholm (SWE)
05/2016	Institut Pasteur, Paris (F)
10/2015	Keynote talk , RECOMB Comparative Genomics 2015, Frankfurt (D)
04/2015	Queen Mary University of London (GB)

04/2015	Hong Kong University (HK)
04/2015	Chinese University of Hong Kong (HK)
07/2014	GNOME 2014, ETH Zurich (CH): Speeding-up all-against-all protein comparisons while maintaining sensitivity
09/2013	Keynote talk , Ghent University Centre of Excellence in Bioinformatics Annual Symposium, Ghent (BE): Resolving the Ortholog Conjecture
06/2013	Keynote talk , Symposium on Digital Dark Age, ManiFeste 2013, Paris (FR): Information storage in DNA
02/2013	CIG Seminar, University of Lausanne (CH), Toward Unravelling the Forest of Life
02/2013	Cambridge Computational Biology Institute, Cambridge (GB): Methodological Challenges in the Pursuit of the Tree of Life
02/2013	Computer Science, UCL, London (GB): The DNA Sequencing Revolution: Computational Advances and Opportunities
01/2013	SIB Days 2013, Workshop on difficult issues in phylogenomic data analyses, Biel (CH): Effect of Alignment Filtering on Phylogenetic Inference
01/2013	Award Talk , SIB Days, Biel (CH) Resolving the Ortholog Conjecture
01/2013	Genetics Evolution & Environment, UCL, London (GB): Toward Unravelling the Forest of Life
11/2012	StarOmics Minisymposium, University of Lausanne (CH): Toward large-scale metabolic networks in non-model organisms
05/2012	Cambridge Computational Biology Institute Annual Symposium (GB): Resolving the Ortholog Conjecture
01/2012	EBI Seminar, Hinxton (GB): Towards an Integrated Evolutionary and Functional History of All Sequenced Genes
04/2011	Institute of Genetics and Molecular and Cellular Biology, Strasbourg (FR): Identifying split genes in low-coverage genomes
09/2010	SIB PhD Training Network Workshop, Bern (CH): Unravelling the Evolutionary History of 1,000 Genomes and How This Tells Us What a Good Alignment Is
04/2010	Laboratory for Zoology and Evolutionary Biology Seminar, University of Konstanz (DE): OMA: Orthology Among 907 Genomes
10/2009	EBI/Sanger Seminar, Hinxton (GB): Phylogenetic Tests of Sequence Alignment Accuracy
03/2009	Swiss-Prot Seminar, Geneva (CH), Recent developments of the OMA project
09/2007	SIB Days, Grindelwald (CH): Computing Alignments in OMA
11/2006	University of Basel Seminar (CH): OMA - Large-scale, Automated Orthology Assignment

Contributed conference talks

07/2021	Quest for Orthologs 6.5, virtual conference
09/2019	BC2 EMBO YIP workshop, Basel (CH)
07/2019	Quest for Orthologs 6, Okazaki (JP)
11/2018	PhyloSIB, Geneva (CH)
07/2018	ISMB 2018, Chicago (US)
07/2017	ISMB/ECCB 2017, Prague (CZ)
05/2017	EMBO Young Investigator annual conference, Heidelberg (DE)
09/2016	ECCB2016, Highlight Talk , The Hague (NL)
05/2016	Platform for Advanced Scientific Computing Conference (PASC16): Speeding up all-against-all sequence alignment among thousands of genomes
07/2013	Quest for Orthologs 3, Lausanne (CH): Benchmarking orthology using simulated datasets
07/2013	Quest for Orthologs 3, Lausanne (CH): Progress of the Quest for Orthologs benchmarking working group
06/2012	SMBE 2012, Dublin (IE): Experimental annotations in 13 model organisms corroborate ortholog conjecture: orthologs tend to be weakly, but significantly, more similar in function than paralogs
06/2012	PhyloSIB 2012, Zurich (CH): Effect of alignment filtering on phylogenetic reconstruction

06/2011	PhyloSIB 2011, Lausanne (CH): Detecting split genes in low-coverage genomes: a comparative genomics approach
06/2011	Quest for Orthologs 2, Hinxton (GB): Groups of Orthologs: Objectives and Definitions
07/2009	Quest for Orthologs, Hinxton (GB): OMA–Orthology Inference Among 830 Genomes
06/2009	ISMB/ECCB 2009, Highlight Talk , Stockholm (SE): Phylogenetic and Functional Assessment of Orthologs Inference Projects and Methods
04/2008	RECOMB 2008, Singapore (Acceptance rate: 17.6%): DLIGHT – Lateral Gene Transfer Detection Using Pairwise Evolutionary Distances in a Statistical Framework
11/2007	PhyloSIB 2007, Lausanne (CH): OMA – Update and Comparison
11/2006	Swiss Studies Foundation Interdisciplinary Meeting, Zurich (CH): OMA Project: Large-Scale Comparison of Entire Genomes
10/2006	PhyloSIB 2006, Geneva (CH): Functional and Phylogenetic Inference Based on OMA
09/2005	RECOMB CG 2005, Dublin (IE): OMA, a Comprehensive, Automated Project for the Identification of Orthologs from Complete Genome Data: Introduction and First Achievements

Teaching

2018-2022	Tutorial organiser and lecturer, <i>Reviews in Quantitative Biology</i> , UNIL
2018-present	Lecturer, <i>Comparative Genomics</i> , Swiss Institute of Bioinformatics
2016-present	Course organiser and lecturer, <i>Bioinformatic Algorithms</i> , UNIL
2016-2018	Lecturer, <i>Molecular Evolution</i> , UNIL
2015-2022	Course organiser and lecturer, <i>Methods in Evolution & Ecology</i> , UCL
2015-2016	Guest lecturer, <i>Molecular Evolution</i> , UNIL (2 lectures)
2014-2015	Lecturer, <i>Molecular Evolution</i> , UCL (2 lectures per year)
2013-2017	Lecturer, <i>Computational Biology</i> , UCL (2 lectures and 1 practical per year)
2013-2016	Lecturer, <i>Introduction to Bioinformatics</i> , UCL & Birkbeck (2 lectures)
2013-2014	Guest lecturer, <i>CoMPLEX–Analysis of Biological Complexity</i> , UCL (2 lectures per year)
2012, 2013	Course organiser and lecturer, <i>Reviews in Computational Biology</i> , Cambridge University (7 lectures per year)
2012	Guest lecturer, <i>Biochemical Pathways and Large Scale Metabolic Networks</i> , SIB Training course, University of Lausanne (half day)
2011	Lecturer, <i>EMBO Course on Bioinformatics and Comparative Genome Analysis</i> , Institut Pasteur, Paris (half day)
2010, 2011	Course organiser and lecturer, <i>Reviews in Computational Biology</i> , ETH Zurich (14 lectures per year)
2011	Lecturer, <i>Bioinformatics: in-depth</i> , ETH and Uni Zurich (3 lectures)
2010	Lecturer, <i>Bioinformatics and Comparative Genome Analysis</i> , Institut Pasteur, Paris (half day)
2010	Lecturer, <i>Computational Biology</i> , ETH Zurich (6 lectures)
11/2009	Guest lecturer, <i>Computational Biology</i> , ETH Zurich
04/2008	Guest lecturer, <i>Bioinformatik: Vertiefung</i> , ETH and Uni Zurich
2008, 09, 10, 11	Guest lecturer, <i>Probabilistic Modeling in Molecular Evolution</i> , ETH Zurich
2008, 2009	Head teaching assistant, <i>Foundations of Computer Science: Computational Science</i> , ETH Zurich
2006, 07, 08, 09	Guest lecturer, <i>Introduction to Bioinformatics I</i> , University of Basel
2005-2007	Teaching assistant for courses: <i>Informatik II</i> , <i>Linear Algebra</i> , <i>Datenstrukturen und Algorithmen</i> , <i>Introduction to Computational Science</i> , <i>Scientific Computing</i> .

Trainees supervised

Postdocs & associates

2022-2023	Dr. Charles Bernard (UNIL)
2021-present	Dr. Sina Majidian (UNIL)
2021-2021	Dr. Natalia Zajac (UNIL)
2021-2023	Dr. Ana-Claudia Sima (SIB)
2020-2021	Dr. Bhushan Karampudi (UNIL)

2019-present	Dr. Yannis Nevers (UNIL)
2019-present	Dr. David Moi (UNIL)
2019-present	Dr. Alexander Warwick Vesztrocy (UNIL)
2017-2019	Dr. Tarcisio Mendes de Farias (UNIL)
2019-2020	Dr. Kimberly Gilbert (UNIL)
2017-2018	Dr. Tugce Bilgin (UNIL)
2016-2018	Dr. Leonardo de Oliveira Martins (UNIL)
2015-2020	Dr. David Dylus (UNIL)
2014-present	Dr. Natasha Glover (UCL/Bayer then UNIL, and since 09/2020 at SIB)
2012-present	Dr. Adrian Altenhoff (SIB)
2012-2013	Dr. Nick Williams (EMBL-EBI)

PhD students, as main supervisor

2022-present	Silvia Prieto Baños (UNIL)
2017-2022	Victor Rossier (UNIL)
2016-2018	Karina Zile (UCL) <i>Transferred to a different supervisor</i>
2015-2019	Clément-Marie Train (UNIL) <i>PhD successfully defended on 22 Jan 2020</i>
2015-2019	Alexander Warwick Vesztrocy (UCL) <i>PhD successfully defended on 15 Nov 2019</i>
2014-2018	Jeremy Levy (UCL) <i>PhD viva successfully defended on 13 Nov 2018</i>
2013-2020	Ivana Piližota (UCL) <i>PhD viva successfully defended on 22 May 2020</i>

PhD students, as joint or secondary supervisor

2017-2021	Bristena Oprisanu (UCL, primary Prof. Emiliano de Cristofaro)
2016-2019	David Moi (University of San Martin, Argentina, primary Prof. Pablo Aguilar)
2014-2019	Tom Watkins (Crick Institute, primary Prof. Charles Swanton)
2014-2019	Steven Müller (UCL, primary Prof. Max Telford)
2013-2017	Bartłomiej Tomiczek (UCL, primary Prof. Max Telford)
2013 (Jan-May)	Esther Camilo (visiting PhD student from UNESP, Botucatu, Brasil)
2011-2016	Kevin Gori (EMBL-EBI, jointly supervised with Dr. Nick Goldman).
2010-2014	Nives Skunca (ETH Zurich, jointly supervised with Prof. Gaston Gonnet).
2009-2013	Daniel Dalquen (ETH Zurich, jointly supervised with Prof. Gaston Gonnet).
2008-2012	Adrian Altenhoff (ETH Zurich, jointly supervised with Prof. Gaston Gonnet).

Bachelor's and Master's degree students

2023-2024	Arun Singh Maurya (UNIL), MSc project
2023	Luca Dubs, University of Strasbourg, MSc project
2019-2020	Antoine Gürtler (UNIL), MSc project
2018-2019	Marie-Pierre Meurville (UNIL), MSc project
2018-2019	Karim Saied (UNIL), MSc project
2018	Shaoline Sheppard (UNIL), internship
2018	Laurent Kilchoer (UNIL), internship. Work published in PLOS Comput Biol.
2017-2018	Max Tomlinson (UCL), MSc project
2017-2018	Simone Webb (UCL), MSc project
2017-2018	Charles Stevenson (UCL), summer internship & BSc project
2017	Klara Kaleb (UCL), summer internship. Work published in Nucl Acids Res and F1000 research.
2017	Duncan Mahon (UCL), summer internship. Work published in Nucl Acids Res.
2017	Nicole Lee (UCL), Wellcome Trust vacation bursary
2016	Surag Nair (UNIL), summer internship
2016	Angela Aimee (UCL), summer internship
2016	Joseph Trafford (UCL), summer internship
2016	Gabriela Lobinska (UCL), summer internship. Work published in APBC 2020.
2016	Karina Zile (UCL), London BBSRC Doctoral Training programme rotation
2015	Victor Rossier (UNIL), “first step” project

- 2015 Oscar Robinson (UCL), competitively-funded summer internship. Work published in *Mol Biol Evol*
- 2015 Abraham Olaoye (UCL), competitively-funded summer internship
- 2015 Jan Koch (UCL), Erasmus project student from University of Frankfurt
- 2014-2015 Clemency Jolly (UCL), MSc extended project. Work published in *Nature Communications*.
- 2014-2015 Georgina Bland (UCL), MSc project
- 2014-2015 Jeehyun Park (UCL), MSc project
- 2014-2015 Elliott Parris (UCL), MSc project
- 2014-2015 Ridhima Kad (UCL), Literature project
- 2014 Anna Sueki (UCL), summer internship, *Visualising gene order conservation among orthologous genes in the OMA database*, Wellcome Trust vacation bursary. Work published in *Nucl Acids Res*.
- 2014 Clemency Jolly (UCL), summer internship, *Unravelling structural variations across 150 genomes of the fission yeast S. pombe*. FLS Dean's summer bursary
- 2014 Vera Johne (UCL), summer internship, *Embedding Gene Trees in 2D/3D space to Elucidate Shared Evolutionary Histories*. EPSRC/BEAMS/CS summer bursary
- 2014 Calvin Ka Lee (UCL), competitively-funded summer internship, *Evolutionary analysis of long introns and their associated splicing mechanisms*. GEE summer bursary
- 2014 Leslie Macmillan (UCL), MSc project, *Speed Optimisation of "Trees of Life"*
- 2014 Clément-Marie Train (ETH Zurich), summer internship, *Genome picker and responsive design in the OMA Browser*. Work published in *NAR*
- 2014 Ferenc Galco (ETH Zurich), summer internship, *PyOPA: Vectorised Smith-Waterman alignments in Python*
- 2014 Liam Shaw (UCL), MPhil mini-project, *Harnessing rapidly evolving ancestral genes for deep animal clade typing*.
- 2014 Daniel Temko (UCL), MPhil mini-project, *Elucidating the Evolutionary Relationships of Non-coding RNA Sequences Across Multiple Species*.
- 2013-2014 Lucas Wittwer (UCL), BSc thesis, *Towards orthology among 10,000 genomes*.
- 2013 Lucy Mengqi Li (Cambridge University), MPhil thesis, *Domain-aware Orthology Inference*. Oral presentation at Quest for Orthologs 3.
- 2013 Lenka Matejovicova (Cambridge University), MPhil thesis, *Inferring trees from deep sequencing of cancer samples*.
- 2013 Malcolm Perry (Cambridge University), MPhil thesis, *Clustering Strategies for protein-specific phylogenies*.
- 2012 Nick Williams (Cambridge University), MPhil thesis, *Detecting lateral gene transfer*.
- 2011-2012 Ge Tan (ETH Zurich), master thesis, *Pairwise Evolutionary Distance Estimation Under Alignment Uncertainty*. SMBE Undergraduate Travel Award (USD 1000).
- 2011 Johann Wolf (ETH Zurich), lab rotation, *Protein Domains in OMA*
- 2011 Stephan Kollmann (ETH Zurich), lab rotation, *Validating MinSquareTreeCollection in Darwin*
- 2011 Ke Li (ETH Zurich), semester project, *Improving Pairwise Orthology using Graph Properties*
- 2010-2011 Ge Tan (ETH Zurich), lab rotation, *Comparison of multiple sequence alignment filtering methods*. Work published at *Systematic Biology* and *PNAS*.
- 2010 Louis du Plessis (ETH Zurich), lab rotation, *Darwin-Maple: Trees*. Work published in *Briefings in Bioinformatics*.
- 2009 Christian Ledergerber (ETH Zurich), master thesis, *Probabilistic Estimation of Multiple Sequence Alignments*.
- 2009 Hannes Röst (ETH Zurich), lab rotation, *Lateral Gene Transfer Detection with DLIGHT*. Work presented at *PhyloSIB 2009*.
- 2007-2008 Florian Walpen (ETH Zurich), master thesis, *ML Evolutionary Distance Estimation in Cases of Weak Similarity*
- 2007 Philipp Krähenbühl (ETH Zurich), lab rotation, *Fast Multi-Threaded Vectorized Smith-Waterman for IBM Cell/B.E*. Work published in *BMC Research Notes*.

2006-2007 Christian Ledergerber (ETH Zurich), bachelor thesis, *Alignments with Non-overlapping Moves, Inversions and Tandem Duplications in $O(n^4)$ time*. Work presented at COCOON 2007, invited for publication in J. Comb. Optim.

Selected media coverage²

06/2023 Uniscope Podcast *Que peut-on lire dans mes gènes ?*
 06/2023 Guest in radio programme "CQFD" on "RTS 1ère" *Le génome de 233 primates séquencé et comparé au génome humain*
 11/2022 Guest in radio programme "CQFD" on "RTS 1ère" *Vers un recyclage des données scientifiques*
 03/2021 Guest in radio programme "CQFD" on "RTS 1ère" *Rencontre avec Christophe Dessimoz, spécialiste de la bio-informatique*
 03/2021 Interview in the morning news on Swiss French radio "RTS 1ère"
 01/2021 Guest in radio programme "CQFD" on "RTS 1ère" *L'écriture des données informatiques sur de l'ADN*
 12/2018 Quoted in an article in "ITPro Today" on data storage in DNA
 07/2018 Quoted in an article in "We Demain" on genome privacy
 08/2017 Quoted in an article in "Le Temps" on computer malware in DNA
 08/2017 Quoted in an article in "The Register" on computer malware in DNA
 07/2017 Quoted in an article in "Le Figaro" on data storage in DNA using CRISPR
 04/2017 Quoted in an article in "Québec Science" on data storage in DNA
 03/2017 Guest in radio programme "La Méthode Scientifique" on "France Culture"
 03/2017 Interview in the morning news on Swiss French radio "RTS 1ère"
 01/2014 Quoted in an article in "International Science Grid This Week" on DNA storage
 01/2014 Quoted in an article in French daily newspaper "Les Echos" on DNA storage
 10/2013 Invited article "Stocker de l'information dans l'ADN" in French magazine "Pour la Science"
 07/2013 Interview/podcast in French magazine "Pour la Science"
 01/2013 Quoted in article in French daily newspaper "Le Monde" on DNA storage
 01/2013 Quoted in article in Swiss daily newspaper "Le Temps" on DNA storage

Languages

French Native speaker
 English Excellent oral and written proficiency
 German Excellent oral and written proficiency (incl. comprehension of Swiss German)
 Chinese Mandarin: intermediate oral and written proficiency; Cantonese: basic oral and written proficiency

² full list at <http://lab.dessimoz.org/media-coverage>