Ronen Hershman

Born:	January 17, 1985; Israel
Military Service:	2003-2006
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EDUCATION

2008-2012	BSc	Ben-Gurion University of the Negev, Physics and Computer Science
2015-2017	MA	Ben-Gurion University of the Negev, Department of Brain and Cognitive Sciences Advisor: Prof. Avishai Henik Title: Measuring Pupil Size in Numerical Cognition Tasks
2017-2021	PhD	Ben-Gurion University of the Negev, Department of Brain and Cognitive Sciences Advisor: Prof. Avishai Henik Title: Cognitive Control and Pupil Dilation
2021-2022	Post-Doc	Ben-Gurion University of the Negev, Department of Psychology Advisor: Prof. Avishai Henik
2022-current	Post-Doc	University of Innsbruck, Department of Psychology Advisor: Prof. Elisabeth M. Weiss

EMPLOYMENT HISTORY

2015 - 2017	Teaching Assistant, Department of Psychology, Ben-Gurion University of the Negev
2016 - 2018	Teaching Assistant, Department of Brain and Cognitive Sciences, Ben-Gurion University of the Negev
2020	Teaching Assistant, Department of Brain and Cognitive Sciences, Ben-Gurion University of the Negev
2022-current	Lecture, Department of Psychology, University of Innsbruck

RESEARCH INTERESTS

I am interested in the relationship between cognitive mental load and pupil dilation and how their regulatory interactions are influenced by different conditions. Understanding of these interactions and relationships is an essential and necessary tool for efficiently studying preverbal (e.g., infants) and nonverbal participants (e.g., neurological patients). My research thus far has included behavioral and psychophysiological (mainly eye-tracking) methods that were applied on healthy populations. Some of those methods (like CHAP –Open-Source Software for Processing and Analyzing Pupillometry Data) were created for this purpose.

METHODS

I have expertise in programming and analyzing behavioral and psychophysiological (eye-movement) paradigms. I have worked with various software programs including MATLAB, Psychtoolbox, SPSS, STATISTICA and JASP. I am also familiar with the Linux environment and with various programming languages.

SOCIETY MEMBERSHIP

2015-2021	Israel Society of Cognitive Psychology – ISCoP
2015-2018	European Society of Eye Movement – ECEM
2016-2024	European Conference on Visual Perception - ECVP
2017-2023	European Society of Cognitive Psychology - ESCoP
2017-2021	Vision Sciences Society - VSS
2018-2020	Mathematical Cognition and Learning Society - MCLS
2019-2023	Psychonomic Society

EDUCATIONAL ACTIVITIES

Teaching Assistant in courses: Introduction to Statistics, Probability, Linear Algebra, Calculus, and Cellular Basis of Neuroscience.

Lecture in courses: Special Clinical Methods of Research, Seminar on basic- and practice deepening: pupillometry, and Seminar on basic- and practice deepening: pupillometry, Seminar on basic- and practice deepening: Eye movements.

AWARDS AND FELLOWSHIPS

August 2016	The Zlotowski Neuroscience Center - Travel Grant (500 USD)
May 2017	The Zlotowski Neuroscience Center - Travel Grant (500 USD)

2017	Dean's Award for MA, Ben-Gurion University of the Negev, Israel
April 2018	The Zlotowski Neuroscience Center - Travel Grant (500 USD)
2018	The Inter-Faculty Brain Sciences School - Tuition Scholarship
2019	The Ministry of Science & Technology, Israel - Travel Grant (10,000 NIS)
2019-2021	Mid way Negev - Tsin Scholarships for Excellence PhD
September 2019	The Zlotowski Neuroscience Center - Travel Grant (500 USD)
2020	The Ministry of Science & Technology, Israel - Travel Grant (canceled due to COVID-19, 10,000 NIS)
2020	Zlotowski Best Research Project of 2020 Academic Year (500 USD)
2021	Dean's Award and prize for PhD, Ben-Gurion University of the Negev, Israel (4,000 NIS)
2021-2022	A short-term post-doctoral scholarship, Ben-Gurion University of the Negev, Israel
2022-2023	Post-doctoral scholarship, The Bloom School of Graduate Studies, The University of Haifa, Israel (declined due to concurrent funding, 180,000 NIS)
2022-2023	Post-doctoral scholarship, Haifa Brain and Behavior Hub, The University of Haifa, Israel (declined due to concurrent funding, 180,000 NIS)
2023	The Austrian Research Foundation, Austria - Travel Grant (700 EUR)
2024	The Austrian Research Foundation, Austria - Travel Grant (500 EUR)
2025	The Austrian Research Foundation, Austria - Travel Grant (400 EUR)

Ad Hoc Reviewer:

- Behavior Research Methods
- Behavioral Sciences
- Experimental Psychology
- Journal of Experimental Child Psychology
- Journal of Experimental Psychology: General
- Journal of Experimental Psychology: Human Perception and Performance
- Journal of Experimental Psychology: Learning, Memory, and Cognition
- Journal of Vision
- Memory & Cognition
- MethodsX
- Neurobiology of Aging
- Neuropsychologia

- PloS One
- Psychological research
- Quarterly Journal of Experimental Psychology
- Scientific Reports
- Series on Studies in Singapore Education: Research, Innovation, and Practice

SCIENTIFIC PUBLICATIONS
Articles in scientific journals:

Hershman, R., Henik, A., & Cohen, N. (2018). A novel blink detection method based on pupillometry noise. *Behavior Research Methods, 50*(1), 107-114. https://doi.org/10.3758/s13428-017-1008-1

Hershman, R., Henik, A., & Cohen, N. (2019). CHAP: Open-source software for processing and analyzing pupillometry data. *Behavior Research Methods* 51(3), 1059-1074. https://doi.org/10.3758/s13428-018-01190-1

Hershman, R., & Henik, A. (2019). Dissociation between Reaction Time and Pupil Dilation in the Stroop Task. *Journal of Experimental Psychology: Learning, Memory, and Cognition.* 45(10), 1899-1909. https://dx.doi.org/10.1037/xlm0000690

Hershman, R. & Henik, A. (2020). Pupillometric contributions to deciphering Stroop conflicts. *Memory & Cognition. 48(2), 325-333* https://dx.doi.org/10.3758/s13421-019-00971-z

Hershman, R., Levin, Y., Tzelgov, J., & Henik, A. (2021). Neutral Stimuli and Pupillometric Task Conflict. *Psychological Research*. *85*(3), 1084–1092. https://dx.doi.org/10.1007/s00426-020-01311-6

Hershman, R., Levin, Y., Tzelgov, J., & Henik, A. (2021). The Contribution of Meaning to the Detection of Task Conflict. *Quarterly Journal of Experimental Psychology*. *74(9), 1553-1561.* https://doi.org/10.1177/17470218211001331

Sapir, A.,* **Hershman, R.,*** & Henik, A. (2021). Top-Down Effect on Pupillary Response: Evidence from Shape from Shading. *Cognition*. 212, 104664. https://doi.org/10.1016/j.cognition.2021.104664

Gliksman, Y., Berebbi, S., **Hershman, R.**, & Henik, A. (2022). BGU-MF: Ben-Gurion University Math Fluency Test. *Applied Cognitive Psychology*. *36(2), 293-305.* https://doi.org/10.1002/acp.3918

Hershman, R.,* Beckmann, L.,* & Henik, A. (2022). Task and Information Conflicts in the Numerical Stroop Task. *Psychophysiology*, *59*(9), e14057. https://dx.doi.org/10.1111/psyp.14057

Shechter, A., **Hershman, R.**, & Share, D. (2022). A pupillometric study of developmental and individual differences in cognitive effort in visual word recognition. *Scientific Reports, 12*(1), 1–7. https://doi.org/10.1038/S41598-022-14536-9

Hershman, R.,* Milshtein, D.,* & Henik, A. (2023). Contribution of Temporal Analysis of Pupillometry Measurements to Cognitive Research. *Psychological Research*, 87(1), 28–42. https://dx.doi.org/10.1007/s00426-022-01656-0

Hershman, R.,* Share, D. L., Weiss, E. M., Henik. A., & Shechter, A.* (2024). Insights from eye-blinks into the cognitive processes involved in visual word recognition. *Journal of Cognition*, *7*(1): 14, 1–9. https://doi.org/10.5334/joc.343

Bar-Anan, Y. & **Hershman, R.** (2024). Using Facial Expressions Instead of Response Keys in the Implicit Association Test. *Behavior Research Methods*. *56*(1): 468–484. https://doi.org/10.3758/s13428-023-02060-1

Hershman, R., Dadon, G., Kiesel, A., & Henik, A. (2024). The Resting Stroop Task: Evidence of Task Conflict in Trials with No Required Response. *Psychonomic Bulletin & Review*. *31*(1), 353–360. https://doi.org/10.3758/s13423-023-02354-7

Hershman, R., Milshtein, D., & Henik, A. (2024). Processing and Analyzing of Pupillometry Data. In: Papesh, M.H., Goldinger, S.D. (eds) Modern Pupillometry. Springer, Cham. https://doi.org/10.1007/978-3-031-54896-3_15

Hershman, R., Keha, E., Sapir, A., Weiss, E. M., Henik, A., & Kaufmann, L. (2024). Evidence for Two Types of Task Conflict in a Color-Digit Stroop Task. *Journal of Cognition. 7(1): 54, 1–12.* https://doi.org/10.5334/joc.386

Hershman, R., Sapir, A., Keha, E., Wagner, M., Weiss, E. M., & Henik, A. (in press). The Contribution of Difficulty of an Irrelevant Task to Task Conflict. *Quarterly Journal of Experimental Psychology*. https://doi.org/10.1177/17470218241228709

Hershman, R.,* Beckmann, L.,* Keha, E., Wagner, M., Kaufmann, L., & Henik, A. (in press). A Color-Digit Stroop Task Shows Numerical Influence on Numerosity Processing. *Memory & Cognition.* https://doi.org/10.3758/s13421-024-01631-7

Goettfried, E., Barket, R., **Hershman, R.**, Delazer, M., Auer, M., Berek, K., Ellmerer, P., Seebacher, B., Hegen, H., Di Pauli, F., Deisenhammer, F., Zamarian, L. (in press). Face exploration, emotion recognition, and emotional enhancement of memory in relapsing-remitting multiple sclerosis.

Under review:

Hershman, R., Keha, E., Beckmann, L., Henik, A., & Sapir, A. (under review). A Task Conflict Gradient in The Gestalt-Color-Digit Stroop Task.

Shechter, A., van den Ber, M., **Hershman, R.**, de Jong, P. F., & Share, D. L. (under review). Cognitive Effort in Dutch Word Reading.

In preparation:

Hershman, R., Beckmann, L., Keha, E., & Henik, A. (in preparation). Evidence for Both Task and Information Conflicts in the Color-Digit Stroop Task: A Pupillometry Study.

Hershman, R., Wagner, M., & Henik, A. (in preparation). Evidence of both stimulus-stimulus and stimulus-response compatibilities in the color-word Stroop task using measurement of steering wheel movement.

Keha, E.,* **Hershman, R.**,* Gozansky, E., Kalanthroff, A., & Henik, A. (in preparation). Pupillometric Comparison between Vocal and Manual Color-Word Stroop task.

Hershman, R.,* Nicolay, A. P.,* Henik, A., Hämmerer, D., Staggl, S., Weiss, E. M., & Kaufmann, L. (in preparation). Task and information conflicts in the Emotional Stroop task.

CONFERENCE PRESENTATIONS

Oral presentations:

Hershman, R., Cohen, N., & Henik, A. (2017, August). CHAP: An Open Source Software for Processing and Analyzing Pupillometry Data. Presented at the 19th European Conference on Eye Movements (ECEM), Wuppertal, Germany.

Hershman, R. & Henik, A. (2018, February). Disassociation between Reaction Time and Pupil Dilation in Stroop Task: Evidence of Task Conflict. Presented at the Zlotowski Annual Retreat, Sde Boker, Israel.

Hershman, R. & Henik, A. (2018, February). Disassociation between Reaction Time and Pupil Dilation in Stroop Task: Evidence of Task Conflict. Presented at the 5th Israeli Society for Cognitive Psychology (ISCOP) Conference, Akko (Acre), Israel.

Hershman, R. & Henik, A. (2019, February). Semantic and response conflicts in the Stroop task: Evidence from a Pupillometry Study. Presented at the 6th Israeli Society for Cognitive Psychology (ISCOP) Conference, Akko (Acre), Israel.

Hershman, R. & Henik, A. (2019, September). Dissociation between reaction time and pupil dilation in the color-word Stroop task. Presented at the 21st European Society for Cognitive Psychology (ESCoP) Conference, Tenerife, Spain.

Hershman, R., & Henik, A. (2020, February). The Contribution of Temporal Analysis of Pupillometry to Deciphering Cognitive Conflicts. Presented at the Zlotowski Annual Retreat, Ein Gedi, Israel.

Hershman, R. & Henik, A. (2020, October). Cognitive Control and Pupil Dilation. Presented at the 2020 Zlotowski Best Research Winners seminar, Beer-Sheva, Israel.

Hershman, R., Milshtein, D., & Henik, A. (2021, August). The Contribution of Temporal Analysis of Pupillometry to Deciphering Cognitive Conflicts. Presented at the online 43rd European Conference on Visual Perception (ECVP).

Hershman, R., Sapir, A., & Henik, A. (2021, Novenber). Deeper is Darker: A Pupillometry Study. Presented at the 29th Object Perception, Attention, & Memory (OPAM) virtual conference.

Hershman, R., Beckmann, L., Keha, E., Wagner, M., & Henik, A. (2022, March). The Color-Number Stroop Task. Presented at the Zlotowski Annual Retreat, Ein Gedi, Israel.

Hershman, R., Keha, E., Beckmann, L., Henik, A., & Sapir, A. (2025, March). A Task Conflict Gradient in The Gestalt-Color-Digit Stroop Task. P presented at the 67th annual meeting of the General Psychology Section of the German Psychological Society (TEAP), Frankfurt, Germany.

Presentation of posters at conferences:

Hershman, R., Cohen, N., & Henik, A. (2016, February). CHAP: An Open Source Software for Processing and Analyzing Pupillometry Data. Presented at the 3rd Conference on Cognition Research of the Israeli Society for Cognitive Psychology (ISCOP), Akko (Acre), Israel.

Hershman, R., Cohen, N., & Henik, A. (2016, August). CHAP: An Open Source Software for Processing and Analyzing Pupillometry Data. Presented at the 39th European Conference on Visual Perception (ECVP), Barcelona, Spain.

Hershman, R., Cohen, N., & Henik, A. (2017, February). Blink Detection Based on "Noise" in Pupillometry Data. Presented at the 4th Israeli Society for Cognitive Psychology (ISCOP) Conference, Akko (Acre), Israel.

Hershman, R., Cohen, N., & Henik, A. (2017, May). CHAP: An Open Source Software for Processing and Analyzing Pupillometry Data. Presented at the 17th Annual Meeting of the Vision Sciences Society (VSS), St. Pete Beach, FL, United States.

Hershman, R., Henik, A., & Cohen, N. (2017, August). Blink Detection Based on "Noise" in Pupillometry Data. Presented at the 40th European Conference on Visual Perception (ECVP), Berlin, Germany.

Hershman, R., Cohen, N., & Henik, A. (2017, September). CHAP: An Open Source Software for Processing and Analyzing Pupillometry Data. Presented at the 20th European Society for Cognitive Psychology (ESCoP) Conference, Potsdam, Germany.

Hershman, R., Beckmann, L., & Henik, A. (2018, April). The Dissociation between Pupil Dilation and Reaction Time in the Numerical Stroop Task. Presented at the 1st Mathematical Cognition and Learning Society (MCLS) Conference, Oxford, United Kingdom.

Hershman, R., Henik, A., & Cohen, N. (2018, May). Novel Blink Detection Method Based on Pupillometry Noise. Presented at the 18th Annual Meeting of the Vision Sciences Society (VSS), St. Pete Beach, FL, United States.

Hershman, R., & Henik, A. (2018, August). Disassociation between Reaction Time and Pupil Dilation in the Stroop Task. Presented at the 41th European Conference on Visual Perception (ECVP), Trieste, Italy.

Hershman, R., Devyatko, D., Wagner, M., Kimchi, R., & Henik, A. (2019, February). When the brain fools your eyes: Pupil response in motion-induced blindness. Presented at the 6th Israeli Society for Cognitive Psychology (ISCOP) Conference, Akko (Acre), Israel.

Hershman, R., & Henik, A. (2019, March). Dissociation between Reaction Time and Pupil Dilation in the Stroop Task. Presented at the 15th Karniel Computational Motor Control Workshop (CMCW), Beer-Sheva, Israel.

Hershman, R., & Henik, A. (2019, November). Dissociation between Reaction Time and Pupil Dilation in the Stroop Task. Presented at the 60th Annual Meeting of the Psychonomic Society, Montréal, Canada.

Hershman, R., & Henik, A. (2019, November). The Contribution of Temporal Analysis of Pupillometry to Deciphering Cognitive Conflicts. Presented at the 27th Object Perception, Attention, & Memory (OPAM) conference, Montréal, Canada.

Hershman, R. & Henik, A. (2020, February). The Resting Stroop Task: Evidence of Task Conflict in Trials with No Required Response. Presented at the 7th Israeli Society for Cognitive Psychology (ISCOP) Conference, Akko (Acre), Israel.

Hershman, R. & Henik, A. (2020, June). The Contribution of Temporal Analysis of Pupillometry to Deciphering Cognitive Conflicts. Presented at the virtual 20th Annual Meeting of the Vision Sciences Society (VVSS).

Hershman, R. Milshtein, D. & Henik, A. (2020, November). The Contribution of Temporal Analysis of Pupillometry to Deciphering Cognitive Conflicts. Presented at the virtual 61st Annual Meeting of the Psychonomic Society.

Hershman, R., Sapir, A., & Henik. (2021, February). Top-down effect on pupillary response: evidence from shape from shading. Presented at the virtual 8th Israeli Society for Cognitive Psychology (ISCOP) Conference.

Hershman, R., Levin, Y., Tzelgov, J., & Henik, A. (2021, August). The Contribution of Meaning to the Detection of Task Conflict. Presented at the online 43rd European Conference on Visual Perception (ECVP).

Hershman, R., Levin, Y., Tzelgov, J., & Henik, A. (2021, November). The Contribution of Meaning to the Detection of Task Conflict. Presented at the virtual 62nh Annual Meeting of the Psychonomic Society.

Hershman, R., Beckmann, L., & Henik, A. (2022, February). Task and Information Conflicts in the Numerical Stroop Task. Presented at the virtual 9th Israeli Society for Cognitive Psychology (ISCOP) Conference.

Hershman, R., Sapir, A., Wagner, M., Weiss, E. M., & Henik, A. (2023, November). The Contribution of Difficulty of an Irrelevant Task to Task Conflict. Presented at the 64th Annual Meeting of the Psychonomic Society, San Francisco, USA.

Hershman, R., Share, D. L., Weiss, E. M., Henik. A., & Shechter, A. (2023, November). Insights from Eye Blinks into The Cognitive Processes Involved in Visual Word Recognition. Presented at the 31st Object Perception, Attention, & Memory (OPAM) conference, San Francisco, USA

Hershman, R., Share, D. L., Weiss, E. M., Henik. A., & Shechter, A. (2024, August). Insights From Eye Blinks into Cognitive Processes. Presented at the 46th European Conference on Visual Perception (ECVP), Aberdeen, Scotland.