

CURRICULUM VITAE

Bastien Maubert, born February 26, 1987 in Nantes, France.

Education

2014 **PhD in Computer Science**, *Université de Rennes 1*

Title: *Logical foundations of games with imperfect information: uniform strategies.*

Committee:

Joseph Y. Halpern (president)	Professor, Cornell University
Christof Löding (referee)	Associate Professor, RWTH Aachen University
Ramanujam (referee)	Professor, IMSc Chennai
Dietmar Berwanger	Full-time researcher, CNRS-ENS Cachan
Thomas Bolander	Associate Professor, DTU Lyngby
Cătălin Dima	Professor, Université Paris-Est Créteil
Sophie Pinchinat (supervisor)	Professor, Université Rennes 1
Guillaume Aucher (co-supervisor)	Chaire INRIA-Université Rennes 1

2009 **Master's degree in Computer Science, with honours**

Ecole Normale Supérieure de Rennes

Current position

04/2018 - today **Postdoctoral researcher** at Università degli Studi di Napoli "Federico II".

Past positions

04/2016 - 03/2018 **Marie Skłodowska-Curie fellow**

Project LoGICInMAS (Logics and Games for Imperfect Information in Multi-Agent Systems), Università degli Studi di Napoli "Federico II", Naples.

09/2014 - 02/2015 **CNRS postdoctoral researcher**

ERC project Epistemic Protocol Synthesis, LORIA, Nancy.

Grants and awards

2021 IJCAI Distinguished Senior Program Committee member.

2016 Marie-Curie Individual Fellowship for the project LoGICInMAS (168,277.20€).

2015 MEALS grant for a two months visit to Carlos Areces in Cordoba, Argentina (5320€).

2011 Rennes university grant for a one month visit to Prof. Ramanujam in Chennai, India (800€).

Research interests

Program verification and synthesis; logics of time, knowledge and strategic abilities; game theory, in particular games with imperfect information; automata theory; automatic and rational structures.

Publications

In international journals:

- 2021 Copy and Remove as Dynamic Operators**
C. Areces, H. van Ditmarsch, R. Fervari, B. Maubert, and F. Schwarzentruber
Journal of Applied Non-Classical Logics (to appear).
- 2020 Strategy Logic with Imperfect Information**
R. Berthon, B. Maubert, A. Murano, S. Rubin and M. Vardi
ACM Transactions on Computational Logic, vol.22(1).
- Alternating Tree Automata with Qualitative Semantics**
R. Berthon, N. Fijalkow, E. Filiot, S. Guha, B. Maubert, A. Murano, L. Pinault, S. Pinchinat, S. Rubin, O. Serre. *ACM Transactions on Computational Logic*, vol.22(1).
- 2019 Reasoning about knowledge and messages in asynchronous multi-agent systems**
S. Knight, B. Maubert and F. Schwarzentruber
Mathematical Structures in Computer Science, vol.29(1). Special issue for ICTAC 2015.
- 2018 Relating paths in transition systems: the fall of the modal mu-calculus**
C. Dima, B. Maubert and S. Pinchinat
ACM Transactions on Computational Logic, vol.19(3).
- 2015 Uniform strategies, rational relations and jumping automata**
L. Bozzelli, B. Maubert and S. Pinchinat
Information and Computation, vol. 242. Special issue for SR 2013.
- 2014 A general notion of uniform strategies**
B. Maubert and S. Pinchinat
International Game Theory Review, vol. 16(01). Special issue for LOFT 2012.

In international conferences with program committee:

- 2021 Strategic Reasoning in Automated Mechanism Design**
B. Maubert, M. Mittelmann, A. Murano and L. Perrussel
KR, 18th International Conference on Principles of Knowledge Representation and Reasoning
- Reasoning about agents that may know other agents' strategies**
F. Belardinelli, S. Knight, A. Lomuscio, B. Maubert, A. Murano and S. Rubin
IJCAI, 30th International Joint Conference on Artificial Intelligence
- 2020 Nondeterministic Strategies and their Refinement in Strategy Logic**
G. De Giacomo, B. Maubert and A. Murano
KR, 17th International Conference on Principles of Knowledge Representation and Reasoning
- Assume-Guarantee Synthesis for Prompt Linear Temporal Logic**
N. Fijalkow, B. Maubert, A. Murano and M. Vardi
IJCAI-PRICAI, 29th International Joint Conference on Artificial Intelligence and 17th Pacific Rim International Conference on Artificial Intelligence
- Concurrent Games in Dynamic Epistemic Logic**
B. Maubert, S. Pinchinat, F. Schwarzentruber and S. Stranieri
IJCAI-PRICAI, 29th International Joint Conference on Artificial Intelligence and 17th Pacific Rim International Conference on Artificial Intelligence
- Dynamic Epistemic Logic Games with Epistemic Temporal Goals**
B. Maubert, A. Murano, S. Pinchinat, F. Schwarzentruber and S. Stranieri
ECAI, 24th European Conference on Artificial Intelligence
- 2019 The Complexity of Model Checking Knowledge and Time**
L. Bozzelli, B. Maubert and A. Murano
IJCAI, 28th International Joint Conference on Artificial Intelligence

Reachability Games in Dynamic Epistemic Logic

B. Maubert, S. Pinchinat and F. Schwarzenruber

IJCAI, 28th International Joint Conference on Artificial Intelligence

Reasoning about Quality and Fuzziness of Strategic Behaviours

P. Bouyer, O. Kupferman, N. Markey, B. Maubert, A. Murano and G. Perelli

IJCAI, 28th International Joint Conference on Artificial Intelligence

Probabilistic Strategy Logic

B. Aminof, M. Kwiatkowska, B. Maubert, A. Murano and S. Rubin

IJCAI, 28th International Joint Conference on Artificial Intelligence

Reasoning about Changes of Observational Power in Logics of Knowledge and Time

A. Barrière, B. Maubert, A. Murano and S. Rubin

AAMAS, 18th International Conference on Autonomous Agents and Multiagent Systems

2018 Reasoning about Knowledge and Strategies under Hierarchical Information

B. Maubert and A. Murano

KR, 16th International Conference on Principles of Knowledge Representation and Reasoning

Quantifying bounds in Strategy Logic

N. Fijalkow, B. Maubert, A. Murano and S. Rubin

CSL, 27th Annual EACSL Conference on Computer Science Logic

2017 Strategy logic with imperfect information

R. Berthon, B. Maubert, S. Rubin, A. Murano et M. Y. Vardi

LICS, 32th Annual ACM/IEEE Symposium on Logic in Computer Science

Decidability results for ATL* with imperfect information and perfect recall

R. Berthon, B. Maubert et A. Murano

AAMAS, 16th International Conference on Autonomous Agents and Multiagent Systems

2016 On the impact of modal depth in epistemic planning

T. Charrier, B. Maubert and F. Schwarzenruber

IJCAI, International Joint Conference on Artificial Intelligence

2015 Games with Communication: from Belief to Preference Change

G. Aucher, B. Maubert, S. Pinchinat and F. Schwarzenruber

PRIMA, Principles and Practice of Multi-Agent Systems

Relating paths in transition systems: the fall of the modal mu-calculus

C. Dima, B. Maubert and S. Pinchinat

MFCS, Mathematical Foundations of Computer Science

Asynchronous announcements in a public channel

S. Knight, B. Maubert and F. Schwarzenruber

ICTAC, International Colloquium on Theoretical Aspects of Computing

Unifying Hyper Logic and Epistemic Temporal Logic

L. Bozzelli, B. Maubert and S. Pinchinat

FoSSaCS, Foundations of Software Science and Computation Structures

2013 Jumping automata for uniform strategies

B. Maubert and S. Pinchinat

FSTTCS, Foundations of Software Technology and Theoretical Computer Science

2012 Generalized DEL-sequents

G. Aucher, B. Maubert and F. Schwarzenruber

JELIA, European Conference on Logics in Artificial Intelligence

Uniform strategies

B. Maubert and S. Pinchinat

LOFT, Conference on Logic and the Foundations of Game and Decision Theory

[In international workshops with program committee:](#)

- 2015 Games with Communication: from Belief to Preference Change**
G. Aucher, B. Maubert, S. Pinchinat and F. Schwarzentruber
SR, Strategic Reasoning (no published proceedings)
- Dealing with imperfect information in Strategy Logic**
S. Knight and B. Maubert
SR, Strategic Reasoning (no published proceedings)
- 2014 Automata techniques for epistemic protocol synthesis**
G. Aucher, B. Maubert and S. Pinchinat
SR, Strategic Reasoning
- 2013 The complexity of synthesizing uniform strategies**
B. Maubert, S. Pinchinat and L. Bozzelli
SR, Strategic Reasoning
- 2011 Tableau method and NEXPTIME-completeness of DEL-sequents**
G. Aucher, B. Maubert and F. Schwarzentruber
M4M, Methods for Modalities
- Opacity issues in games with imperfect information**
B. Maubert, S. Pinchinat and L. Bozzelli
GandALF, Symposium on Games, Automata, Logics and Formal Verification
- 2009 Games with opacity condition**
B. Maubert and S. Pinchinat
RP, Reachability Problems

[Talks](#)

- Reasoning about agents that may know other agents' strategies**
23/08/2021: IJCAI 2021 (Online)
- Games in Dynamic Epistemic Logic**
16/04/2021: FMAI 2021 (Online)
- Concurrent Games in Dynamic Epistemic Logic**
13/01/2021: IJCAI 2020 (Online)
- Assume-Guarantee Synthesis for Prompt Linear Temporal Logic**
15/01/2021: IJCAI 2020 (Online)
- Assume-Guarantee Synthesis for Prompt Linear Temporal Logic**
16/09/2020: Highlights of Logic, Games and Automata (Online)
- Concurrent Games in Dynamic Epistemic Logic**
29/06/2020: PFIA 2020 (Angers, France)
- Reasoning about Quality and Fuzziness of Strategic Behaviours**
14/08/2019: IJCAI 2019 (Macao, China)
19/09/2019: Highlights of Logic, Games and Automata (Warsaw, Poland)
12/12/2019: 68NQRT seminar (Rennes, France)
- Probabilistic Strategy Logic**
14/08/2019: IJCAI 2019 (Macao, China)
- The Complexity of Model Checking Knowledge and Time**
13/08/2019: IJCAI 2019 (Macao, China)
- Reasoning about Changes of Observational Power in Logics of Knowledge and Time**
16/05/2019: AAMAS 2019 (Montreal, Canada)

Reasoning about Knowledge and Strategies

1/11/2018: KR 2018 (Tempe, USA)

29/10/2018: ACTIONS 2018 (Tempe, USA)

20/09/2018: Highlights of Logic, Games and Automata (Berlin, Germany)

Quantifying bounds in Strategy Logic

4/09/2018: CSL 2018 (Birmingham, England)

8/07/2018: SR 2018 (Oxford, England)

Strategy Logic with Imperfect Information

8/07/2018: SR 2018 (Oxford, England)

23/06/2017: LICS 2017 (Reykjavik, Iceland)

Decidability results for ATL* with imperfect information and perfect recall

12/05/2017: AAMAS 2017 (São Paulo, Brasil)

Games with Communication: from Belief to Preference Change

22/09/2015: SR 2015 (Oxford, England)

Dealing with imperfect information in Strategy Logic

21/09/2015: SR 2015 (Oxford, England)

Relating paths in transition systems: the fall of the modal mu-calculus

08/09/2016: ICTCS 2016 (Lecce, Italy)

17/09/2015: Highlights of Logic, Games and Automata (Prague, République Tchèque)

28/08/2015: MFCS 2015 (Milano, Italy)

Automata techniques for epistemic protocol synthesis in DEL

03/09/2014: Highlights of Logic, Games and Automata (Paris, France)

26/08/2014: Workshop Epistemic Protocol Synthesis (Rennes, France)

06/04/2014: SR 2014 (Grenoble, France)

Logical foundations of games with imperfect information: uniform strategies

17/01/2014: Thesis defense, IRISA (Rennes, France)

Uniform strategies, rational relations and jumping automata

07/12/2013: GIInAL, IMSc (Chennai, India)

Jumping automata for uniform strategies

12/12/2013: FSTTCS 2013 (Guwahati, India)

04/07/2013: GT FORWAL, Université Paris 6 (Paris, France)

18/06/2013: GT Vérif, ENS Cachan (Paris, France)

The complexity of synthesizing uniform strategies

17/03/2013: SR 2013 (Rome, Italy)

Uniform strategies

29/04/2013: Séminaire Dagstuhl VaToMAS, Schloss Dagstuhl (Germany)

21/11/2012: IRIT (Toulouse, France)

Introduction to Dependence Logic

20/07/2012: Formal methods update meeting, CMI (Chennai, India)

Towards a notion of uniform strategies

20/09/2012: GT Jeux 2012, ENS Cachan (Paris, France)

11/07/2012: TCS Colloquium, IMSc (Chennai, India)

18/06/2012: LOFT 2012 (Sevilla, Spain)

Tableau method and NEXPTIME-completeness of DEL-sequents

11/11/2011: M4M 7 (Osuna, Spain)

Uniform strategies

26/10/2011: GIPSy workshop, IRISA (Rennes, France)

Opacity issues in games with imperfect information

15/06/2011: GandALF 2011 (Minori, Italy)

Games with opacity condition

24/09/2009: RP 2009, Ecole Polytechnique (Palaiseau, France)

16/09/2009: Séminaire 68NQRT , IRISA (Rennes, France)

Other research activities

Events organisation

Co-chair:

- 1st International Workshop on Logical Aspects in Multi-Agent Systems and Strategic Reasoning, Online, May 3-4, 2021
- 8th International Workshop on Strategic Reasoning, Online, September 4-5, 2020
- 9th Workshop on Logical Aspects of Multi-Agent Systems, Online, May 8-10, 2020
- 2nd Workshop on Formal Methods and AI, Rennes, France, May 2-3, 2019
- 5th International Workshop on Strategic Reasoning, Liverpool, England, July 26-27, 2017
- 1st Workshop on Formal Methods in AI, Naples, Italy, February 22-24, 2017

PC member:

- IJCAI'22, 31th International Joint Conference on Artificial Intelligence (PC Board)
- AAMAS'22, 21th International Conference on Autonomous Agents and Multiagent Systems
- IJCAI'21, 30th International Joint Conference on Artificial Intelligence (Senior PC)
- AAMAS'21, 20th International Conference on Autonomous Agents and Multiagent Systems
- AAI'21, 35th AAAI Conference on Artificial Intelligence
- ECAI'20, 24th European Conference on Artificial Intelligence
- AAI'20, 34th AAAI Conference on Artificial Intelligence
- TIME'19, 26th International Symposium on Temporal Representation and Reasoning
- AAI'19, 33rd AAAI Conference on Artificial Intelligence

Local organisation:

- Conference ICTCS, Naples, Italy, September 26-28, 2017
- Conference CILC, Naples, Italy, September 26-28, 2017
- Workshop GIPSy, Rennes, France, October 25-27, 2011

External reviewer

Journals:

- 2021: Autonomous Agents and Multi-Agent Systems, Information and Computation, Journal of Logic and Computation
- 2020: ACM Transactions on Computational Logic, Journal of Autonomous Agents and Multi-Agent Systems, IEEE Intelligent Systems
- 2019: Information and Computation, Theoretical Computer Science, ACM Transactions on Computational Logic
- 2018: Information and Computation, Autonomous Agents and Multi-Agent Systems
- 2017: ACM Transactions on Computational Logic
- 2016: Information and Computation
- 2015: Information and Computation, ACM Transactions on Computational Logic
- 2014: Journal of Logic and Computation

Workshops and conferences:

- 2021: LICS
- 2020: CONCUR

- 2019: LICS, FORTE, SR, FSTTCS, CSL
- 2018: AAMAS, IJCAI, ICALP, MFCS, TIME, GandALF
- 2017: AAI, FoSSaCS, AAMAS, IJCAI, GandALF, FORTE, LICS, CSL, MFCS
- 2016: KR, AAMAS, IJCAI, ECAI, CSL, MFCS, RV
- 2015: ICLA, TACAS, LICS, TARK, LORI, RV
- 2014: CLIMA, GandALF
- 2013: GandALF, AAMAS, WoLLIC

Students supervision

- Gregory Gobin (ENS Rennes, Master student). May-July 2021.
- Andrea Colecchia (Università degli Studi di Napoli, Master student). April-November 2019.
- Aurèle Barrière (ENS Rennes, Master student). September-December 2017.
- Raphaël Berthon (ENS Rennes, Master student). June-July 2016.

Misc: Collector for a Dagstuhl report (Seminar 13181: VaToMAS, April 2013)

Teaching activities

2020-2021	Lectures and tutorials – Introduction to programming in C University of Naples, undergraduate (40h)
2019-2020	Lectures and tutorials – Introduction to programming in C University of Naples, undergraduate (40h)
2018	Lectures – Introduction to strategic logics University of Naples, postgraduate (10h)
2011-2012, 2012-2013	Tutorials – Program Design and Verification ENS Rennes, postgraduate (24h + 24h)
2011-2012, 2012-2013	Tutorials – Logic and Calculability ENS Rennes, undergraduate (12h + 24h)
2012-2013	Tutorials – Introduction to LaTeX ENS Rennes, undergraduate (4h)
2010-2011, 2011-2012	Lectures and tutorials – Introduction to Compilation Université de Rennes 1, undergraduate (40h + 40h)
2010-2011	Tutorials – Data Structures INSA de Rennes, undergraduate (20h)
2009-2010	Tutorials – Functional Programming INSA de Rennes, undergraduate (20h)

Languages

French: mother tongue

English, Spanish, Italian: fluent

Portuguese: intermediate