

Pierre Ohlmann

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Experience

Faculty of Mathematics, Informatics and Mechanics, University of Warsaw <i>Postdoc, supervised by Michał Pilipczuk</i>	Warsaw, Poland <i>Jan 2022 - Dec 2024</i>
Institut de Recherche en Informatique Fondamentale <i>PhD, supervised by Olivier Serre and Nathanaël Fijalkow</i>	Paris, France <i>Sept 2018 - Oct 2021</i>
Institut de Recherche en Informatique Fondamentale <i>Master's student internship, supervised by Olivier Serre and Nathanaël Fijalkow</i>	Paris, France <i>Jan - Jun 2018</i>
Alan Turing Institute of Data Science & University College London <i>Master's student internship, supervised by Nathanaël Fijalkow and Alexandra Silva</i>	London, UK <i>Apr - Jun 2017</i>
Oxford Computer Science Department <i>Master's student internship, supervised by Joël Ouaknine and James Worrell</i>	Oxford, UK <i>May - Jul 2016</i>
Laboratoire I3S Nice Sophia Antipolis <i>Undergraduate student internship, supervised by Julien Provillard</i>	Sophia Antipolis, France <i>Jun - Jul 2015</i>

Education

École Normale Supérieure de Lyon <i>Master's degree of Computer Science (2nd year), awarded with highest honors, ranked first</i>	Lyon, France <i>Sept 2017 - Jun 2018</i>
Université Pierre et Marie Curie <i>Master's degree of Mathematics (1st year), awarded with highest honors, ranked first</i>	Paris, France <i>Sept 2016 - May 2017</i>
École Normale Supérieure de Lyon <i>Master's degree of Computer Science (1st year), awarded with highest honors</i>	Lyon, France <i>Sept 2015 - May 2016</i>
École Normale Supérieure de Lyon <i>Undergraduate degree in Computer Science, awarded with highest honors</i>	Lyon, France <i>Sept 2014 - Jun 2015</i>
Lycée Kleber <i>Classes préparatoires aux grandes écoles</i>	Strasbourg, France <i>Sept 2012 - Jun 2014</i>

Publications

Peer-reviewed journals	
Characterizing positionality in games of infinite duration over infinite graphs <i>Single author</i>	TheoretCS <i>2023</i>
Controlling a random population <i>With Nathanaël Fijalkow and Thomas Colcombet</i>	Logical Methods in Computer Science <i>2022</i>
The theory of universal graphs for infinite duration games <i>With Nathanaël Fijalkow and Thomas Colcombet</i>	Logical Methods in Computer Science <i>2021</i>
Lower bounds for arithmetic circuits via the Hankel matrix <i>With Nathanaël Fijalkow, Guillaume Lagarde and Olivier Serre</i>	Computational Complexity <i>2021</i>
Semialgebraic invariant synthesis for the Kannan-Lipton orbit problem <i>With Nathanaël Fijalkow, Joël Ouaknine, Amaury Pouly and James Worrell</i>	Theory of Computing Systems <i>2019</i>
Proceedings of peer-reviewed international conferences	
Positionality in Sigma2 and a completeness result <i>With Michał Skrzypczak</i>	STACS <i>2024</i>
Flipper games for monadically stable graph classes <i>With J. Gajarský, N. Mählmann, R. McCarty, Mi. Pilipczuk, W. Przybyszewski,</i>	ICALP <i>2023</i>

S. Siebertz, M. Sokółowski and S. Toruńczyk

Canonical decompositions in monadically stable and bounded shrubdepth graph classes <i>With Michał Pilipczuk, Wojciech Przybychewski and Szymon Toruńczyk</i>	ICALP 2023
Characterising memory in infinite games <i>With Antonio Casares</i>	ICALP 2023
A technique to speed up symmetric attractor-based algorithms for parity games <i>With Marcin Jurdziński and K. S. Thejaswini</i>	FSTTCS 2022
Characterizing positionality in games of infinite duration over infinite graphs <i>Single author</i>	LICS 2022
The GKK Algorithm is the Fastest over Simple Mean-Payoff Games <i>Single author</i> Best paper award	CSR 2022
Scaling Neural Program Synthesis with Distribution-based Search <i>With Nathanaël Fijalkow, Guillaume Lagarde, Théo Matricon, Kevin Ellis and Akarsh Potta</i> Selected for publication (5% of papers)	AAAI 2022
New Algorithms for Combinations of Objectives using Separating Automata <i>With Ashwani Anand, Nathanaël Fijalkow, Aliénor Goubault-Larrecq and Jérôme Leroux</i> Invited for publication in LMCS special issue	Gandalf 2021
The complexity of mean payoff games using universal graphs <i>With Nathanaël Fijalkow and Paweł Gawrychowski</i>	MFCS 2020
Lower bounds for arithmetic circuits via the Hankel matrix <i>With Nathanaël Fijalkow, Guillaume Lagarde and Olivier Serre</i>	STACS 2022
Controlling a Random Population <i>With Nathanaël Fijalkow and Thomas Colcombet</i> Invited for publication in LMCS special issue	FoSSaCS 2020
On the Monniaux Problem in Abstract Interpretation <i>With N. Fijalkow, E. Lefauchaux, J. Ouaknine, A. Pouly and J. Worrell</i>	SAS 2019
Semialgebraic Invariant Synthesis for the Kannan-Lipton Orbit Problem <i>With Nathanaël Fijalkow, Joël Ouaknine, Amaury Pouly and James Worrell</i> Invited for publication in ToCS special issue	STACS 2017

Preprints (unpublished).....

Rank-decreasing transduction <i>With Mikołaj Bojanczyk</i>	arxiv 2024
Half-positional omega-regular languages <i>With Antonio Casares</i>	arxiv 2024
Fast value iteration for energy games <i>With Antonio Casares</i>	arxiv 2021

Talks

Presentations in international conferences and workshop.....

STACS 2024 <i>International conference on Theoretical Computer Science</i>	Clermont-Ferrand, France Mar 2024
ICALP 2023 <i>International colloquium on Automata, Languages and Programming</i>	Paderborn, Germany Jul 2023
LICS 2022 <i>International conference on Logics in Computer Science</i>	Haifa, Israël Aug 2022

CSR 2022 <i>International conference on Theoretical Computer Science</i>	Online <i>Jun 2022</i>
Highlights of Logics, Games and Automata 2022 <i>International conference on Logics, Games and Automata</i>	Paris, France <i>Jun 2022</i>
Automata Theory and Applications: Games, Learning and Structures <i>International workshop on automata theory, hosted by national university of Singapour</i>	Online <i>Sep 2021</i>
Highlights of Logics, Games and Automata 2021 <i>International conference on Logics, Games and Automata</i>	Online <i>Sep 2021</i>
FoSSaCS 2021 <i>International conference on Theoretical Computer Science</i>	Online <i>Mar 2021</i>
Spotlight on Games Workshop 2020 <i>International workshop on Games</i>	Online <i>Nov 2020</i>
Highlights of Logics, Games and Automata 2020 <i>International conference on Logics, Games and Automata</i>	Online <i>Sep 2020</i>
STACS 2020 <i>International conference on Theoretical Computer Science</i>	Montpellier, France <i>Mar 2020</i>
Highlights of Logics, Games and Automata 2019 <i>International conference on Logics, Games and Automata</i>	Warsaw, Poland <i>Sep 2019</i>
RP 2019 <i>International conference on Reachability Problems (talk only presentation)</i>	Brussels, Belgium <i>Sep 2019</i>
FILOFOCS 2018 <i>International workshop on Foundations of Computer Science</i>	Paris, France <i>Oct 2018</i>
Highlights of Logics, Games and Automata 2018 <i>International conference on Logics, Games and Automata</i>	Berlin, Germany <i>Sep 2018</i>
WACT 2018 <i>International workshop on Algebraic Complexity Theory</i>	Paris, France <i>Mar 2018</i>
STACS 2017 <i>International conference on Theoretical Computer Science</i>	Hannover, Germany <i>Mar 2017</i>
Presentations in seminars and research project meetings.....	
LIS pole calcul seminar <i>Monthly pole seminar in LIS</i>	Marseille, France <i>Mar 2023</i>
MIMUW seminar <i>Weekly seminar in automata theory team at MIMUW</i>	Warsaw, Poland <i>Jun 2023</i>
MOVE seminar <i>Weekly seminar in model-checking and verification team at LIS lab, team MOVE</i>	Marseille, France <i>Dec 2022</i>
Kolmogorov seminar on complexity <i>Weekly team seminar</i>	Online <i>Nov 2022</i>
M2F seminar <i>Bi-monthly seminar for formal methods and models department in LaBRI</i>	Bordeaux, France <i>Oct 2022</i>
LMF seminar <i>Weekly seminar in model-checking and synthesis team at LMF lab</i>	Saclay, France <i>Oct 2022</i>
MC2 seminar <i>Weekly seminar in computation, complexity and combinatorics team at LIP</i>	Lyon, France <i>Oct 2022</i>
IRIF seminar <i>Weekly seminar in automata team at IRIF</i>	Paris, France <i>Apr 2022</i>

MIMUW seminar <i>Weekly seminar in algorithms team at MIMUW</i>	Warsaw, Poland <i>Jan 2022</i>
MIMUW seminar <i>Weekly seminar in automata theory team at MIMUW</i>	Warsaw, Poland <i>Jan 2022</i>
LMF seminar <i>Weekly seminar in model-checking and synthesis team at LMF lab</i>	Saclay, France <i>Nov 2021</i>
PLUME seminar <i>Weekly seminar in PLUME team at LIP lab</i>	Lyon, France <i>Nov 2021</i>
MOVE seminar <i>Weekly seminar in MOVE team at LIS lab</i>	Marseille, France <i>Nov 2021</i>
LINKS seminar <i>Weekly seminar in LINKS project at CRIStAL lab, held online</i>	Lille, France <i>Jun 2021</i>
LMF verification seminar <i>Weekly seminar in the verification team of LMF, held online</i>	Gif-sur-Yvettes, France <i>Apr 2021</i>
TFCS seminar <i>Seminar at spring research program of Simons Institute, held online</i>	Berkley, USA <i>Mar 2021</i>
YR-OWLS seminar <i>International weakly seminar on semantics and logics (young researcher track), held online</i>	Worldwide <i>Mar 2021</i>
MIMUW automata theory seminar <i>Weekly seminar in the automata team of MIMUW, held online</i>	Warsaw, Poland <i>Mar 2021</i>
Journées ASV <i>Local research group annual meeting, held online</i>	Paris, France <i>Oct 2020</i>
LaBRI seminar <i>Weekly seminar in the formal methods team of LaBRI, held online</i>	Bordeaux, France <i>Apr 2020</i>
IRIF seminar <i>Weekly seminar in the automata team of IRIF, held online</i>	Paris, France <i>Apr 2020</i>
IRISA seminar <i>Weekly seminar in the algorithm team of IRISA</i>	Rennes, France <i>Jan 2020</i>
LACL seminar <i>Weekly seminar in the algorithm team of LACL</i>	Créteil, France <i>Jan 2020</i>
GDR ALGA meeting <i>Reseach group meeting on themes related to automata and game theory</i>	Paris, France <i>Oct 2019</i>
LIGM seminar <i>Weekly seminar in the algorithm team of LIGM</i>	Marne-la-Vallée, France <i>Feb 2019</i>
ANR Codys <i>Research project meeting on dynamical systems and applications</i>	meeting Paris, France <i>Nov 2018</i>
Cambridge seminar <i>Weekly seminar in the Logics and Semantics group of the Computer Science department</i>	Cambridge, UK <i>Nov 2018</i>
IRIF seminar <i>Weekly seminar in the automata team of IRIF</i>	Paris, France <i>Sep 2018</i>
GDR ALGA meeting <i>Research group meeting on themes related to automata and game theory</i>	Lille, France <i>Oct 2018</i>
ANR COMPA meeting <i>Research project meeting on Algebraic Complexity Theory</i>	Lyon, France <i>Sept 2018</i>
LABRI seminar <i>Weekly seminar in the formal methods team in LABRI</i>	Bordeaux, France <i>Apr 2018</i>

ANR DELTA meeting <i>Research project meeting on transducers and automata theory</i>	Paris, France <i>Mar 2018</i>
Alan Turing Institute seminar <i>Weekly seminar in the Alan Turing Institute of Data Science</i>	London, UK <i>Jun 2017</i>
IRIF seminar <i>Weekly seminar in the automata team in IRIF</i>	Paris, France <i>May 2017</i>

Teaching and supervising

Co-supervised 6 weeks research internship of Olivier Idir on combinatorial games <i>Along with Olivier Serre and Mathieu Mari</i>	IRIF, Paris, France <i>Jun 2020 - Jul 2020</i>
Invited lecture on infinite duration games <i>Game theory techniques in computer science, 3 hours</i> Master Parisien de Recherche en Informatique Invited lecture on infinite duration games	Paris, France <i>Oct 2023</i>
Invited lectures on infinite duration games <i>Algorithmic aspects of game theory, 6 hours</i>	University of Warsaw, Poland <i>May 2022</i>
Teacher assistant in M2 <i>Algorithmic aspects of game theory, 24 hours</i>	University of Warsaw, Poland <i>Jan 2022 - Jun 2022</i>
Teacher assistant in L2 <i>Professionnalizing project, 20 hours</i>	Université de Paris, France <i>Sep 2020 - Jan 2021</i>
Teacher assistant in L1 <i>Introduction to programming in Java, 32 hours</i>	Université de Paris, France <i>Sep 2020 - Jan 2021</i>
Teacher assistant in L1 <i>Principles of binary machines, 32 hours</i>	Université de Paris, France <i>Sep 2020 - Jan 2021</i>
Teacher assistant in L2 <i>Introduction to automata theory, 32 hours</i>	Université Paris Diderot, France <i>Sep 2019 - Jan 2020</i>
Teacher assistant in L1 <i>Basics of programming in Python, 32 hours</i>	Université Paris Diderot, France <i>Sep 2019 - Jan 2020</i>
Teacher assistant in L1 <i>Basics of programming in Python, 32 hours</i>	Université Paris Diderot, France <i>Sep 2018 - Jan 2019</i>
Teacher assistant in L2 <i>Principles of Object-Oriented programming, 32 hours</i>	Université Paris Diderot, France <i>Sep 2018 - Jan 2019</i>

Other

Participation to program committees for international conferences	
PC member for CSL <i>Annual international conference</i>	<i>2024</i>
PC member for CSR <i>Annual international conference</i>	<i>2022</i>
Reviewing for international conferences and journals	
Subreviewing for conferences or journals (Total:27) <i>LICS (x8), ICALP (x8), STACS (x3), SODA (x2), MFCS (x2), FI (x1), ...</i>	
Organisation of scientific events	
LMW@CSL 2023 <i>Logic mentoring workshop at CSL conference</i>	<i>2023</i>
Automata seminar <i>Weekly team seminar at IRIF</i>	<i>2019-2021</i>

Highlights of Logics, Games and automata 2020*Annual international conference, held online*

2020

FOCS 2018*Student volunteer for international conference*

2018

Participation to scientific events.....**CIRM thematic month***month-long seminar on Groups, Dynamics, Complexity and Words***Marseille, France***Feb 2024***Dagstuhl seminar***International workshop on Reactive Synthesis***Dagstuhl, Germany***Sept 2023***Workshop on graph theory***First workshop on twin-width***Aussois, France***May 2023***Autobóz 2022***Problem-solving based workshop on TCS***Sobótka, Poland***September 2022***Algomanet research school in combinatorics***Research school on posets and product theorems for planar graphs***Kraków, Poland***May 2022***Parameterized Algorithms Retreat of University of the Warsaw***International workshop on parameterized complexity***Bendlewo, Poland***Mar 2022***Research retreat***International workshop on reactive synthesis***Hauteluce, France***Mar 2022***Dagstuhl seminar***International workshop on Unambiguity in automata theory***Dagstuhl, Germany***Nov 2021***Automata Theory and Applications: Games, Learning and Structures***International workshop on automata theory, hosted by national university of Singapore***Online***Sep 2021***Simons Institute spring 2021 research program***International workshop on Theoretical Foundations of Computer Science, held online***Berkeley, USA***Jan 2021 - May 2021***Caleidoscope 2019 IHP***Research school on computational complexity***Paris, France***Jun 2019***Bellairs workshop on Learning and Verification***International workshop on Learning and Verification***Holetown, Barbados***Mar 2019***CAALM 2019***French-Indian workshop on Logics and Algorithms***Chennai, India***Jan 2019***ProbProgSchool 2017***Summer school on Foundations of Probabilistic Programming***Braga, Portugal***Jun 2017*