

# ODALRIC-AMBRYM MAILLARD

October 12, 1984, Nouméa (France), ORCID 0000-0001-7935-7026 [Personal website](#) [Gitlab](#) [Google scholar](#)  
Inria Lille – Nord Europe, Equipe [SCOOL](#), Bureau A10, 59650 Villeneuve d'Ascq FRANCE, (+33) 03 59 57 79 06

## Academic position

11.02.2019	<b>Habilitation à diriger des recherches</b> from University of Lille, France
01.2017 -	<b>Chargé de Recherche Inria (CRCN)</b> in Sequel Team, France. <i>Inria Lille - Nord europe</i>
10.2016 - 12.2016	<b>Chargé de Recherche Inria (CR2)</b> in Sequel Team, France. <i>Inria Lille - Nord europe</i>
01.2015 - 09.2016	<b>Chargé de Recherche Inria (CR2)</b> in TAO Team, France. <i>Inria Saclay - Île de France</i>
06.2014 - 12.2014	<b>Senior Researcher</b> in Israel, team of <b>Shie Mannor</b> . <i>The Technion, Faculty of Electrical Engineering</i>
02.2013 - 05.2014	<b>Postdoc</b> in Israel, with <b>Shie Mannor</b> . <i>The Technion, Faculty of Electrical Engineering</i> FP7 <a href="#">European Project</a> SUPREL (Scaling-Up Reinforcement Learning)
2011 - 01.2013	<b>Postdoc</b> in Austria, with <b>Peter Auer</b> . <i>Montanuniversität Leoben, Lehrstuhl für Informationstechnologie</i> FP7 <a href="#">European Project</a> CompLacs (Composing Learning for Artificial Cognitive Systems),
2008 - 2011	<b>Ph.D.</b> in France “ <i>Apprentissage Séquentiel : Bandits, Statistique et Renforcement.</i> ” <i>INRIA Lille - Nord europe, Sequel Team-Project</i> , selective grant from ENS Cachan (rank 1) Advisors: <b>Rémi Munos</b> (INRIA Lille - Nord Europe), <b>Philippe Berthet</b> (IMT, Toulouse) [ <b>Ph.D. 1st prize from AFIA</b> (Association Française pour l'Intelligence Artificielle) <b>2012</b> ]. PASCAL2 European network of excellence (since 2010)

## Education

2008	<b>Diploma from École Normale Supérieure de Cachan</b>
2007 - 2008	<b>Master 2 of research in Computer Science: “Master Vision et Apprentissage” (MVA)</b> <i>common to Ulm/Cachan/X/Mines/Ponts/Telecom/Centrale/Paris V/XIII/Dauphine (rank 1)</i>
2006 - 2007	<b>Master 2 of research in Mathematics: “Théorie Statistique”</b> <i>IRMAR, University of Rennes 1 (rank 1)</i>
2004 - 2006	<b>École Normale Supérieure de Cachan (“3/2”, Ker Lann)</b> Magistère (~150% of Bsc+Msc) in Computer science (DIT) and in Mathematics (DMMI) in parallel. 1st year: rank 3 (DIT), 7 (DMMI), 2nd year: rank 2 (DIT), 7 (DMMI)

## Grants

2022-2024 co-PI of Inria-Japan Associate team “[Real-Life Bandits \(RELIANT\)](#)” with J. Honda (6 chercheurs permanents, 31 publications, un [article de vulgarisation](#)).

2022 - 2025 co-PI of Inria-Inrae project “Three-risk proof Sequential Decision Making (3RDSM), 4k?.”

2021 co-PI of **RLRL** “Real-Life Reinforcement Learning” project with B. De Saporta, 20k.

2021 - 2024 co-PI of **Chaire IA AppRenf** on reinforcement learning with P. Preux, 400k.

2019 - 2023 PI of **INRIA Action Exploratoire AEx** “Sequential Recommendation for Sustainable Gardening (SR4SG)”, 165k, <https://project.inria.fr/sr4sg>, gathering AI and AgroEcology research to recommend good gardening practice.

2019 - 2022 Member (10%) of **I-SITE** project “Bandits for Health (B4H)”, with Lille Hospital, PI F. Pattou & P. Preux.

2019 - 2020 Involved (5%) in project “Learning Framework for Radio resource Allocation in LoRaWaAN”, PI K. Khawam.

2016 - 2020 PI of **ANR JCJC** project “Bandits against non-Stationarity and Structure (BADASS)”, 180k with E. Kaufmann and R. Combes. <https://project.inria.fr/badass/> Postdoctorant: M.S. Talebi, and PhD: S. W. Akhtar

2016 - **IFCAM project** “Contextual multi-armed bandits with hidden structure”, with Aditya Gopalan (Bangalore), 7k.

2015 - **Programme Invité Digiteo**, 4k: Invitation of A. Gopalan for 3 weeks.

2015 - **PEPS JCJC - INS2I** project “PROMO” with R. Bardenet (CNRS, Lille), 7k.

2015 - **INRIA-Carnot** “Outil générique de prévision/contrôle de flux hydrauliques” with Prolog and O. Teytaud (1y engineer).

## Notable facts

2 NeurIPS Oral presentations, 1 ACML Best student paper award.

In 2023, I qualified for the oral interview for ERC CoG. The project eventually was not funded for being “too ambitious”.

In 2022, two researchers [named an algorithm after me](#).

2016 - 2020 Prime d'encadrement doctoral et de recherche (PEDR).

August 2015 - Part of the 200 young researchers internationally selected to attend the Heidelberg Laureate Forum and meet Abel, Fields and Turing laureates.

May 2015 - Participation to the Association Technion France (ATF) delegation in Israël.

2012 - **Ph.D. 1st prize from AFIA** (Association Française pour l'Intelligence Artificielle).

## List of publications

My **full list** of publication is [available here](#). I present below a selective list of 5 relevant and diverse type of publications:

[1] Sayak Ray Chowdhury, Patrick Saux, Odalric-Ambrym Maillard, Aditya Gopalan. [BREGMAN DEVIATIONS OF GENERIC EXPONENTIAL FAMILIES](#) In *Conference On Learning Theory (COLT)*, Jul 2023, Bangalore, India.

[2] Fabien Pesquerel and Odalric-Ambrym Maillard. [IMED-RL: REGRET OPTIMAL LEARNING OF ERGODIC MARKOV DECISION PROCESSES](#). In *NeurIPS 2022 - Thirty-sixth Conference on Neural Information Processing Systems*, Thirty-sixth Conference on Neural Information Processing Systems, New-Orleans, United States, November 2022.

[3] Edouard Leurent, Denis Efimov, and Odalric-Ambrym Maillard. **ROBUST-ADAPTIVE CONTROL OF LINEAR SYSTEMS: BEYOND QUADRATIC COSTS**. In *34th Conference on Neural Information Processing Systems (NeurIPS)*, 2020. Oral, 1% acceptance rate

[4] Odalric-Ambrym Maillard. **BOUNDARY CROSSING PROBABILITIES FOR GENERAL EXPONENTIAL FAMILIES**. *Mathematical Methods of Statistics*, 27(1):1–31, 2018.

[5] Dorian Baudry, Romain Gautron, Émilie Kaufmann and Odalric-Ambrym Maillard. **OPTIMAL THOMPSON SAMPLING STRATEGIES FOR SUPPORT-AWARE CVAR BANDITS**. In *Proceedings of the 38th International Conference on Machine Learning (ICML)*. PMLR, 2021.

Invited speaker (selected list, see [detailed list here](#))

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June 28-30, 2023, Nancy (France): INFORMS Applied Probability Society Conference.

June 04, 2019, Amsterdam (Netherlands): P.Grünwald’s group at Centrum voor Wiskunde en Informatica (CWI).

May 13-14, 2019, Besançon (France): Workshop on Empirical Processes and Applications to Statistics.

March 07, 2019, Paris (France): 3rd nonstationary day, at Institut Henri Poincaré (IHP).

November 03, 2018, Sapporo (Japan): 20th Ibis conference (**plenary talk**).

June 03, 2016, Paris (France): GdR Isis.

January 12, 2016, Lancaster (UK): the Bandits Workshop in Lancaster.

January 08, 2016, Orsay (France): journées Statistics/Learning at Paris-Saclay at IHES.

November 09, 2015, Toulouse (France): CIMI.

January, 30, 2015 Paris (France): Journées YSP at Institut Henri Poincaré (IHP).

I was further invited to [organize](#) a session at RL4SN INFORMS conference, June 17-21, 2024, Toulouse (France).

## Supervision of students and young researchers [full list](#)

I have supervised the following smart people: Tanguy Lefrot (Postdoc, 2024-2025, Pl@ntAgroEco), Tuan Dam (Postdoc, 2022-2023, Chaire IA), Timothée Mathieu (Postdoc, 2021-2023, Inria), Mohammad Sadegh Talebi (Postdoc, 2018-2020, ANR), Hernán Carvajal (Engineer, 2021-2023, Inria).

I continue this list with the Ph.D. students I have advised since my habilitation (2019):

S. Vashishtha (100%, 2022-2025, Chaire IA fellow) F. Fabre (33%, 2021-2024, U. Reunion & CIRAD)

F. Pesquerel (100%, 2020-2023, ENS fellow) P. Saux (50%, 2020-2023, ENS fellow, 1 [Lancet](#) publication)

D. Baudry (50%, 2019-2022, Inria fellow) R. Ouhamma (50%, 2019-2023, Ecole Polytechnique fellow)

H. Saber (100%, 2019-2022, Inria fellow) E. Leurent (50%, 2017-2020, CIFRE Renault; **2 PhD awards**)

Before my habilitation, I also co-supervised<sup>1</sup> S. Akhtar (2017, ANR) R. Alami (2016-2020, CIFRE Orange Labs) R. Allesiaro (2015-2017, CIFRE Orange Labs) N. Galichet (2016, Université Orsay).

## Teaching (Master level)

I have been teaching **Statistical Reinforcement Learning** in several M.Sc over the last few years:

Part of the material is based on my Habilitation manuscript, completed with more visual/informal slides made available on [github](#) for the community.

**École Polytechnique**, 2019-2023 (5y) Master 2 “Artificial Intelligence & Advanced Visual Computing (Ai-ViC)” (48h, ~20 students) and 2020-2022 (3y) Executive Master Data-Science (3h, ~50 students)

**École Centrale Supélec**, 2021/2022, Master 2 Mention IA (24h, ~70 students) and **École Centrale de Lille**, 2017/2018, Master 2 “Données, Apprentissage, Décision (DAD)” (18h, ~40 students)

I also taught at **Reinforcement Learning Summer School (RLSS)**, 01-12 July 2019, (5h, ~300 students).

## Reviewing and juries

I regularly participate in PhD or HDR defence juries, as well as hiring committees juries, see [full list here](#)

I have been reviewing for the following international conferences (55 PC) and journals (+50 reviews):

Algorithmic Learning Theory, Bernoulli Journal, Artificial Intelligence and Statistics, The Annals of Statistics, Conference On Learning Theory, European Conference on Machine Learning, European Workshop on Reinforcement Learning, International Conference on Machine Learning, Journal of Machine Learning Research, Machine Learning Journal, Neural Information Processing Systems, IEEE Transactions on Automatic Controls, IEEE Transactions on Information Theory, Theoretical Computer Science, I am **editor** of the Journal of Machine Learning Research. I occasionally reviewed for the ANR. I was part of the Inria CR hiring committee in 2018, 2019, 2020, and Inrae jury in 2021.

## Broadcasting

More recently, I regularly engage with public audience, see [list of events](#).

2025.02 - Interview for France Culture (national Radio channel) “8h45”, regarding AI and agroecology.

2025.01 - [Communication](#) about Inria-Japan associate team RELIANT

2024.03 - Presentation to students from Lycée Horticole Lomme.

2020.10 - Participation to Fête de la Science (video intended to the public) at Inria.

More information available at <https://odalric-ambrymmaillard.github.io/researcher/>

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<sup>1</sup>in French, doctoral school officially recognizes supervision only after habilitation.