Ivan Geffner

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Education

25-08-2014 – 21-06-2021	**Ph.D. in Mathematics, Cornell University.** Thesis title: *Implementing Mediators with Cheap Talk.* Advisor: Joseph Y. Halpern
09-09-2013 – 13-06-2014	**M.Sc. in Advanced Mathematics, Polytechnic University of Catalonia.** Thesis title: *Counting Outerplanar Maps.* Advisor: Marc Noy
14-09-2009 – 14-06-2013	**Degree in Mathematics, Polytechnic University of Catalonia.** Ranked 1st out of 13.

Work

01-11-2024 – now	**Assistant Professor** Utrecht University (Mathematics Department)
15-04-2024 – 31-10-2024	**Post-Doc** Carnegie Mellon University, FOCAL lab. Host: Vincent Conitzer.
01-11-2021 – 01-11-2023	**Post-Doc** Technion, Game Theory group. Hosts: Moshe Tennenholtz, Itai Arieli, Inbal Talgram-Cohen
01-01-2017 – 30-06-2021	**Research Assistant** Cornell University.
01-09-2014 – 30-12-2016	**Teaching Assistant** Cornell University.
01-09-2013 – 30-06-2014	**Research Assistant** Polytechnic University of Catalonia.
01-09-2011 – 30-06-2014	**Teaching Assistant** Polytechnic University of Catalonia.

Research Interests

- Game Theory
- Algorithms
- Distributed Computing
- Mechanism Design
- Cryptography

Publications

1. I. Arieli, **I. Geffner**, and M. Tennenholtz, "Optimal information design in sender-receiver cheap talk interactions," in *Proceedings of the Conference on Theoretical Aspects of Rationality and Knowledge*, 2025.

2. **I. Geffner**, E. Karpas, and M. Tennenholtz, "When competition helps: Achieving optimal traffic flow with multiple autonomous planners," *arXiv preprint arXiv:2508.07145*, 2025.

3. **I. Geffner**, C. Oesterheld, and V. Conitzer, "Maximizing social welfare with side payments," *arXiv preprint arXiv:2508.07147*, 2025.

4. I. Arieli, **I. Geffner**, and M. Tennenholtz, "Receiver-oriented cheap talk design," *arXiv preprint arXiv:2401.03671*, 2024.

5. **I. Geffner** and J. Y. Halpern, "Bounding the communication complexity of fault-tolerant common coin tossing," *ACM Transactions on Computation Theory*, vol. 16, no. 3, pp. 1–10, 2024.

6. **I. Geffner** and J. Y. Halpern, "Communication games, sequential equilibrium, and mediators," *Journal of Economic Theory*, vol. 221, p. 105 890, 2024.

7. **I. Geffner** and M. Tennenholtz, "Making a nash equilibrium resilient to coalitions," in *Proceedings of the 25th ACM Conference on Economics and Computation*, 2024, pp. 213–238.

8. I. Arieli, **I. Geffner**, and M. Tennenholtz, "Mediated cheap talk design," in *Proceedings of the AAAI Conference on Artificial Intelligence*, vol. 37, 2023, pp. 5456–5463.

9. I. Arieli, **I. Geffner**, and M. Tennenholtz, "Resilient information aggregation," in *Proceedings of the Conference on Theoretical Aspects of Rationality and Knowledge*, vol. 379, 2023, pp. 31–45. 🔗 DOI: `10.4204/EPTCS.379.6`.

10. I. Arieli, **I. Geffner**, and M. Tennenholtz, "The value of mediation in long cheap talk," *arXiv preprint arXiv:2312.14793*, 2023.

11. **I. Geffner** and J. Y. Halpern, "Lower bounds on implementing mediators in asynchronous systems with rational and malicious agents," *Journal of the ACM*, vol. 70, no. 2, pp. 1–21, 2023.

12. **I. Geffner** and J. Y. Halpern, "Security in asynchronous interactive systems," in *International Symposium on Stabilizing, Safety, and Security of Distributed Systems*, Springer, 2021, pp. 123–140.

13. I. Abraham, D. Dolev, **I. Geffner**, and J. Y. Halpern, "Implementing mediators with asynchronous cheap talk," in *Proceedings of the 2019 ACM Symposium on Principles of Distributed Computing*, 2019, pp. 501–510.

14. **I. Geffner** and M. Noy Serrano, "Counting outerplanar maps," *Electronic journal of combinatorics*, vol. 24, no. 2, pp. 1–8, 2017.

Service

2025	🔖 AAAI Program Committee Member
	🔖 JET Reviewer
2023	🔖 Reviewer for Mathematics of OR

Honors and Awards

🔖 International Collegiate Programming Contest, South-Western Europe (SWERC)
First Place (2013), **Second Place** (2012), **Sixth Place** (2011)

🔖 International Mathematics Competition (IMC)
First Prize (2013), **Second Prize** (2010, 2011, 2012)

🔖 International Mathematical Olympiad (IMO)
Bronze Medal (2009)

Skills

Languages	🔖	Fluent in Spanish, English and Catalan.
Coding	🔖	Java, C++, C#, Matlab, Python, Sage, R.

Other Relevant Activities

2018 – now	🔖	Founder and lead developer of **AI Coliseum**, a non-profit online platform that runs yearly AI competitions, organizes programming courses for high and middle school students in Catalonia, and runs some of the stages of the Catalan Informatics Olympiad.
2021 – now	🔖	Founder and lead organizer of **Taller Demostra**, an open online course for high and middle school students in Barcelona that want to go beyond the Math taught at school. Typically, around 80 students register every year.
	🔖	Founder and lead organizer of **Taller Programa**, an open online programming course for high school students in Barcelona. Typically, around 100 students register every year.
2009 – now	🔖	Volunteer instructor for the Catalan Mathematical Olympiad training courses.
2013 – now	🔖	Volunteer instructor for the Catalan Informatics Olympiad training courses.
2015 – 2021	🔖	Regular participant of the MIT Battlecode competition. **First Place** (2020), **Third Place** (2017) and **Fourth Place** (2018, 2021).

References

Joseph Y. Halpern
Cornell University
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Moshe Tennenholtz
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Utrecht University
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