

# Matan Mazor

## Curriculum Vitae

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### EDUCATION

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2017 to 2021	<b>Institute of Neurology, UCL</b> PhD. Advisors: Prof. Stephen M. Fleming and Prof. Karl J. Friston Thesis title: "SELF-MODELLING IN INFERENCE ABOUT ABSENCE"
2019	<b>Department of Brain and Cognitive Sciences, MIT</b> A three month research visit to the labs of Prof. Laura Schulz and Prof. Josh Tenenbaum, studying intuitive models of psychophysics.
2014 to 2016	<b>Sagol School of Neuroscience, Tel Aviv University</b> MSc, <i>Summa Cum Laude</i> . Advisor: Prof. Roy Mukamel Thesis title: "THE INTERNAL FORWARD MODEL IN THE HUMAN BRAIN: A FUNCTIONAL MRI STUDY" Cumulative GPA: 98.4/100 Final examination: 100/100 Thesis dissertation: 98/100
2011 to 2015	<b>Adi Lautman Interdisciplinary Program for Outstanding Students, Tel Aviv University</b> Cumulative GPA: 92/100
2009 to 2011	<b>Bezalel Academy for Art and Design, Jerusalem</b> Visual Communication, Illustration major

### HONORS & AWARDS

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2022	<b>Research Innovation Grant (£4,832)</b> <b>The Development and Stability of Metacognitive Knowledge</b> Birkbeck, University of London
2019	<b>Bogue Fellowship (£6,624)</b> <b>Inference about Absence</b> University College London
2017, 2018, 2019	<b>Kenneth Lindsay Scholarship (£3,000)</b> Anglo Israel Association
2018	<b>Guarantors of Brain Travel Grant (£1,000)</b>
2017 to 2020	<b>Graduate Research Scholarship (GRS)</b> Institute of Neurology, University College London
2017 to 2020	<b>Overseas Research Scholarship (ORS)</b> Institute of Neurology, University College London
2016	<b>Travel Grant</b> Sagol School of Neuroscience, Tel Aviv University

- 2015 **Best Talk Award**  
Sagol School of Neuroscience , Tel Aviv University
- 2013 **Award for Exceptional Academic Achievements**  
Adi Lautman Interdisciplinary Program for Outstanding Students, Tel Aviv University
- 2011 to 2014 **Full Excellence Scholarship**  
Adi Lautman Interdisciplinary Program for Outstanding Students, Tel Aviv University

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## ACADEMIC & PROFESSIONAL EXPERIENCE

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- 2022 to present **Postdoctoral researcher**  
*Action and Perception lab, Birkbeck, University of London*
- 2020 to 2021 **BSc Research supervisor**  
*Fleming lab, University College London*  
Responsible for supervising two final-year psychology students on the research project “Consciousness and Dimensions of Moral Worth”, and one student on her research project “Metacognitive Contributions to Search Termination”.
- 2020 **Journal club organizer and host**  
*Institute of Neuroscience, University College London*  
Organizing and hosting a postgraduate journal club on the topic of “Self Models in Cognitive Neuroscience”.
- 2019 to 2020 **MSc research supervisor**  
*Fleming lab, University College London*  
Responsible for supervising Chudi Gong’s MSc research project on “computational approaches to metacognitive evaluation of inference about absence”.
- 2018 to 2019 **MSc research supervisor**  
*Fleming lab, University College London*  
Responsible for supervising Roy Tal’s MSc research project on “counterfactual heuristics in inference about absence”. For this thesis, Roy has been awarded the 2019 Richard Frackowiak MSc Prize.
- 2016 to 2017 **Research Staff**  
*Roy Mukamel’s lab, Tel Aviv University*  
Responsible for design, running and analysis of several different fMRI experiments; development and implementation of model-free tools for fMRI analysis; and preparation of manuscripts for publication.
- 2017 **Lecturer: “Introduction to Bayesian Statistics” graduate course**  
*Tel Aviv University*  
Responsible for designing course, delivering lectures, composing and grading theoretical and programming home-assignments and final exam.
- 2017 **Lecturer: “Methods in MRI/fMRI” graduate course**  
*Tel Aviv University*  
Responsible for designing course, delivering lectures, composing and grading theoretical and programming home-assignments.
- 2016 **Teaching Assistant: “Introduction to Computational Neuroscience”**  
*Tel Aviv University*  
Responsible for grading theoretical and programming home-assignments, instructing students in their final project and assisting them with data analysis and writing.
- 2016 **Bayesian Statistics Workshop Instructor**

*Tel Aviv University*

Designed and delivered a one-week intensive psychology and neuroscience graduate students' workshop (40 in-class hours total) on Bayesian statistics.

2014 to 2015

### **Educational Consultant**

*Ort educational network of schools and colleges*

Developed a curriculum for Ort's new brain science program, including writing a chapter on image recognition. Devised in-class exercises, MATLAB tutorials, homework exercises, and teacher guide.

2012 to 2014

### **Research Assistant**

*Naama Friedmann's lab, Tel Aviv University*

Assisted in designing a functional MRI experiment studying grammatical processing.

2012 to 2014

### **Research intern**

*Linguistic infrastructure team, Ginger Software (Intel since 2014)*

Applied machine learning tools to resolve semantic ambiguities using large-scale data-sets.

## **PUBLICATIONS & PRESENTATIONS**

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**Mazor**, Gong & Fleming ([bioRxiv](#), under review)

*Re-evaluating frontopolar and temporoparietal contributions to detection and discrimination confidence*

**Mazor**, Siegel & Tenenbaum ([GitHub](#), under review)

*Internal models of visual search are rich, person-specific, and mostly accurate*

**Mazor** ([PsyArXiv](#), under review)

*Inference about absence as a window into the mental self-model*

**Mazor**, Brown, Ciaunica, Demertzi, Fahrenfort, Faivre, Francken, Lamy, Leggenhager, Moutoussis, Nizzi, Salomon, Soto, Stein & Lubianiker ([Perspectives on Psychological Science](#), in press)

*The scientific study of consciousness cannot, and should not, be morally neutral*

**Mazor\***, Dijkstra\* & Fleming ([Journal of Neuroscience](#), 2022)

*Dissociating the neural correlates of subjective visibility from those of decision confidence*

**Mazor** & Fleming ([Journal of Experimental Psychology: General](#), 2022)

*Efficient search termination without task experience*

**Mazor**, Moran & Fleming ([Neuroscience of Consciousness](#), phase 1 Registered Report; 2021

[Neuroscience of Consciousness](#), phase 2 Registered Report; 2021)

*Metacognitive asymmetries in visual perception*

Dijkstra, **Mazor**, Kok & Fleming ([Cognition](#), 2021)

*Mistaking imagination for reality: Congruent mental imagery leads to more liberal perceptual detection*

**Mazor** & Fleming ([Nature Human Behaviour](#), 2021)

*The Dunning-Kruger effect revisited*

**Mazor** & Fleming ([Philosophy and the Mind Sciences](#), 2020)

*Distinguishing absence of awareness from awareness of absence*

**Mazor**, Friston & Fleming ([eLife](#), 2020)

*Distinct neural contributions to metacognition for detecting, but not discriminating visual stimuli*

Scotti, Kulkarni, **Mazor**, Klapwijk, Yarkoni & Huth ([Journal of Open Source Education](#), 2020)

*EduCortex: browser-based 3D brain visualization of fMRI meta-analysis maps*

**Mazor**, Mazor & Mukamel ([European Journal of Neuroscience](#), 2019)

*A novel tool for time-locking study plans to results*

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**Mazor**, Firestone & Phillips (July, 2022; talk)  
*Using pretense behavior to explore counterfactual self-simulation*  
The annual meeting of The Cognitive Science Society  
Toronto, Canada

**Mazor** (June, 2022; invited symposium talk)  
*Simulating counterfactual cognitive states*  
The annual meeting of The Society for Philosophy and Psychology  
Milan, Italy

**Mazor** & Stein (June, 2022; tutorial)  
*The ethics of animal consciousness*  
The annual meeting of The Association for the Scientific Study of Consciousness  
Amsterdam, the Netherlands

**Mazor**, Goetz & Press (June, 2022; poster)  
*Loss-gain asymmetries in perceptual decisions*  
The annual meeting of The Association for the Scientific Study of Consciousness  
Amsterdam, the Netherlands

**Mazor**, Goldreich & Press (June, 2022; poster)  
*Presence-absence asymmetries in predictive perception*  
The annual meeting of The Association for the Scientific Study of Consciousness  
Amsterdam, the Netherlands

**Mazor\***, Yaron\*, Faivre & Mudrik (June, 2022; poster)  
*Telling between strong and weak null results using non-directional tests*  
The annual meeting of The Association for the Scientific Study of Consciousness  
Amsterdam, the Netherlands

**Mazor**, Phillips & Firestone (June, 2022; poster)  
*Pretending not to see: Pretense behavior reveals the limits of self-simulation*  
The annual meeting of the Visual Sciences Society

**Mazor**, Eberhardt, Risoli & Fleming (July, 2021; talk)  
*Dimensions of moral worth*  
The annual meeting of The Cognitive Science Society

**Mazor** (June, 2021; talk)  
*Why do some scientists say they study consciousness*  
The annual meeting of the Association for the Scientific Study of Consciousness

**Mazor** (June, 2021; talk)  
*Zero-shot search termination reveals a dissociation between implicit and explicit metacognitive knowledge*  
The annual meeting of the Association for the Scientific Study of Consciousness

**Mazor**, Eberhardt, Risoli & Fleming (June, 2021; talk)  
*Perceptual consciousness and moral worth are strongly coupled*  
The annual meeting of the Association for the Scientific Study of Consciousness

**Mazor** & Fleming (October, 2020; talk)  
*Metacognitive contributions to search termination*  
Neuromatch3

**Mazor** & Fleming (June, 2019; talk)  
*Inference about absence*  
The annual meeting of the Association for the Scientific Study of Consciousness  
Ontario, Canada

**Mazor**, Friston, Charles & Fleming (May, 2019; poster)  
*Inference about absence: the special status of no responses.*  
The annual meeting of the Visual Sciences Society  
Florida, USA

**Mazor**, Mazor & Mukamel (June, 2018; poster)  
*In-lab pre-registration: time-locking of study plans and hypotheses without preliminary review*  
The annual meeting of the Organization for Human Brain Mapping  
Singapore

**Mazor**, Fahrenfort & Fleming (June, 2018; poster)  
*Failure to incorporate information about perceptual precision impairs metacognitive sensitivity in detection*  
The annual meeting of the Association for the Scientific Study of Consciousness  
Krakow, Poland

**Mazor** & Mukamel (February, 2017; poster)  
*TWISTER: a temporal multivariate approach to behavioural and neuroimaging studies*  
The annual meeting of the Israeli Society for Cognitive Psychology  
Acre, Israel

**Mazor** & Mukamel (June, 2016; poster)  
*Time-Course Consistency (TCC): an alternative to model-based approaches to fMRI analysis*  
The annual meeting of the Organization for Human Brain Mapping  
Geneve, Switzerland

**Mazor** & Mukamel (June, 2016; poster)  
*Time Course Consistency: A model-free approach to fMRI analysis*  
The international workshop on Pattern Recognition in Neuroimaging  
Trento, Italy

## RELATED VOLUNTEER WORK

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2022	<b>The Under-Represented Student Mentorship (URSM) scheme</b> Mentoring students in their applications for neuroscience PhD. programmes.
2021	<b>240 Project</b> Drawing and painting with people who are affected by homelessness and exclusion.
2020 to 2021	<b>Maccabi Healthcare Services</b> Keeping virtual company to an older person who is living by himself in self-isolation.
2012 to 2016	<b>Abarbanel Mental Health Center</b> Worked in a closed psychiatric ward, primarily with patients coping with schizophrenia.
2014	<b>Drawing instructor at Levinsky Garden Library</b> Taught basics of drawing from observation to refugees from Eritrea and Sudan.
2013	<b>Keshet - Association for the Elderly in Tel-Aviv-Yaffo</b> Weekly friendly meetings with a cerebellar stroke patient
2007 to 2008	<b>Melabev day-care for people with Dementia and Alzheimer's disease</b>

## SKILLS & INTERESTS

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Programming	<b>Python</b> (scipy, pandas, scikit-learn, psychopy), <b>R</b> (dplyr, brms, rjags, RStan, Shiny, PapaJa), <b>JavaScript</b> (p5, jsPsych, jQuery, D3), <b>MATLAB</b> (Psychtoolbox, SPM, RSA), <b>Git</b>
OS	Linux, Windows

Languages	<b>Hebrew</b> (native language), <b>English</b> (proficient), <b>Italian</b> (independent user), <b>Arabic</b> (student)
Interests	cognitive sciences, statistical inference, philosophy of mind, moral philosophy, open science

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## SELECTED REVIEWS FROM MY ONLINE PARTICIPANTS

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5f649be46bea202219bc735	"This experiment was very enjoyable"
5c2fcd716ea6880001dc8e3d	"I LOVED THIS SO MUCH, IT WAS SO FUN!"
5d60b5beea1c1c0001c98bf6	"I thought that it was interesting because of the different ways the tasks were set up."
5c40bb8880392f00015e8910	"I love these type of games and thank you for allowing me to participate. Have a splentacular day."
62a779f845a7840040d41bf8	"This was the most fun online research game I've ever played. Kudos! "
5dbb9407e0a6e81863526af7	"I think this type of game is great, because of the mental agility to which you are subjected, but I think the survey is very well structured."
60a55d4bb6bd9be6c95b89eb	"This was one of the most entertaining and interesting studies I've done while on Prolific, and I've done a lot! Thanks for that break, it was very interesting!"
5ee0edcb962eba464f486b40	"it was testing reaction time I guess"
5decc61a488cde39be161a91	"I play a lot of video games."
5d62886927a84f00010fbbb4	"it was a solid experiment"
5f78433aef37d001ace1f086	"I enjoyed the game very much"
5ea4a9cac3872a06b560229f	"very unusual, but fun"
5e459f61418f610891628564	"found it incredibly easy"
5ea1c935df1e160ae8532b18	"Very well explained and set up."
5dde8fba82f458000c8c7c75	"This was interesting. Oddly more difficult than expected. Everything worked great, though. Hope I helped. Good luck with your research!"
58f3760092ac81000154f8af	"Questions were clear and concise. Survey UI worked perfectly. Really fun study."
5f7a28b8bedcf2112ebd1289	"I thought this was fun and got me thinking about things."
5d4a41890e604c00011ade8b	"I liked this experiment a lot. It was fun and interesting. Thanks and I wish you luck in your research!"
5a135875074b1900012527a9	"Jesus loves you!"
62b347618b52904682bf1ca7	"This is a cool experiment! Wasn't what I expected when I accepted it, but I don't mind."
5df4ed2eae7b303760a9d47c	"This was so much fun. Thanks."