

Jonathan Mosheiff — CV

Positions

Department of Computer Science, Ben-Gurion University <i>Senior Lecturer (Assistant Professor)</i>	Be'er Sheva, Israel <i>June 2022–</i>
School of Computer Science, Carnegie Mellon University <i>Postdoctoral researcher, hosted by Prof. Venkatesan Guruswami</i>	Pittsburgh, Pennsylvania <i>October 2019–April 2022</i>
Dept. of Computer Science, Weizmann Institute of Science <i>Postdoctoral researcher, hosted by Prof. Irit Dinur</i>	Rehovot, Israel <i>October 2018–September 2019</i>

Education

The Hebrew University <i>Ph.D, Computer Science</i>	Jerusalem, Israel <i>2013–2018</i>
Dissertation: Combinatorics, Symmetry and Randomness Advisor: Prof. Nati Linial	
The Hebrew University <i>M.Sc, Computer Science</i> Summa Cum Laude	Jerusalem, Israel <i>2011–2013</i>
Dissertation: Prime Languages Advisor: Prof. Orna Kupferman	
The Hebrew University <i>B.Sc, Computer Science and Mathematics</i> Magna Cum Laude	Jerusalem, Israel <i>2001–2006</i>
Degree obtained mostly during high school	

Publications (titles are clickable links)

1. Becker, O., Lubotzky, A. & **Mosheiff, J.** Testability in Group Theory (preprint).
2. Guruswami, V., Manohar, P. & **Mosheiff, J.** Sparsity and ℓ_p -Restricted Isometry (preprint).
3. Guruswami, V. & **Mosheiff, J.** Punctured Low-Bias Codes Behave Like Random Linear Codes. *Annual Symposium on Foundations of Computer Science (FOCS)* (2022).
4. Guruswami, V., Manohar, P. & **Mosheiff, J.** ℓ_p -Spread Properties of Sparse Random Matrices. *Computational Complexity Conference (CCC)* (2022).
5. Becker, O., Lubotzky, A. & **Mosheiff, J.** Testability of Relations Between Permutations. *Annual Symposium on Foundations of Computer Science (FOCS)* (2021).
6. Guruswami, V., **Mosheiff, J.**, Resch, N., Silas, S. & Wootters, M. Threshold rates for properties of random codes. *Innovations in Theoretical Computer Science (ITCS)* (2021). Extended version to appear in *IEEE Transactions on Information Theory*.
7. **Mosheiff, J.**, Resch, N., Ron-Zewi, N., Silas, S. & Wootters, M. LDPC Codes Achieve List Decoding Capacity. *Annual Symposium on Foundations of Computer Science (FOCS)* (2020). Extended version to appear in *FOCS special issue of SICOMP*.

8. Guruswami, V., Li, R., **Mosheiff, J.**, Resch, N., Silas, S. & Wootters, M. Bounds for List-Decoding and List-Recovery of Random Linear Codes. *International Conference on Randomization and Computation (RANDOM)* (2020). Extended version to appear in *IEEE Transactions on Information Theory*.
9. Becker, O. & **Mosheiff, J.** Abelian Groups Are Polynomially Stable. *International Mathematics Research Notices*. rnaa017 (2020).
10. Linial, N. & **Mosheiff, J.** On the Weight Distribution of Random Binary Linear Codes. *Random Structures & Algorithms* **56**, 5–36 (2020).
11. Linial, N. & **Mosheiff, J.** On the Rigidity of Sparse Random Graphs. *Journal of Graph Theory* **85**, 466–480 (2017).
12. Kupferman, O. & **Mosheiff, J.** Prime Languages. *Information and Computation* **240**, 90–107 (2015). special issue for MFCS 2013.

Papers outside of main research scope.....

1. Mosheiov, G., Sarig, A., Strusevich, V. A. & **Mosheiff, J.** Two-Machine Flow Shop and Open Shop Scheduling Problems with a Single Maintenance Window. *European Journal of Operational Research* **271**, 388–400 (2018).

Awards, Honors and Competitions

<i>Adams Fellowship, given by the Israel Academy of Sciences and Humanities</i>	2014–2018
<i>Intel Award, given to M.Sc students for excellence in research</i>	2013
<i>Liss Foundation Scholarship</i>	2013
<i>Dean's List, HUJI</i>	2012
<i>Rector's Prize and Dean's Prize, HUJI</i>	2011
<i>Excellence scholarship for students in interdisciplinary programs, HUJI</i>	2011
<i>Excellence scholarship, HUJI School of Computer Science</i>	2011
<i>Silver medals at the International Olympiad in Informatics (IOI)</i>	2003, 2004, 2005
<i>Silver medal at the Baltic Olympiad in Informatics (BOI)</i>	2005

Teaching awards.....

<i>Top teachers list (based on student evaluations), HUJI</i>	2012, 2013, 2014, 2015, 2016, 2017, 2018
<i>Award for continued excellence in teaching, HUJI, School of Computer Science</i>	2015

Talks

Dozens of talks at CS and Math departmental seminars and certain special programs, including institutions such as Stanford, MIT, The Simons Institute at Berkeley, IAS, UCSD, CMU, TAU, BGU, Technion, WIS and HUJI.

Teaching Experience

Carnegie Mellon University	Pittsburgh, Pennsylvania
<i>Lecturer - "Undergraduate Complexity Theory"</i>	<i>Fall 2020</i>

This is an advanced undergraduate course, intended for Computer Science B.Sc students focusing on theory. I taught the course jointly with Prof. Venkatesan Guruswami.

The Hebrew University

Jerusalem, Israel

Lecturer – “Algorithmic Problem Solving”

Fall 2012–Fall 2017

Initiated and developed a new course and taught it for 6 fall semesters, first jointly with fellow graduate student Oren Becker and later on my own. The course teaches problem solving techniques in algorithms, emphasizing creativity. It is intended for B.Sc and M.Sc students in Computer Science and Mathematics. In my years as lecturer, student evaluations consistently gave top rankings both to the course itself and to me as a teacher. By my last year, enrollment reached around 130 students.

The Hebrew University

Jerusalem, Israel

Teaching Assistant - “Computational Models, Computability and Complexity” Spring 2012–Spring 2018

This is a second year mandatory course for Computer Science B.Sc students. My job included holding weekly recitation sessions, being involved with every aspect of the course and managing some of them. I was consistently ranked among the top teachers in the department according to student evaluations.

The International Olympiad in Informatics

Head of professional staff for Israeli team

2011–2015

Other Professional Activities

Refereed for the conferences *FOCS*, *STOC*, *CCC*, *ICALP*, *ITCS*, *RANDOM* and *ISIT*, and the journal *IEEE Transactions on Information Theory*.

Other Research Experience

Military Service - Intelligence Corps

Algorithms researcher

2005–2010

Head of a seven person research team (last position held). Ranked Senior Academic Officer.

Other Activities

Singing, [sometimes about computer science!](#)

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