

# Aviv Emanuel

*Motivation & Effort Allocation · Computational Models of Affect & Control · Reinforcement Learning · Applied Behavioral Science*

aviv.emmanuel@gmail.com · avivemanuel.com · ORCID: 0000-0003-3760-3289 · Google Scholar: [bit.ly/2YfhEnI](https://bit.ly/2YfhEnI)

[linkedin.com/in/aviv-emmanuel-03b6bab8](https://linkedin.com/in/aviv-emmanuel-03b6bab8) · [github.com/emanuelaviv](https://github.com/emanuelaviv) · Montréal, QC, Canada

## ACADEMIC APPOINTMENTS

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- 2023–2025** Postdoctoral Researcher, Department of Psychology, McGill University, Montreal, Canada. Advisor: Dr. Ross Otto.
- 2021–2023** Postdoctoral Fellow, Hebrew University of Jerusalem, Jerusalem, Israel. Advisor: Dr. Eran Eldar.

## EDUCATION

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- 2016–2022** Ph.D. (direct track), Social Psychology, School of Psychological Sciences, in affiliation with the School of Public Health and the Sylvan Adams Sports Institute, Tel Aviv University, Israel. Advisors: Prof. Nira Liberman, Dr. Israel Halperin. Dissertation: “*Patterns and Mechanisms of Effort Allocation Over Time.*”
- 2015–2017** M.A., Social Psychology, School of Psychological Sciences, Tel Aviv University, Israel. Advisor: Prof. Nira Liberman.
- 2012–2015** B.A., Psychology and Philosophy, Ben-Gurion University, Israel.

## PUBLICATIONS

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### *Peer-Reviewed Journal Articles*

1. Emanuel, A. (2026). Computational underpinnings of cognitive effortful performance in short timescales. *Cognitive, Affective, & Behavioral Neuroscience*, 26, 639–649. IF: 2.7 (Q2).
2. Solomyak, L.\*, Emanuel, A.\*, & Eldar, E. (2025). The resource elasticity of control. *eLife*, 14, RP105507. \*Co-first authors. IF: 6.4 (Q1).
3. Emanuel, A., Haklay, I., Har-Nir, I., Halperin, I., & Liberman, N. (2024). The impact of task (un)certainly on repeated grip force production. *Psychology of Sport and Exercise*, 73, 102618. IF: 3.1 (Q1).
4. Emanuel, A., & Ravreby, I. (2023). Sounds hard: Prosodic features reflect effort level and related affective states during exercise. *Mental Health and Physical Activity*, 25, 100559. IF: 4.7 (Q2). Citations: 1.
5. Emanuel, A., & Eldar, E. (2022). Emotions as computations. *Neuroscience & Biobehavioral Reviews*, 144, 104977. IF: 8.2 (Q1). Citations: 54.
6. Emanuel, A., Har-Nir, I., Obolski, U., & Halperin, I. (2022). Seeing effort: Assessing coaches’ prediction of the number of repetitions in reserve before task failure. *Sports Medicine – Open*, 8(1), 132. IF: 4.6 (Q1). Citations: 2.
7. Emanuel, A., Katzir, M., & Liberman, N. (2022). Why do people increase effort near a deadline? An opportunity-cost model of goal-gradients. *Journal of Experimental Psychology: General*, 151(11), 2910–2926. IF: 5.5 (Q1). Citations: 30.
8. Schwartz, H., Emanuel, A., Rozen Smukas, I., & Halperin, I. (2021). Exploring the acute affective responses to resistance training: A comparison of the predetermined and the estimated repetitions to failure approaches. *PLOS ONE*, 16(8), e0256231. IF: 3.7 (Q2). Citations: 10.
9. Emanuel, A., Hesbage, J., Sharon, H., Liberman, N., & Censor, N. (2021). Inhibition of the supplementary motor area affects distribution of effort over time. *Cortex*, 134, 134–144. IF: 4.6 (Q1). Citations: 16.
10. Emanuel, A., Rozen Smukas, I., & Halperin, I. (2020). The effects of lifting lighter and heavier loads on subjective measures. *International Journal of Sports Physiology and Performance*, 16(2), 176–183. IF: 4.0 (Q1). Citations: 20.
11. Emanuel, A., Rozen Smukas, I., & Halperin, I. (2020). How one feels during resistance exercises: A repetition-by-repetition analysis across exercises and loads. *International Journal of Sports Physiology and Performance*, 16(1), 135–144. IF: 4.0 (Q1). Citations: 20.

12. Emanuel, A., Har-Nir, I., Rozen Smukas, I., & Halperin, I. (2020). The effect of self-selecting the number of repetitions on motor performance and psychological outcomes. *Psychological Research*, 85, 2398–2407. IF: 2.9 (Q2). Citations: 9.
13. Emanuel, A., Rozen Smukas, I., & Halperin, I. (2020). An analysis of the perceived reasons for set termination in resistance exercises. *PeerJ*, 8, e9611. IF: 2.9 (Q2). Citations: 10.
14. Katzir, M., Emanuel, A., & Liberman, N. (2020). Cognitive performance is enhanced if one knows when the task will end. *Cognition*, 197, 104189. IF: 3.6 (Q1). Citations: 35.
15. Halperin, I., & Emanuel, A. (2020). Rating of perceived effort: Methodological concerns and future directions. *Sports Medicine*, 50(4), 679–687. IF: 11.1 (Q1). Citations: 162.
16. Emanuel, A. (2019). Perceived impact as the underpinning mechanism of the end-spurt and u-shape pacing patterns. *Frontiers in Psychology*, 10, 1082. IF: 2.0 (Q2). Citations: 20.

### **Manuscripts Under Review / In Revision**

1. Emanuel, A., Sherk, M., Heller, A. S., & Otto, A. R. (in revision). Effects of task duration prediction errors on affective state and performance.  
Preprint: PsyArXiv, doi.org/10.31234/osf.io/8usp6\_v1
2. Emanuel, A. (under review, Motivation Science). Affective dynamics when approaching a deadline.  
Preprint: PsyArXiv, doi.org/10.31234/osf.io/349dq
3. Emanuel, A. (under review, Motivation and Emotion). How to stay motivated: The influence of agency and progress-related incentives on sustained effort exertion. Citations: 3.  
Preprint: PsyArXiv, doi.org/10.31234/osf.io/3bf8p

### **Manuscripts in Preparation**

1. Emanuel, A.\*, Solomyak, L.\*, & Eldar, E. An emotion-as-inference model for controllability and task persistence.  
\*Co-first authors.
2. Emanuel, A. Patterns of long-term task engagement in large language models.

### **CONFERENCE PRESENTATIONS**

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| <b>Sep. 2021</b> | Emanuel, A., Halperin, I., & Liberman, N. Why do people increase effort near a deadline? An opportunity-cost model of goal-gradients. Mental Effort Workshop, CogSci Conference, online. — Poster.                          |
| <b>Sep. 2021</b> | Emanuel, A., Halperin, I., & Liberman, N. Task uncertainty affects fatigue during prolonged effort exertion. Israeli Social Psychology Grad-Students Conference, online. — Talk.                                            |
| <b>Jun. 2021</b> | Emanuel, A., Rozen Smukas, I., & Halperin, I. The effects of lifting lighter and heavier loads on subjective measures. 6th International Congress for Exercise and Sports Science, Wingate Institute, Israel. — Talk.       |
| <b>Oct. 2020</b> | Emanuel, A., Heslage, J., Sharon, H., Liberman, N., & Censor, N. Inhibition of the supplementary motor area affects distribution of effort over time. Neuromatch Conference, online. — Talk.                                |
| <b>Jul. 2020</b> | Emanuel, A., Heslage, J., Sharon, H., Liberman, N., & Censor, N. Inhibition of the supplementary motor area affects distribution of effort over time. Mental Effort Workshop, CogSci Conference, online. — Poster.          |
| <b>Sep. 2018</b> | Emanuel, A., & Liberman, N. Effort allocation in the course of goal-pursuit. European Social-Cognition Network (ESCON) Transfer of Knowledge Conference, Cologne, Germany. — Talk.                                          |
| <b>Feb. 2018</b> | Emanuel, A., & Liberman, N. Effort allocation in the course of goal-pursuit. Annual Meeting of the Society for Personality and Social Psychology (SPSP), Atlanta, USA. — Poster.                                            |
| <b>Dec. 2017</b> | Emanuel, A., & Liberman, N. Sufficiency and necessity affect the stuck-in-the-middle effect in goal-pursuit. 6th National Research Conference of PhD Students' Society in Social Psychology, IDC, Herzliya, Israel. — Talk. |
| <b>Aug. 2017</b> | Emanuel, A., & Liberman, N. Effort allocation in the course of goal-pursuit. European Social-Cognition Network (ESCON) Transfer of Knowledge Conference, Gdansk, Poland. — Talk.                                            |
| <b>Jan. 2017</b> | Emanuel, A., & Liberman, N. Effort allocation in the course of goal-pursuit. Annual Meeting of the I-CORE Convention, Weizmann Institute, Israel. — Poster.                                                                 |

**Dec. 2016** Emanuel, A., & Liberman, N. Effort allocation in the course of goal-pursuit. 5th National Research Conference of PhD Students' Society in Social Psychology, Haifa, Israel. — Talk.

## INVITED TALKS

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**2024** Duration prediction errors influence mood and performance. CRAM Seminar, McGill University.  
**2024** Duration prediction errors influence mood and performance. Motivational Neuromedicine Lab Seminar, Montreal Neurological Institute.  
**2023** Effort allocation in the course of goal-pursuit. CRAM Seminar, McGill University.  
**2023** Effort allocation in the course of goal-pursuit. Effort Lab Seminar, Tel Aviv University.  
**2022** Emotions as computations. Emotions Lab Seminar, Harvard University.  
**2021** Effort allocation in the course of goal-pursuit. Motivation Lab Seminar, University of Haifa.  
**2021** Effort allocation in the course of goal-pursuit. Computational Psychology Lab Seminar, Washington University in St. Louis.  
**2020** Effort allocation in the course of goal-pursuit. Computational Clinical Psychology Lab Seminar, Tel Aviv University.  
**2020** Effort allocation in the course of goal-pursuit. Motivation and Cognitive Control Seminar, Donders Institute, Radboud University.  
**2020** Subjective measures in the service of exercise performance. Sylvan Adams Sports Institute Seminar, Tel Aviv University.  
**2019** Effort allocation in the course of goal-pursuit. Decision Making and Economic Psychology Seminar, Ben-Gurion University.  
**2019** Perceived impact as the underpinning mechanism of the end-spurt and u-shape pacing patterns. Sport Psychology Lab Seminar, Interdisciplinary Center Herzliya.  
**2018** Action-outcome contingency underlies patterns of effort allocation over time. Social Cognition Lab Seminar, New York University.

## ACADEMIC AND PROFESSIONAL AWARDS

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**2023** Research Incubator Award (~\$7,300), Centre for Research on Brain, Language and Music, Quebec.  
**2023** Merit Scholarship Program for Foreign Students (~\$8,800), Montreal, Quebec.  
**2021** Dean's Excellence Scholarship (~\$2,000), Faculty of Social Sciences, Tel Aviv University.  
**2021** Trotsky Foundation Research Excellence Scholarship (~\$2,000).  
**2020** Israel Science Foundation Personal Research Grant — collaborator of Dr. Israel Halperin (~\$187,027).  
**2020** Spotlight Poster Presentation, Cognitive Effort Workshop, CogSci Conference.  
**2020** Dean's Excellence Scholarship (~\$2,000), Faculty of Social Sciences, Tel Aviv University.  
**2020** Research Excellence Scholarship (~\$2,900), School of Psychological Sciences, Tel Aviv University.  
**2015** M.A. Excellence Scholarship (~\$1,800), School of Psychological Sciences, Tel Aviv University.

## TEACHING EXPERIENCE

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**2019–present** R Programming Language Personal Instructor (self-employed); coached 13+ learners transitioning into data and research roles.  
**2019–2020** Guest Lecturer, Research Methods in Social Psychology (graduate level), School of Psychological Sciences, Tel Aviv University.  
**2017–2019** Guest Lecturer, Human Motivation (graduate level), School of Psychological Sciences, Tel Aviv University.

## MENTORING

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### McGill University

2024–2025: Marcy Qu, Ashleigh Brown, Mariel Kandalaft, Merel Schenk, Clara Liang, Alicia Jiménez.

2023–2024: Setareh Setayesh, Sasha Nuttal, Tyler Forgione, Johana Sava, Artiom Matvei.

#### **Hebrew University of Jerusalem**

2022–2023: Tom Shimshi.

2021–2022: Tomer Yaary, Judah Kosowsky.

#### **Tel Aviv University**

2020–2021: Idan Haklay, Emily Bar-Mashiah.

2019–2020: Yael Benarroch, Hen Zoltak.

2018–2019: Inbar Zeldes, Dana Amer.

2017–2018: Ran Amram, Anat Korol.

2016–2017: Shir Nathan, Noa Nadav.

### **UNIVERSITY, COMMUNITY, AND PEER-REVIEW SERVICE**

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**2012–2015** Head, Ben-Gurion University Psychology Department Student's Committee.

**2012–2015** Head, Ben-Gurion University Philosophy Department Student's Committee.

#### **Ad hoc reviewer for:**

Journal of Personality and Social Psychology · Journal of Experimental Psychology: General · Journal of Sports Science · Scientific Reports · Behavior Research Methods · PeerJ · Attention, Perception, & Psychophysics · Personality and Social Psychology Bulletin

### **PROGRAMMING AND SOFTWARE SKILLS**

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R, Python, SPSS/Excel/JASP, Qualtrics, MATLAB, SQL, FSL, Brainsight, Tableau, STAN, Unix, JavaScript (listed in descending order of proficiency).

### **OPEN SCIENCE PRACTICES**

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#### **Materials and Data (Open Science Framework)**

The impact of task (un)certainly on repeated grip force production.

Sounds hard: Predicting effort level and related affect from speech features.

A novel paradigm for the study of the decline in cognitive performance over time.

Seeing effort: A test of the coach's accuracy rates in predicting the number of repetitions left to task failure.

How to stay motivated: The influence of agency and progress-related incentives on sustained effort exertion.

Why do people increase effort near a deadline? An opportunity-cost model of goal-gradients.

Inhibition of the supplementary motor area affects distribution of effort over time.

A comparison between a predetermined and self-selected approach to prescribing repetitions number in resistance training.

The effects of lifting lighter and heavier loads on subjective measures among resistance-trained participants.

#### **Preregistrations (AsPredicted)**

The impact of task (un)certainly on repeated grip force production.

A novel paradigm for the study of the decline in cognitive performance over time.

Seeing effort: A test of the coach's accuracy rates in predicting the number of repetitions left to task failure.

How to stay motivated: The influence of agency and progress-related incentives on sustained effort exertion.

Why do people increase effort near a deadline? An opportunity-cost model of goal-gradients.

Inhibition of the supplementary motor area affects distribution of effort over time.

The effects of lifting lighter and heavier loads on subjective measures among resistance-trained participants.

### **SUMMER SCHOOLS**

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**2019** Psychological Networks Amsterdam Summer School, University of Amsterdam, the Netherlands.

**2017** Diversity Summer School, Interdisciplinary Center (IDC) Herzliya, Israel.

## OTHER

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- 2011–present** Professional personal trainer, certified by the Wingate Institute, Israel (350-hour course).
- 2008–2011** Military service, special forces battalion; flight course attendee.
- 2001–2006** Professional Taekwondo athlete; certified instructor, Wingate Institute, Israel (290-hour course).