

## BIOGRAPHICAL SUMMARY

NAME <b>DAN VILENCHIK</b>  Email: <a href="mailto:vilenchi@bgu.ac.il">vilenchi@bgu.ac.il</a> Phone: 054-9399504  <a href="https://www.bgu.ac.il/~vilenchi">https://www.bgu.ac.il/~vilenchi</a>  <a href="https://scholar.google.co.il/citations?user=BCc11zIAAAJ&amp;hl=en&amp;inst=2200037940676332253">https://scholar.google.co.il/citations?user=BCc11zIAAAJ&amp;hl=en&amp;inst=2200037940676332253</a>		POSITION <b>SENIOR LECTURER</b>  School of Electrical and Computer Engineering Ben-Gurion University of the Negev, Israel	
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR	FIELD OF STUDY
Technion	B.SC	1998-2001	Computer Science
Weizmann Inst.	M.Sc	2001-2004	Computer Science
Technion	PhD	2004-2008	Computer Science
UC Berkeley	Postdoc	2008-2009	Computer Science
UCLA	Adjunct Professor	2009-2011	Mathematics

### A. Personal Statement

Dr. Dan Vilenchik is a researcher with a background in theoretical computer science (focusing on optimization and algorithm design) as well as machine learning. He is currently researching problems in Natural Language Processing, statistical challenges of high-dimensional data, and “AI for social good” multidisciplinary projects. He did his post-doc at the universities of Berkeley and UCLA. He is the author of over 45 articles that have appeared at the world's leading conferences in the field of artificial intelligence, such as AAAI and COLT. Has a proven ability in conducting innovative studies. His research was previously funded by the Innovation Authority (Kamin, about NIS 1 million), the ISF Foundation (NIS 320,000) and the MOST (Ministry of Science and Technology (900,000 NIS). His full academic CV are [here](#).  
Dan is also working as a freelance consultant. Among his clients is SOOS, the 1M\$ first-prize winner of the 2020 [Grow-NY](#) AgriTech competition.

### B. Positions and Honors

2020-	Ben-Gurion University of the Negev, Senior Lecturer with tenure.
2014-2020	Ben-Gurion University of the Negev, Lecturer.
2011	Returning Scientist Fellowship – Israeli Ministry of Immigration and Absorption
2008	Phd awarded with dean's excellence prize
2001	BSc completed with honours (cum laude)

### C. Peer-reviewed papers in the past 5 years See below

### D. Competitive Research Grants

<i>Project Title</i>	<i>Funding source</i>	<i>Amount</i>	<i>Period</i>
COBMINDEX goes forward: teaching Crohn disease patients proactive coping using app and machine learning	Helmsley Charitable Trust	2.7M\$	2023-2026
A Decision-making Support System for Early Identification of Non-accidental Burns in Children Using Machine-learning	Ministry of Science and Technology (MOST)	140K\$	2023-2026
Highlighted Gaps: Toward Undogmatic Modeling of Literary Character Networks	Ministry of Science and Technology (MOST)	110K\$	2023-2026

New Directions in Average Case Complexity of NP-Hard Problems	Israel Science Foundation	110K\$	2016-2020
The feasibility of sex reassignment treatment in chicken embryos	<a href="#">NR SOOS Technology</a>	20K\$	2018-2019
Research and development of Anti Deepfake	Israel Innovation Authority	€117K	2018-2020

#### Referred Journal Papers

1. Ilic<sup>PD</sup>, S., Akabayov<sup>T</sup>, S., Froimovici<sup>S</sup>, R., Meiry<sup>S</sup>, R., **Vilenchik<sup>PI</sup>, D.**, Hernandez<sup>PD</sup>, A., Arnathani<sup>PI</sup>, H. and Akabayov<sup>PI</sup>, B. 2017. Modulation of the activity in the Mn-substituted T7 DNA primase has a structural origin. *Scientific Reports* 7:5797 (ISI 1 citations; IF 5.228; 10/64; ISI Q1 / SJR Q1)
2. Langberg<sup>PI</sup>, M. and **Vilenchik<sup>PI</sup>, D.** 2017. Constructing cospectral graphs via a new form of graph product. *Linear and Multilinear Algebra*, pages 1-15, (citations ISI 1 / Google 1; IF 1.0; 62/311; ISI Q1 / SJR Q2).
3. Sofer<sup>PD</sup>, C., **Vilenchik<sup>PI</sup>, D.**, Dotsch<sup>PI</sup>, R. and Avidan<sup>PI</sup>, G. 2018. Emotion Algebra reveals the richness of meanings of facial expressions. *Journal of Vision* 18(10), 193 (citations 0; ISI Q2 / SJR Q1) (short abstract)
4. Neuman<sup>PI</sup>, Y., Israeli<sup>T</sup>, N. **Vilenchik<sup>PI</sup>, D.** and Cohen<sup>T</sup>, Y. 2018. The Adaptive Behavior of a Soccer Team: An Entropy-Based Analysis. *Entropy* 20(10), 758 (citations ISI NA / Google 10, IF 2.3; 22/78; ISI Q2 / SJR Q2),
5. **Vilenchik<sup>PI</sup>, D.** 2019. Simple statistics are sometime too simple: A case study in social media data. *IEEE Transactions on Knowledge and Data Engineering*. doi: 10.1109/TKDE.2019.2899355 (citations ISI 0 / Google 4, IF 2.775, 33/132, ISI Q1 / SJR Q1).
6. Neuman<sup>PI</sup>, Y., **Vilenchik<sup>PI</sup>, D.** 2019. Modeling Small Systems through the Relative Entropy Lattice. *IEEE Access*. (citations ISI NA / Google 3, IF 3.56, 48/260, ISI Q1 / SJR Q1).
7. Tam<sup>S</sup>, B., Sherf<sup>S</sup>, D., Cohen<sup>S</sup>, S., Eisdorfer<sup>S</sup>, S., Peretz<sup>S</sup>, M., Soffer<sup>S</sup>, A., **Vilenchik<sup>PI</sup>, D.**, Akabayov<sup>T</sup>, S., Wagner<sup>PI</sup>, G. and Akabayov<sup>PI</sup>, B. 2019. Discovery of small-molecule inhibitors targeting the ribosomal peptidyl transferase center (PTC) of M. tuberculosis. *Chemical Science* (citations ISI 0 / Google 1, IF 9.55, 19/172. ISI Q1 / SJR Q1).
8. Hershcovits<sup>S</sup>, H., **Vilenchik<sup>PI</sup>, D.** and Gal<sup>PI</sup>, K. 2019. Modeling Engagement in Self-Directed Learning Systems using Principal Component Analysis. *IEEE Transactions on Learning Technologies*. (citations ISI 0 / Google 1, IF 2.3, 50/106, ISI Q2 / SJR Q1)
9. Neuman<sup>PI</sup>, Y., **Vilenchik<sup>PI</sup>, D.**, and Israeli<sup>T</sup>, N. 2020. From physical to social interactions: The relative entropy model. *Scientific Reports*. (citations ISI 0 / Google 1; IF 4.01; 15/69; Q1 / SJR Q1)
10. Itamar<sup>S</sup>, E., **Vilenchik<sup>PI</sup>, D.**, 2021. An Oblivious Approach to Machine Translation Quality Estimation. *Mathematics*. (citations ISI 0 / Google 0; IF; 15/69; Q1 / SJR Q1)

11. Soffer A., Eisdorfer S. , Ifrach M., Ilic S., Afek A., Schussheim H., **Vilenchik, D.** and Akabayov B. 2021. Inferring primase-DNA specific recognition using a data driven approach, in *Nucleic Acids Research*
12. Portnikh, R., Kenzi K., Krohn, N., **Vilenchik D.**, Marienberg-Milikowsky I., 2022. An Experimental Undogmatic Modelling of (Hebrew ) Literature, in *Digital Journal for Philology*, special issue on *Digital Methods in Literary Studies*.

#### Referred Conference Papers

1. Segal<sup>S</sup>, Y., **Vilenchik<sup>PI</sup>, D.** and Hadar<sup>PI</sup>, O. 2018. Detecting and Coloring Anomalies in real cellular network using Principle Component Analysis. *The 2<sup>nd</sup> International Symposium on Cyber Security Cryptography and Machine Learning (CSCML 2018)*. (0 citations).
2. **Vilenchik<sup>PI</sup>, D.**, Yichye B. and Abutbul<sup>S</sup>, M. 2019. To interpret or not to interpret PCA? This is the question. *Proceedings of the International AAAI Conference on Web and Social Media (ICWSM)*, 655-658. (1 citation)
3. Holtzman<sup>S</sup> G., Soffer<sup>S</sup> A., **Vilenchik<sup>PI</sup> D.** 2020. A greedy anytime algorithm for sparse PCA. *The 33rd Annual Conference on Learning Theory (COLT 2020)*. (2 citations)
4. Korenblum<sup>S</sup> R., Kozhukhov<sup>S</sup> V., **Vilenchik<sup>PI</sup> D.**, Tsur<sup>PI</sup> O. 2021. STEM: Unsupervised SStructural EMbedding for Stance Detection, in *AAAI 2022*.
5. Fairstein R., Meir R., **Vilenchik D.**, Gal K. 2022. [Welfare vs. Representation in Participatory Budgeting](#), in *AAMAS 2022*
6. Danilchenko, K., Segal, M., **Vilenchik D.**, 2022. Opinion Spam Detection: A New Approach Using Machine Learning and Network-Based Algorithms, in *Proceedings of the International AAAI Conference on Web and Social Media (ICWSM)*.
7. Ilan, T<sup>S</sup>., **Vilenchik D.**, 2022. HARALD: Augmenting Hate Speech Data Sets with Real Data. in *Proceedings of The 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP)*.