Ivan Geffner

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Education

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

Work

2021 – now	🔖 **Post-Doc** Technion, Game Theory group. Host: Moshe Tennenholtz.
2017 – 2021	🔖 **Research Assistant** Cornell University.
2014 – 2017	🔖 **Teaching Assistant** Cornell University.
2013 – 2014	🔖 **Research Assistant** Polytechnic University of Catalonia.
2011 – 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, "Receiver-oriented cheap talk design," Available at https://www.ivangeffner.com (in preparation).

2. 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.

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

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

5. **I. Geffner** and J. Y. Halpern, "Bounding the communication complexity of fault-tolerant common coin tossing," *arXiv preprint arXiv:2312.14775*, 2023.

6. **I. Geffner** and J. Y. Halpern, "Communication games, sequential equilibrium, and mediators," *arXiv preprint, arXiv:2309.14618*, 2023.

7. **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.

8. **I. Geffner** and M. Tennenholtz, "Strengthening nash equilibria," *arXiv preprint arXiv:2312.14745*, 2023.

9. **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.

10. 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.

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

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.

Other Relevant Activities (continued)

2015 – 2021   🔖   Regular participant of the MIT Battlecode competition.
First Place (2020), **Third Place** (2017) and **Fourth Place** (2018, 2021).

References

Joseph Y. Halpern
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