Sarit Buzaglo

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Personal:

Born on March 9, 1983.

Single +1.

Israeli Citizen.

Education:

2010-2014: PhD student in Computer Science, Technion- Israel Institute of Technology.
Research area: Coding Theory.
Advisor: Professor Tuvi Etzion.
Co-Advisor: Professor Eitan Yaakobi.

2007-2010: M.Sc. in Mathematics, Technion- Israel Institute of Technology.
Thesis: The VC-Dimension of s- Intersecting Curves.
Research area: Discrete Geometry.
Advisor: Professor Rom Pinchasi.

2004-2007: B.Sc. in Mathematics, Technion- Israel Institute of Technology.

Employment:

2014-Present: Postdoctoral Researcher in the Center for Memory and Recording Research, at University of California, San Diego. I study coding for memories and distributed storage networks, under the supervision of Professor Paul H. Siegel.

2007-2014: Technion- Israel Institute of Technology- Teaching Assistant in the following courses: Discrete Mathematics, Calculus, Algebra, and Combinatorics.

Research Interests:

Coding theory, algebraic error-correction coding, coding for distributed storage, combinatorics, and discrete geometry.

Publications:

Journal Papers:

1) S. Buzaglo, Y. Cassuto, P. H. Siegel, and E. Yakkobi, "Consecutive switch codes," submitted to *IEEE Trans. Inform. Theory.*

2) S. Buzaglo and P. H. Siegel, "Row-by-row coding schemes for inter-cell interference in flash memory," submitted to *IEEE Trans. Commun.*.

3) S. Buzaglo, E. Yaakobi, T. Etzion, and J. Bruck, 'Systematic error-correcting codes for permutations and multi-permutations," *IEEE Trans. Inform. Theory*, vol. 62, pp. 3113–3123, June 2016.

4) S. Buzaglo and E. Yaakobi, "On the capacity of constrained permutation codes for rank modulation," *IEEE Trans. Inform. Theory*, vol. 62, pp. 1649–1666, April 2016.

5) S. Buzaglo and T. Etzion, "Bounds on the size of permutation codes with the Kendall τ-metric," *IEEE Trans. Inform. Theory*, vol. 61, pp. 3241–3250, April 2015.

6) S. Buzaglo and T. Etzion, "Tilings by $(0.5, n)$-crosses and perfect codes," *SIAM Journal on Discrete Mathematics,* vol. 27, pp. 1067-1081, June 2013.

7) S. Buzaglo and T. Etzion, "Tilings with n-dimensional chairs and their applications to asymmetric codes," *IEEE Trans. Inform. Theory*, vol. 59, pp. 1573–1582, March 2013.

Chapter in a Book:

S. Buzaglo, R. Pinchasi, and G. Rote, "Topological Hyper-Graphs," Thirty Essays on Geometric Graph Theory, Springer New York, 2013.

Conference Papers:

1) S. Buzaglo, A. Fazeli, P. H. Siegel, V. Taranalli, and A. Vardy, "On efficient decoding of polar codes with large kernels," submitted to *IEEE Wireless Communications and Networking Conference.*

2) S. Buzaglo, E. Yaakobi, Y. Cassuto, and P. H. Siegel,"Consecutive switch codes" *IEEE Int. Symp. on Information Theory,* Barcelona, Spain, July 2016.

3) S. Buzaglo, P. H. Siegel, and E. Yaakobi, "Coding schemes for inter-cell interference in flash memory," *Proc. of IEEE Int. Symp. on Information Theory,* pp. 1736–1740, Hong Kong, June 2015.

4) S. Buzaglo and T. Etzion, "Perfect permutation codes with the Kendall's τ-metric," *Proc. of IEEE Int. Symp. on Information Theory,* pp. 2391–2395, Hawaii, 2014.

5) S. Buzaglo and E. Yaakobi, "Constrained codes for rank modulation," *Proc. of IEEE Int. Symp. on Information Theory,* pp. 2396–2400, Hawaii, 2014.

6) S. Buzaglo, E. Yaakobi, T. Etzion, and J. Bruck, "Systematic codes for rank modulation," *Proc. of IEEE Int. Symp. on Information Theory,* pp. 2386–2390, Hawaii, 2014.

7) S. Buzaglo, E. Yaakobi, T. Etzion, and J. Bruck, "Error-correcting codes for multipermutations," *Proc. IEEE Int. Symp. on Information Theory,* pp. 724–728, Istanbul, Turkey, July 2013.

8) S. Buzaglo, R. Holzman, and R. Pinchasi, "On s-intersecting curves and related problems", *Proc. of SOCG- 24th Annual Symposium on Computational Geometry,* pp. 79–84, Maryland, 2008.

Talks:

1) S. Buzaglo and S. Lovett, "Combinatorial switch codes," Southern California Theory Day at Caltech, Pasadena, California, November 2016.

2) Trends in Coding Theory, Monte Verità, Ascona, Switzerland, "On the existence of perfect codes for asymmetric limited magnitude errors", October 29- November 2, 2012.

3) ITA Workshop, San Diego, California, "Codes for permutations with the Kendall's τ-metric", February 12 (Graduation Day), 2014.

Poster Presentations

"Coding schemes for inter-cell interference in flash memory," SPCodingSchool, Campinas, São Paulo, Brazil, January 19-30, 2015.

Scholarships and Awards:

1) Weizmann Institute of Science - National Postdoctoral Award Program for Advancing Women in Science, 2014-2016.
2) ISEF - International Graduate Fellowship, 2014-2017.
3) Jacobs-Qualcomm Scholarship for excellence in graduate research, 2012/2013.
4) Technion Computer Science Department scholarship for excellence in graduate research, 2013/2014.

Other Activities

1) 2013-2014: Organiser of the Coding Theory Seminar in the Computer Science Department at the Technion.
2) 2004-2009: ISEF Scholar.

Computer Knowledge:

C, C++, MATLAB.

Languages:

Hebrew- native tongue.
English- full professional proficiency.