

Pierre Ohlmann

✉ pierre.ohlmann@irif.fr

Experience

Faculty of Mathematics, Informatics and Mechanics, University of Warsaw <i>Postdoc, supervised by Michał Pilipczuk</i> ○ Working on (fixed-parameter) complexity of the model-checking problem for first-order formulas.	Warsaw, Poland <i>Jan 2022 - Current</i>
Institut de Recherche en Informatique Fondamentale <i>PhD, supervised by Olivier Serre and Nathanaël Fijalkow</i> ○ Working mostly on infinite duration games.	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> ○ Working on problems related to weighted automata and circuit lower bounds.	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> ○ Working on problems related to weighted automata and learning.	London, UK <i>Apr - Jun 2017</i>
Oxford Computer Science Department <i>Master's student internship, supervised by Joël Ouaknine and James Worrell</i> ○ Worked on semi-algebraic and semi-linear invariants for the Kannan-Lipton Orbit problem.	Oxford, UK <i>May - Jul 2016</i>
Laboratoire I3S Nice Sophia Antipolis <i>Undergraduate student internship, supervised by Julien Provillard</i> ○ Worked on proving conjectures on minimal incompletable words. Designed an algorithm which improved the search framework.	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>	Theoretics <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.....

Flipper games for monadically stable graph classes <i>With J. Gajarský, N. Mählmann, R. McCarty, Mi. Pilipczuk, W. Przybyszewski S. Siebertz, M. Sokołowski and S. Toruńczyk</i>	ICALP 2023
Canonical decompositions in monadically stable and bounded shrubdepth graph classes <i>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
The GKK Algorithm is the Fastest over Simple Mean-Payoff Games <i>Single author</i> Best paper award	CSR 2022
Characterizing positionality in games of infinite duration over infinite graphs <i>Single author</i>	LICS 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 presentation (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 2020
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.....

Positionality in Σ_0^2 and a completeness result <i>With Michał Skrzypczak</i>	Submitted Publication in progress
Fast value iteration for energy games <i>With Antonio Casares</i>	Submitted Publication in progress

Talks

Presentations in international conferences and workshops.....

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 Jun 2022
Highlights of Logics, Games and Automata 2022 <i>International conference on Logics, Games and Automata</i>	Paris, France Jun 2022

Automata Theory and Applications: Games, Learning and Structures <i>International workshop on automata theory, hosted by national university of Singapore</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>
RP2019 <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 seminar and research project meetings.....	
MIMUW seminar <i>Weekly seminar in automata theory team at MIMUW</i>	Wasaw, 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>Research 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 meeting <i>Research project meeting on dynamical systems and applications</i>	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	Paris, France <i>Oct 2023</i>

Invited lecture on infinite duration games <i>Game theory techniques in computer science, 3 hours</i> Master Parisien de Recherche en Informatique	Paris, France Sept 2022
Invited lectures on infinite duration games <i>Algorithmic aspects of game theory, 6 hours</i>	University of Warsaw, Poland May 2022
Teacher assistant in M2 <i>Algorithmic aspects of game theory, 24 hours</i>	University of Warsaw, Poland Jan 2022 - Jun 2022
Teacher assistant in L2 <i>Professionnalizing project, 20 hours</i>	Université de Paris, France Sep 2020 - Jan 2021
Teacher assistant in L1 <i>Introduction to programming in Java, 32 hours</i>	Université de Paris, France Sep 2020 - Jan 2021
Teacher assistant in L1 <i>Principles of binary machines, 32 hours</i>	Université de Paris, France Sep 2020 - Jan 2021
Teacher assistant in L2 <i>Introduction to automata theory, 32 hours</i>	Université Paris Diderot, France Sep 2019 - Jan 2020
Teacher assistant in L1 <i>Basics of programming in Python, 32 hours</i>	Université Paris Diderot, France Sep 2019 - Jan 2020
Teacher assistant in L1 <i>Basics of programming in Python, 32 hours</i>	Université Paris Diderot, France Sep 2018 - Jan 2019
Teacher assistant in L2 <i>Principles of Object-Oriented programming, 32 hours</i>	Université Paris Diderot, France Sep 2018 - Jan 2019

Other

PC member for CSL 2024 <i>Annual international conference</i>	
PC member for CSR 2022 <i>Annual international conference</i>	
Reviewer for LICS2023, STACS2023, SODA2022, ICALP2022 (x2), LICS2022 (x3), STACS2022 (x2), LICS 2021, SODA 2020, ICALP 2020, MFCS 2020, LICS 2019, ICALP2019, FoSSaCS 2019, MFCS 2018, JLAMP 2017 <i>International peer-reviewed conferences</i>	
Dagstuhl seminar <i>International workshop on Reactive Synthesis</i>	Dagstuhl, Germany Sept 2023
Workshop on graph theory <i>First workshop on twin-width</i>	Aussois, France May 2023
Algomanet research school in combinatorics <i>Attended research school on posets and product theorems for planar graphs</i>	Kraków, Poland May 2022
Parameterized Algorithms Retreat of University of the Warsaw <i>International workshop on parameterized complexity</i>	Będlewo, Poland Mar 2022
Research retreat <i>International workshop on reactive synthesis</i>	Hauteluce, France Mar 2022
Dagstuhl seminar <i>International workshop on Unambiguity in automata theory</i>	Dagstuhl, Germany Nov 2021
Automata Theory and Applications: Games, Learning and Structures <i>International workshop on automata theory, hosted by national university of Singapore</i>	Online Sep 2021
Simons Institute spring 2021 research program <i>International workshop on Theoretical Foundations of Computer Science</i>	Berkeley, USA Jan 2021 - May 2021
Organising team for CSL 2023 satellite event <i>Logic mentoring workshop</i>	Warsaw, Poland Feb 2023
Organizing team for automata seminar <i>Seminar for automata team in IRIF</i>	Paris, France Sep 2019 - Mar 2021

Organizing team for Highlights of Logics, Games and Automata 2020

Annual international conference, held online

Paris, France

Sep 2020

Visiting Marcin Jurdzinski and Dmitry Chistikov

3-months research visit at the University of Warwick

Warwick, UK

Feb 2020 - May 2020

Caleidoscope 2019

Attended research school on computational complexity

IHP, Paris, France

Jun 2019

Bellairs workshop on Learning and Verification

Attended international workshop on Learning and Verification

Holetown, Barbados

Mar 2019

CAALM 2019

Attended French-Indian workshop on Logics and Algorithms

Chennai, India

Jan 2019

FOCS 2018

Student volunteer for international conference

Paris, France

Oct 2018

ProbProgSchool 2017

Attended summer school on Foundations of Probabilistic Programming

Braga, Portugal

Jun 2017