Simon Rey

Senior Scientific Programmer

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Work Experiences

Oct. 2023 - Today   **Senior Scientific Programmer for the project "Collective Information" of Ulle Endriss**, *Institute for Logic, Language and Computation (ILLC), University of Amsterdam*, Amsterdam, The Netherlands.

Education

Oct. 2019 - Oct. 2023   **PhD Candidate under the supervision of Ulle Endriss, Ronald de Haan and Jan Maly on the aggregation of collective information**, *Institute for Logic, Language and Computation (ILLC), University of Amsterdam*, Amsterdam, The Netherlands.

Thesis: *Variations on Participatory Budgeting*.

Sept. 2017 - Aug. 2019   **Master program in Computer Science: Distributed agents, robotics, operation research, interaction and decision (ANDROIDE) track**, *Université Pierre et Marie Curie (UPMC)*, Paris, France.

First year master thesis, *Fair Allocation of Indivisible Goods, a Study of a Decentralized Procedure*, under the supervision of Aurélie Beynier and Nicolas Maudet, UPMC, Paris, France.

Second year master thesis, *Almost Group Envy-free Allocation of Indivisible Goods and Chores*, under the supervision of Haris Aziz, UNSW, Syndey, Australia.

Sept. 2016 - Aug. 2017   **Bachelor in theoretical Computer Science**, *École Normale Supérieure (ENS) de Cachan*, Cachan, France.

Sept. 2015 - June 2016   **Bachelor in Economics and Management Sciences**, *École Normale Supérieure (ENS) de Cachan*, Cachan, France.

Sept. 2013 - July 2015   **Preparatory classes and bachelor in Economics**, *Lycée Ozenne and Université Toulouse 1 - Capitole*, Toulouse, France.

Publications

2023

- Dorothea Baumeister, Linus Boes, Christian Laußmann, Simon Rey, *Bounded Approval Ballots: Balancing Expressiveness and Simplicity for Multiwinner Elections*, Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2023.

- Jan Maly, Simon Rey, Ulle Endriss, Martin Lackner, *Fairness in Participatory Budgeting via Equality of Resources*, Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2023.

- Simon Rey, Ulle Endriss, Ronald de Haan, *A general framework for participatory budgeting with additional constraints*, Social Choice and Welfare, 2023.

2022

- Sirin Botan, Simon Rey, Zoi Terzopoulou, *Let's Agree to Agree: Majority Dynamics for Incomplete Preferences*, Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), 2022.

- Nima Motamed, Arie Soeteman, Simon Rey, Ulle Endriss, *Participatory Budgeting with Multiple Resources*, Proceedings of the European Conference on Multi-Agent Systems (EUMAS), 2022.

- Simon Rey, *Designing Mechanisms for Participatory Budgeting: Doctoral Consortium*, Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2022.

2021

- Aurélie Beynier, Nicolas Maudet, Simon Rey, Parham Shams, *Swap Dynamics in Single-Peaked House Markets*, Journal of Autonomous Agents and Multi-Agent Systems (JAAMAS), 2021.

- Martin Lackner, Jan Maly, Simon Rey, *Fairness in Long-Term Participatory Budgeting*, Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), 2021.

- Simon Rey, Ulle Endriss, Ronald de Haan, *Shortlisting Rules and Incentives in an End-to-End Model for Participatory Budgeting*, Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), 2021.

2020

- Haris Aziz, Simon Rey, *Almost Group Envy-free Allocation of Indivisible Goods and Chores*, Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), 2020.

- Simon Rey, Ulle Endriss, Ronald de Haan, *Designing Participatory Budgeting Mechanisms Grounded in Judgment Aggregation*, Proceedings of the International Conference on Principles of Knowledge Representation and Reasoning (KR), 2020.

2019

- Aurélie Beynier, Sylvain Bouveret, Michel Lemaître, Nicolas Maudet, Simon Rey, Parham Shams, *Efficiency, Sequenceability and Deal-Optimality in Fair Division of Indivisible Goods*, Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2019.

- Davide Grossi, Simon Rey, *Credulous Acceptability, Poison Games and Modal Logic (Extended Abstract)*, Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2019.

Teaching

SUPERVISION

- *Empirical Evaluation of Social Choice*: Supervision of Mart Koek's Bachelor thesis for the Bachelor of Artificial Intelligence, University of Amsterdam, the Netherlands (2021).

- *Multi-Resource Participatory Budgeting*: Co-supervision of Nima Motamed and Arie Soeteman's research project for the Master in Logic, University of Amsterdam, the Netherlands (2020).

- *Complexity of Locally Fair Allocations on Graph*: Co-supervision of Giovanni Varrichione's Master's thesis for the Master in Logic, University of Amsterdam, the Netherlands (2020).

- *Distributional Constraints in Participatory Budgeting*: Supervision of Robert Houten's Bachelor thesis for the Bachelor of Artificial Intelligence, University of Amsterdam, the Netherlands (2020).

- *Matchmaking Model and Algorithm for Competitive Games*: Co-supervision of Marco Constanti's Master's thesis for the Master of Artificial Intelligence, University of Amsterdam, the Netherlands (2019).

TEACHING ASSISTANT

- *Game Theory*: 2020, 2021, 2022

- *Computational Social Choice*: 2020, 2022

- *Computational Complexity*: 2021

- *Algorithmic Game Theory*: 2022

PROJECTS

- *Fairness in Multiwinner Elections*: a four week research project organized together with Julian Chingoma and Jan Maly for 15 students, 2022.

- *Parameterized Complexity Theory and its Applications to Social Choice*: a four week research project organized together with Ronald de Haan for 15 students, 2021.

Academic activities

- *Reviewer and Sub-reviewer*: AAAI, IJCAI, AAMAS, ADT, EUMAS, Social Choice and Welfare, Journal of Artificial Intelligence Research

- *Sydney Economics and Computer Science Workshop*: Local organizer 2019.