Short Curriculum Vitæ

Sylvain Arlot
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Born March 2, 1983
French citizen

Administrative status

2015–… Professor University Paris-Sud/Scay, Mathematics department.
2020–2025 Junior member Institut Universitaire de France (IUF)
2012–2015 CNRS junior researcher (1st class) DI ENS, École Normale Supérieure, Paris
2008–2012 CNRS junior researcher (2nd class) DI ENS, École Normale Supérieure, Paris
2005–2008 PhD fellow Université Paris-Sud, Orsay

Main research interests

Statistical learning, non-parametric statistics. More precisely:

- Data-driven tuning of learning algorithms, model selection, penalization, (V-fold) cross-validation.
- Random forests.
- Change-point detection.

Main publications

5. (2019) Sylvain Arlot, Stefano Marmi and Duccio Papini Coupling the Yoccoz-Birkeland population model with price dynamics: chaotic livestock commodities market cycles Nonlinearity, Volume 32, Number 7, pp 2564–2592


Books and book chapters


Teaching book


Distinctions

PEDR (2017–2025) and PES (2011–2014) bonuses

2020–2025 Junior member Institut Universitaire de France (IUF)

2011 Ph.D. dissertation award Marie-Jeanne Laurent-Duhamel French Statistical Society

2010–2011 Peccot Lecture Collège de France

Member of scientific projects and networks

2019– Leader of the Celeste Project-team INRIA Saclay

See also https://www.imo.universite-paris-saclay.fr/celeste/index.html.

2020–2024 Member of BiSCottE: Bridging Statistical and COMpuTaTional Efficiency in artificial intelligence (scientific leader: Gilles Blanchard, LMO, Univ. Paris-Saclay; 600 kE)

2018–2022 Coordinator for U. Paris-Sud/Saclay of the ANR project Fast-Big (leader: Bertrand Thirion, INRIA Saclay)

See also https://project.inria.fr/fastbig/.

2015–2018 Member of the Select Project INRIA Saclay

2015 Member of the project BeFast (CNRS, PEPS Fascido) (leader: Alain Celisse, Université Lille 1)

2013–2014 Member of the MASTODONS project Gargantua (leader: Zaïd Harchaoui, INRIA Grenoble)

2012–2016 Member of the ANR project Calibration (leader: Vincent Rivoirard, Univ. Paris Dauphine)

2011–2015 Member of the Sierra Project INRIA Paris

2009–2012 Leader of the ANR project Detect: “New statistical approaches for computer vision and bioinformatics”

See also http://www.math.u-psud.fr/~arlot/ANR-DETECT.htm.

2008–2010 Member of the Willow Project INRIA Paris

2007–2013 Member of the European network of excellence Pascal (Pattern Analysis, Statistical Modelling and Computational Learning) then PASCAL 2 from 2008

2005–2008 Member of the Select Project INRIA Saclay

Scientific visits

Mar. 2012 Università degli Studi di Siena Duccio Papini

Feb. 2011 Scuola Normale Superiore di Pisa Stefano Marmi

Dec. 2009 University of California, Berkeley Peter L. Bartlett

Nov. 2009 Scuola Normale Superiore di Pisa and Università degli Studi di Siena Stefano Marmi and Duccio Papini

Jan.–Apr. 2008 University of California, Berkeley Peter L. Bartlett
Collective responsibilities

2021– Invited member of the council of the Computer Science Graduate School Université Paris-Saclay
2018– Associate editor Annales de l’Institut Henri Poincaré B, Probability and Statistics
2016– Member of recruiting committees (5 committees since 2016)
2021 Area chair AISTATS 2021
2020–2021 Member of the temporary council of the Math Graduate School Université Paris-Saclay
2020–2021 Member of the executive board (bureau) of LMO Université Paris-Saclay
2019–2021 Member of the prefiguration group of the Computer Science Graduate School Université Paris-Saclay
2019–2020 Coordinator of the math-AI program Labex Mathématique Hadamard
2019 President of recruiting committees (1 committee)
2018–2020 Executive committee member Fondation Mathématique Jacques Hadamard (FMJH)
2016–2019 Member of steering committee Center for Data Science Paris-Saclay
2019–2020 Coordinator of the math-CS program Labex Mathématique Hadamard
2012–2015 Elected member of the laboratory council DI/ENS

Referee

- Conferences: AISTATS, COLT, ICML, NeurIPS (2019: among the top 400 reviewers over 4500+).
- Projects: Pascal Challenge, Hi! Paris fellowships.

Member of “Habilitation” committees (HDR)

Jan. 2021 Mohamed Hebiri University Gustave Eiffel Examiner
Dec. 2020 Erwan Scornet Institut Polytechnique de Paris Referee
Sep. 2020 Guillaume Rigail Université Paris-Saclay Examiner
Sep. 2020 Victor-Emmanuel Brunel Institut Polytechnique de Paris Examiner
Feb. 2019 Servane Gey Université Paris-Descartes Referee
Nov. 2018 Émilie Lebarbier Université Paris-Sud President

Member of Ph.D. committees

Dec. 2021 TrungTin Nguyen Université de Caen Normandie Referee
Oct. 2020 Gautier Appert Institut Polytechnique de Paris Examiner
Advisor

- Ph.D. students:

  Samy Clementz (2021–...) *Data-driven Early Stopping Rules for saving computation resources in AI* (50%; co-advisor: Alain Celisse)

  El Mehdi Saad (2019–...) *Interactions between statistical and computational aspects in machine learning* (50%; co-advisor: Gilles Blanchard)

  Tuan-Binh Nguyen (2018–2021) *Some Contributions to Modern Multiple Hypothesis Testing in High-dimension* (60%; co-advisor: Bertrand Thirion)

  Guillaume Maillard (2016–2020) *Hold-out and aggregated hold-out* (50%; co-advisor: Matthieu Lerasle)


- Master 2 students:

  Guillaume Maillard (2016) *Aggregated cross-validation* (50%; co-advisor: Matthieu Lerasle)


  Matteo Tanzi (2013) *Denoising and Parameter Estimation for Deterministic Dynamical Systems* (co-advised with Stefano Marmi)


  Matthieu Solnon (2010) *Multi-task learning and minimal penalties* (50%; co-advisor: Francis Bach)

- Master 1 students:

  Farid Arthaud (2021) *Theoretical analysis of purely random forests*

  Anisse Ismaili and Pierre Gaillard (2009) *The Lasso*
Talks and organization of scientific events

- (Co-)organization of 10 one-shot scientific events, and co-organization of monthly seminar (SMILE from 2013 to 2018, Séminaire palaisien since 2019).
- 29 talks in international conferences or workshops (among which 13 abroad),
- 8 talks in national conferences or workshops,
- 44 seminar talks (among which 8 abroad).
- Detailed list available on my webpage: https://www.imo.universite-paris-saclay.fr/~arlot/

Teaching

- Detailed list available on my webpage: https://www.math.u-psud.fr/~arlot/teaching.htm
- Master 2: Statistical learning (Paris-Sud/Saclay, since 2009-10), Seminar coordination (Paris-Sud/Saclay, 2016-17 to 2019-20), Preparation of Mathematics “agrégation” (option probability and statistics, Paris-Sud/Saclay, since 2016-17), Supervised classification (Centrale Paris, 2008-09).

Popularization

2019–2021 Exhibition organized by Fermat Science (Toulouse), IHP (Paris) and MMI (Lyon) member of the steering committee Come into the AI world
2018 La Gazette des Mathématiciens – Numéro spécial Jean-Christophe Yoccoz (with Stefano Marmi, Carlos Matheus and Nigel Gilles Yoccoz Article Dynamique de populations de petits mammifères, saisonnalité et attracteur de Hénon – comment une question d’écologue a pu intéresser Jean-Christophe
May 2008 Le Mensuel de l’Université Article Comment choisir un modèle?
Apr. 2007 Science Académie Lecture for high school students Statistiques et Sélection de modèles
2001–2007 Forum Sciences TPE Answers to scientific questions from high school students
July 2006 Festival des Sciences Paris-Montagne Global warming

Academics: Ph.D. thesis and habilitation

2014 Habilitation in Mathematics Université Paris Diderot Title: Contributions to statistical learning theory: estimator selection and change-point detection.

Languages

French (native)
English (fluent)