Curriculum Vitæ

Clémence Réda

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Education and qualifications

2019 – present **PhD**, *Université Paris Diderot, Inserm UMR 1141 and CNRS UMR 9189*.
PhD in Genetics: **drug repurposing *via* gene network analysis**, supervised by Andrée Delahaye-Duriez & Émilie Kaufmann.

2018 – 2019 **Masters MVA**, *ENS Paris-Saclay (former Ecole Normale Supérieure* de Cachan)*.
Second year of *Master Vision, Apprentissage (MVA)* diploma in Mathematics and Computer Science. **Subjects:** Biostatistics, Deep Learning, Game Theory, Graphs in Machine Learning, Mathematical Methods for Imaging, Modelling in Neurosciences, Object Recognition and Computer Vision, Predictions of Individual Sequences, Probabilistic Graphical Models, Reinforcement Learning, Topological Data Analysis.

2017 – 2018 **Internship**, *Faculty of Mathematics, Informatics and Mechanics (University of Warsaw)*.
Ten-month-long internship in research, included in the curriculum of ENS Paris-Saclay (former Ecole Normale Supérieure* de Cachan).

2016 – 2017 **Masters MPRI**, *ENS Paris-Saclay (former Ecole Normale Supérieure* de Cachan)*.
First year of *Master Parisien de Recherche en Informatique (MPRI)* diploma in Computer Science. **Subjects**: Bioinformatics, Biology, Computer Vision, Convex Optimization, Machine Learning, Networks, Randomized Algorithms.

2015 – 2016 **Bachelors**, *Ecole Normale Supérieure de Cachan and Université Paris Diderot*.
Bachelors degree in Computer Science. **Subjects**: Algorithmics 101, Complexity/Computability, Databases, Discrete Mathematics, Formal Langages 101, Lambda-Calculus 101, Logics 101, Programmation, Systems.

* *An **Ecole Normale Supérieure** is an elite school focused on theoretical research.*

References

Pr. Andrée Delahaye-Duriez **Head of group Integrative Genomics**.
NeuroDiderot/Inserm unit 1141, Robert Debré Hospital in Paris, France.

Dr. Bartek Wilczyński **Head of team Regulomics**.
Faculty of Mathematics, Informatics and Mechanics (MIM UW) in Warsaw, Poland.

Dr. Nicholas Luscombe **Head of the Bioinformatics and Computational Biology Laboratory in the Francis Crick Institute and of the Genomics and Regulatory Systems Unit in the OIST**.
Francis Crick Institute in London, United Kingdom, and Okinawa Institute of Science and Technology (OIST), in Onna, Japan.

Dr. Macha Nikolski **Head of the Bordeaux Bioinformatics Center CBiB**.
Member of **MABioVis** team in LaBRI in Bordeaux, France.

Conferences

June & September 2018
(*accepted talk*), BIT'18 and Workshop 6 of ECCB'18.
C. Réda & B. Wilczyński. **Automated Inference of Gene Regulatory Networks Using Explicit Regulatory Modules**.

Papers

2019
(*review*), médecine/sciences, 35(6-7), 515-518.
A. Delahaye-Duriez, C. Réda & P. Gressens. **Identification de cibles thérapeutiques et repositionnement de médicaments par analyses de réseaux géniques**.

Professional Experience

Internships

2019
Internship in Bioinformatics, *Integrative Genomics, supervised by Pr. A. Delahaye-Duriez and Dr. Émilie Kaufmann*, Paris, France, 4 months.
Design of a method to guide drug repurposing via gene regulation network building and analysis.

2017 – 2018
Internship in Bioinformatics, *Regulomics, supervised by Dr. B. Wilczyński*, Warsaw, Poland, 10 months.
Theoretical work to include explicit specific biological connections in gene regulatory networks, and study their influence on inference and simulation of such biological models.

2017
Internship in Bioinformatics, *Genomics and Regulatory Systems Unit, supervised by Dr. N. Luscombe and Dr. G. Ilsley*, Onna-son, Japan, 5 months.
Implementation in R of an application for single-cell RNA-sequencing data analysis, design and implementation of a novel algorithm for cell clustering.

2016
Internship in Bioinformatics, *CBiB, supervised by Dr. M. Nikolski and Dr. M. Raffinot*, Bordeaux, France, 2 months.
Compared analysis of taxonomic trees in a medical setting: improvement of the analysis of metagenomic data in medical studies: *TaxoTree, TaxoCluster, TaxoClassifier* softwares in Python.

Skills

Programming languages

R, Python 2 and 3, Matlab/Octave, Bash, OCaml, Javascript/Typescript, C/C++, PHP, Haskell, Assembler x86.

Web Programming

Frameworks Django, Jekyll/Hexo, R Shiny.
Languages   HTML/CSS5.

Databases

MySQL, MongoDB, NeDB.

Language proficiency

French	C2	*Native speaker.*
English	C1	*TOEFL score (in 2016): 643/677.*
Spanish	B1	*Intermediate level, studied at school for seven years.*