

Saint-Clair Chabert-Liddell

Eligible for *jeune docteur* contract



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Chabert-Liddell
14 November 1978 • Married • French citizen

Research Themes

Methods: Graph/network statistical modeling, Unsupervised learning, Variational inference

Applications: Social sciences, Life sciences

Experience

INRAE, UMR Marbec/UMR MIA Paris-Saclay

Postdoctoral researcher

09-2022 – ...

Statistical and deep learning methods to infer collective fishing behaviors from GPS trajectory data.
Variational auto-encoder, network inference and analysis, python (pytorch) and R programming.

Agroparistech Innovation

Research & development engineer

05-08 2022

Studied and compared Bayesian inference algorithms for hierarchical models. Tutorial R package.

INRAE

PhD student

2018 – 2022

Development of statistical learning methods and algorithms to analyze heterogeneous interaction network data.
Multilevel analysis of socio-economic systems, resilience of ecosystems, comparison of biological/social structures.
Published 3 articles in peer-reviewed scientific journals and 3 R package softwares. International conference talks.

Agroparistech

Lecturer

2018 – 2022

Taught tutorial and practical work in statistics and data science for MSc and BSc in engineering

Professional poker player

2006 – 2015

Played mostly online while traveling in over 20 different countries.

Focus on poker theory and modeling with advanced usage of dedicated analytical tools.

Good Game

Co-founder of the 1st sponsored eSports team in France

1997 – 2001

Organizer of the French qualifying tournament for the Samsung WCGC. Television and magazines appearances.

Education

PhD in Applied Mathematics

PARIS-SACLAY UNIVERSITY

2018-2022

Title: *Statistical learning of collections of networks with applications in ecology and sociology*

Supervisors: Sophie Donnet, Pierre Barbillon UMR MIA-Paris

Award: Best PhD thesis in applied statistics by the French Statistical Society (Prix Marie-Jeanne Laurent-Duhamel)

Master in applied mathematics – specialization in statistics

UPMC – SORBONNE UNIVERSITY, *highest honors*

2016 – 2018

Skills

Computer skills.....

R: Package development

Python: pytorch

other: L^AT_EX, Linux, C++, git

Languages.....

French: Native language

English: Scientific level

Japanese: Conversational level *JLPT N2*

Publications

Articles.....

Saint-Clair Chabert-Liddell, Pierre Barbillon, Sophie Donnet, and Emmanuel Lazega. A stochastic block model approach for the analysis of multilevel networks: An application to the sociology of organizations. *Computational Statistics & Data Analysis*, 158:107179, 2021.

Saint-Clair Chabert-Liddell, Pierre Barbillon, and Sophie Donnet. Impact of the mesoscale structure of a bipartite ecological interaction network on its robustness through a probabilistic modeling. *Environmetrics*, 33(2):e2709, 2022.

Saint-Clair Chabert-Liddell, Pierre Barbillon, and Sophie Donnet. Learning common structures in a collection of networks. An application to food webs. *Annals of Applied Statistics*, In press.

Preprints.....

Saint-Clair Chabert-Liddell, Nicolas Bez, Pierre Gloaguen, Sophie Donnet, and Stéphanie Mahévas. Auto-encoding GPS data to reveal individual and collective behaviour, 2023.

Softwares

MLVSBM: R package for the simulation, inference and clustering of multilevel networks

<http://Chabert-Liddell.github.io/MLVSBM>, available on cran

robber: R package for computing the robustness of bipartite ecological interaction networks

<http://Chabert-Liddell.github.io/robber>, available on cran

colSBM: R package for analyzing the common structures in collection of networks

<http://Chabert-Liddell.github.io/colSBM>

hbm4ecology: Companion R package for the book *Introduction to hierarchical bayesian modeling for ecological data*, (Parent & Rivot, 2012)

<http://www.hbm-for-ecology/rpackage>

Conferences

Complex Networks: 12th international conference on complex networks and their applications **Menton**
Learning common structures in a collection of networks 2023

18th Conference of Applied Statistics **Ljubljana**
Learning common structures in a collection of networks 2022

Invited session

EUSN 2021 - 5th European Conference on Social Networks **Online**
A Stochastic Block Model for collection of networks: Do the networks share a common structure? 2021

JDS 2021 : 52^{ème} Journées de Statistique de la SFDS **Online**
A stochastic block model for multilevel networks 2021

Sunbelt **Online**
Stochastic block model for multilevel networks unravels structural interdependence between the social and economic networks in a TV program trade fair 2020

Other talks: Netbio, GDR Ecostat, GDR Resodiv, ANR Econet, Costnet Winter School. . .

Teaching

Agroparistech **16h30**
Practical work in Data Science: Statistical Learning, MSc in engineering 1st year 2020 – 2022

Agroparistech **33h**
Tutorial in Statistics, BSc in engineering 3rd year 2018 – 2021

Agroparistech **13h30**
Practical work in Linear Model, MSc in engineering 1st year 2018 – 2020

Agroparistech **3h**
Advanced Course in Mathematics: Introduction to Measure Theory, MSc in engineering 1st year 2018

Miscellaneous

Interests.....

Travel: World tour while playing poker

Sports: Hiking, swimming, cycling, bouldering

Culture: Art-house cinema