SHORT CURRICULUM VITÆ

Sylvain ARLOT
Orsay Mathematics Department
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Paris-Sud University
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Webpage: http://www.math.u-psud.fr/~arlot/

Born March 2, 1983
French citizen

Administrative status

2015 – … Professor University Paris-Sud, Mathematics department.
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

Bernoulli, Vol. 17, No 2, 687-713.

8. (2010) Sylvain Arlot and Alain Celisse Segmentation of the mean of heteroscedastic data via cross-validation


10. (2010) Sylvain Arlot, Gilles Blanchard and Étienne Roquain Some non-asymptotic results on resampling in high dimension, I: confidence regions

11. (2010) Sylvain Arlot, Gilles Blanchard and Étienne Roquain Some non-asymptotic results on resampling in high dimension, II: multiple tests

12. (2009) Sylvain Arlot Model selection by resampling penalization


15. (2009) Sylvain Arlot and Francis Bach Data-driven calibration of linear estimators with minimal penalties

16. (2007) Sylvain Arlot, Gilles Blanchard and Étienne Roquain Resampling-based confidence regions and multiple tests for a correlated random vector

Books and book chapters

In M. Maumy-Bertrand, G. Saporta & C. Thomas-Agnan (éd.), Journées d’Études en Statistique (JES) 2016: Apprentissage statistique et données massives, Éd. Technip pages 17–139

In M. Maumy-Bertrand, G. Saporta & C. Thomas-Agnan (éd.), Journées d’Études en Statistique (JES) 2016: Apprentissage statistique et données massives, Éd. Technip pages 141–174

Teaching book

Collection Références sciences, Ellipses. 528 pages.

Distinctions

PEDR (2017–2020) and PES (2011–2014) bonuses
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

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

2015– 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

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<tr>
<th>Date</th>
<th>Institution</th>
<th>Name</th>
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<tbody>
<tr>
<td>Mar. 2012</td>
<td>Università degli Studi di Siena</td>
<td>Duccio Papini</td>
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<tr>
<td>Feb. 2011</td>
<td>Scuola Normale Superiore di Pisa</td>
<td>Stefano Marmi</td>
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<tr>
<td>Dec. 2009</td>
<td>University of California, Berkeley</td>
<td>Peter L. Bartlett</td>
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<tr>
<td>Nov. 2009</td>
<td>Scuola Normale Superiore di Pisa and Università degli Studi di Siena</td>
<td>Stefano Marmi and Duccio Papini</td>
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<tr>
<td>Jan.–Apr. 2008</td>
<td>University of California, Berkeley</td>
<td>Peter L. Bartlett</td>
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Collective responsibilities

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<th>Year</th>
<th>Role</th>
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<tr>
<td>2018–</td>
<td>Associate editor Annales de l’Institut Henri Poincaré B, Probability and Statistics</td>
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<tr>
<td>2016–</td>
<td>Coordinator of the math-CS program Labex Mathématique Hadamard</td>
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<td>2016–</td>
<td>Member of steering committee Center for Data Science Paris-Saclay</td>
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<td>2016–</td>
<td>Member of recruiting committees (3 committees since 2016)</td>
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<td>2012–2015</td>
<td>Elected member of the laboratory council DI/ENS</td>
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Referee

- **Conferences**: AISTATS, COLT, ICML
- **Books**: Société Mathématique de France
• Mathematical Reviews (since 2017)

• Projects: Pascal Challenge

Member of Ph.D. committees

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<th>Date</th>
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<tbody>
<tr>
<td>Sep. 2016</td>
<td>Marie-Liesse Cauwet</td>
<td>Université Paris-Sud</td>
<td>Examiner</td>
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<tr>
<td>June 2016</td>
<td>Mokhtar Alaya</td>
<td>Université Pierre-et-Marie-Curie</td>
<td>President</td>
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<tr>
<td>May 2016</td>
<td>Gwenaelle Mabon</td>
<td>Université Paris Descartes</td>
<td>Examiner</td>
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<tr>
<td>Feb. 2016</td>
<td>Jérémie Bensadon</td>
<td>Université Paris-Sud</td>
<td>President</td>
</tr>
<tr>
<td>Nov. 2015</td>
<td>Erwan Scornet</td>
<td>Université Pierre et Marie Curie</td>
<td>Examiner</td>
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<tr>
<td>Nov. 2015</td>
<td>Mélisande Albert</td>
<td>Université Nice Sophia-Antipolis</td>
<td>Examiner</td>
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<td>July 2015</td>
<td>Maud Thomas</td>
<td>Université Paris Diderot</td>
<td>Examiner</td>
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<tr>
<td>Apr. 2011</td>
<td>Pierre Connault</td>
<td>Université Paris-Sud</td>
<td>Examiner</td>
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<tr>
<td>June 2009</td>
<td>Matthieu Lerasle</td>
<td>INSA Toulouse</td>
<td>Examiner</td>
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Advisor

• Ph.D. students:

  Tuan-Binh Nguyen  (2018–...)  Efficient Statistical Testing for High-Dimensional Models (75%; co-advisor: Bertrand Thirion)

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

  Damien Garreau  (2014–2017)  Learning the kernel for change-point detection (80%; co-advisor: Gérard Biau)


• 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)

  Rémi Lajugie  (2012)  Metric learning for change-point detection (50%; co-advisor: Francis Bach)

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

• Master 1 students:

Talks and organization of scientific events

- (Co-)organization of 9 one-shot scientific events, and co-organization of a monthly seminar since 2013.
- 26 talks in international conferences or workshops, 8 talks in national conferences or workshops, 47 seminar talks (in France or abroad).
- Detailed list available on my webpage: https://www.math.u-psud.fr/~arlot/talks.htm

Teaching

- Detailed list available on my webpage: https://www.math.u-psud.fr/~arlot/teaching.htm
- **Ph.D. level tutorials:** JES 2016 (Fréjus), CEMRACS 2013 (CIRM, Marseille), Université de Cergy (2012), Scuola Normale Superiore di Pisa (2011), Cours Peccot 2011 (Collège de France, Paris).
- **Master 2:** Statistical learning (Paris-Sud, since 2009-10), Seminar coordination (Paris-Sud, since 2016-17), Preparation of Mathematics “aggregation” (option probability and statistics, Paris-Sud, since 2016-17), Supervised classification (Centrale Paris, 2008-09).
- **Master 1:** Multivariate statistics (Paris-Sud, M1 Bioinformatic-Biostatistics, 2015-18), Statistical learning (ENS Paris, 2010-12), Mathematical lectures: classification (ENS Paris, 2010-12).
- **Bachelor:** Probability and Statistics (2nd year, Paris-Sud, lectures and coordination since 2016-17 practical work since 2015-16), Mathematics board (ENS Paris, 2nd year level, admission exam, section “humanities and economy”, 2010-13), Calculus (1st year, Paris-Sud, practical work, 2005-08).

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)