



TECHNICAL SERVICES

COMPUTING SERVICES

SIBERCHICOT Aurélie

INGÉNIEURE DE RECHERCHE

UCBL

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As a **software engineer**, my core activity is to develop and maintain data analysis software to **enhance and sustain** research results. As an expert in the **R** language and its ecosystem, I am responsible for numerous **R packages** and **shiny** apps. To share my R-related skills, I design original **training courses** and take part in **teaching** programs. More broadly, I'm interested in tools for **reproducible research** and **open science**.

› Position and responsibilities

- Scientific Research Engineer (*Ingénieure de Recherche*) since 2023
- Scientific Project Engineer (*Ingénieure d'Études*) from 2012 to 2023
- Representative of the LBBE IT Department, since 2018
- ITA / BIATSS representative on the UMR council, since 2017

› Networks and IDs

- GitHub :
[aursiber](#)
- ORCID :
[0000-0002-7638-8318](#)
- HAL : aurelie-siberchicot
- [Google Scholar](#)

Evolutionary Ecology

- > **ade4** (Multivariate data analysis and graphical display) :

[CRAN](#)

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[GitHub](#)

—

[book](#)

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[shiny.app](#)

- > **ade4TkGUI** (A Tcl/Tk GUI for some basic functions in the ade4 package) :

[CRAN](#)

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[GitHub](#)

- > **adegraphics** (Graphical functionalities for the representation of multivariate data) :

[CRAN](#)

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[GitHub](#)

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[article](#)

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[talk](#)

- > **adephylo** (Exploratory Analyses for the Phylogenetic Comparative Method) :

[CRAN](#)

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[GitHub](#)

- > **adespatial** (Multivariate Multiscale Spatial Analysis) :

[CRAN](#)

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[GitHub](#)

- > **CINID** (Package on the Curculionidae INstar IDentification) :

[CRAN](#)

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[article](#)

> **Interatrix** (Compute Chi-Square Measures with Corrections) :

[CRAN](#) 

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[article](#) 

> **OnAge** (Implements a likelihood ratio test of differential senescence onset between two groups) :

[CRAN](#) 

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[web \(https://lbbe.univ-lyon1.fr/onage\)](https://lbbe.univ-lyon1.fr/onage)

> Analysis of data from the *International Tiger Studbook* and from the *International and North American Regional Studbooks for Ruffed Lemurs* –

[article](#) 

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[article](#) 

> *AGEX* (ANR-15-CE32-0002-01, 2015-2019) –

[article](#) 

> *Potenchêne* (GIP-ECOFOR, 2014-2018) –

[article](#) 

> *CoCoReCo* (ANR JC09-470585, 2009-2012) –

[article](#) 

> *DL Vitis* (ANR-08-GENM-0002, 2008-2011) –

[article](#) 

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[CRAN](#) 

Bioinformatics

> **DRomics** (Dose Response for Omics) :

[CRAN](#) 

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[GitHub](#) 

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[shiny app 1](#) 

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[shiny app 2](#) 

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[web \(https://lbbe.univ-lyon1.fr/fr/dromics\)](https://lbbe.univ-lyon1.fr/fr/dromics)

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[article](#) 

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[IFB cloud appliance 1](#) 

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[IFB cloud appliance 2](#) 

> **kissDE** (Retrieves Condition-Specific Variants in RNA-Seq Data) :

[Bioconductor](#) 

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[GitHub](#) 

> **LDcorSV** (Linkage Disequilibrium Corrected by the Structure and the Relatedness) :

[CRAN](#) 

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[article](#) 

> **MareyMap** (Estimation of Meiotic Recombination Rates Using Marey Maps) :

[CRAN](#) 

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[GitHub](#) 

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[web \(https://lbbe.univ-lyon1.fr/fr/mareymap\)](https://lbbe.univ-lyon1.fr/fr/mareymap)

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[shiny app](#) 

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[article](#) 

> **phylter** (Detect and Remove Outliers in Phylogenomics Datasets) :

[CRAN](#) 

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[GitHub](#) 

Statistics and data analysis

- › **fitdistrplus** (Help to Fit of a Parametric Distribution to Non-Censored or Censored Data) :

[CRAN](#) ↗

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[GitHub](#) ↗

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[web \(https://lbbe.univ-lyon1.fr/fr/fitdistrplus\)](https://lbbe.univ-lyon1.fr/fr/fitdistrplus)

- › **Mondrian** (A Simple Graphical Representation of the Relative Occurrence and Co-Occurrence of Events) :

[CRAN](#) ↗

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[GitHub](#) ↗

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[shiny.app](#) ↗

- › **nlsMicrobio** (Nonlinear Regression in Predictive Microbiology) :

[CRAN](#) ↗

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[GitHub](#) ↗

- › **nlstools** (Tools for Nonlinear Regression Analysis) :

[CRAN](#) ↗

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[GitHub](#) ↗

IT services

- › **shiny server** :

<http://lbbe-shiny.univ-lyon1.fr> ↗

- › website of Statistics in Biology :

<http://pbil.univ-lyon1.fr/R/> ↗

Professional networks and conferences

- > *3e Journées Nationales du Réseau de la Recherche Reproductible* [↗](#)
, Lyon (organization committee)
- > *Rencontres R* (steering committee)
- > *7e Rencontres R* [↗](#)
, Conference, Rennes (programm committee)
- > *R pour le calcul*, [↗](#)
Action Nationale de Formation CNRS, Aussois (organization committee)
- > *2e Rencontres R* [↗](#)
, Conference, Lyon (organization committee) –
[article](#) [↗](#)

Trainings and Courses

- > *UE IT bases*, M1
[Biodiversité, Écologie et Évolution](#) [↗](#)
, University Lyon 1
- > *UE Visualization of Biological Data*, M2
[Bio-informatique](#) [↗](#)
, University Lyon 1
- > [Reproducible Research in Computational Ecology](#) [↗](#)
,
[FRB-Cesab](#) [↗](#)
et
[Gdr Ecostat](#) [↗](#)
- > [The basics of the R language](#) [↗](#)
, University Savoie Mont Blanc
- > [Programming with R: from the simplest to the most complex](#) [↗](#)
, Groupe Lyon Calcul
- > [Build your own package in R](#) [↗](#)
, ANF CNRS *R pour le calcul*

Competition Jury

- › Concours externe ENS (2021) - BAP A- IE - Ingénieur-e biologiste en traitement des données
- › Concours externe INRA (2019) - Experte - BAP E - AI - Assistant-e statisticien-ne
- › Concours externe INRA (2019) - BAP E - IE - Administrateur-trice des systèmes d'information
- › Concours externe CNRS (2017) - Experte - BAP E - IE - Ingénieur-e en ingénierie logicielle - 2 postes

Supervision

- › Cassandra Bompard, stage M2, Développement d'un package R de visualisation (2023)
- › Eliane Schermer, stage M2 et thèse, Modélisation en écologie (2015-2019)
- › Luka Matsuda, stage L3, Bioinformatique, Statistique et Modélisation (2018)
- › Adrien Bessy, stage M2, Bioinformatique (2015)