הרשות ללימודים מתקדמים
בי"ס ללימודים מתקדמים ע"ש בלום
Graduate Studies Authority
Bloom Graduate School

אוניברסיטת חיפה
University of Haifa
جامعة حيفا

Bloom Scholars
2023

President's Message:

The University of Haifa, situated in a unique setting between mountain, city and sea, offers a unique experience of exploration and learning while fulfilling an essential mission for Israeli society and the world. Having recently celebrated our 50th anniversary, we have set a clear goal for the future: We strive to be an academic institution that is fully integrated into the urban and human ecosystems surrounding us, rather than being a self-contained ivory tower.

Thanks to the generosity and trust of the Bloom family, we established the Bloom School for Graduate Studies – an inspirational community for graduate and post-doctoral students who will play an active part in Israel's intellectual leadership. The Bloom Graduate community is committed to the challenge of "thinking locally and acting globally" – to identify society's critical issues and propose solutions both locally and globally.

Aligned with our broader mission of making higher education more accessible to students from the entire spectrum of Israeli society, the Bloom School for Graduate Studies aspires to be home to the best and brightest students from all over Israel and to play a key role in cultivating the next generation of inclusive academic leadership.

The Graduate School's carefully crafted curriculum introduces a range of contemporary topics from a variety of disciplines and crucial professional skills for doctoral and postdoctoral researchers. The future of academia lies in an ongoing interdisciplinary discourse on the major problems troubling humanity, in which the best minds come together, regardless of faculty affiliations and disciplinary allegiances.

As a community, we have taken upon ourselves the responsibility of identifying the most salient local challenges and providing multifaceted global solutions for a better future.

We invite you all to join us on this exciting journey.

Sincerely,
Prof. Ron Robin

President

Rector's Message:

University of Haifa strives to be a symbol of excellence in teaching and interdisciplinary research in Israel and worldwide with an academic agenda focusing on social and environmental issues as part of its efforts to improve human welfare and Israeli society. Its public engagement will play a key role in Israeli culture, geography and community life and as such, we will serve as a catalyst for change, promoting and developing leadership in public and business sectors, and encouraging everyday coexistence within Israel between members of various religious groups.

The University of Haifa has made a strong commitment to social and environmental sustainability in accordance with the goals set by the United Nations for sustainable development (UN's Sustainable Development Goals; SDGs). The 17 goals, which were adopted by all UN member states, are a 'roadmap' for humanity. The University of Haifa is advancing these goals through research, teaching, public engagement, and the institution's ongoing operations.

Our unique geographical location – Mountain (our main campus situated in the Carmel Forest); City (the Downtown Campus); and Sea (laboratories located along the Mediterranean coastline) – serves as a "living laboratory" for research on man, society and the environment. Our researchers have established a network of international connections that contribute to sustainability research. And, while the insights emerging from this research shed light on local issues, their impact is global.

Important step we took to advance research and sustainability is the establishment of the Bloom School of Graduate Studies. The Bloom School marks a fundamental change in the way research students, and especially postgraduate students, study for their doctoral degree. Instead of doctoral students focusing exclusively in their field of research, Bloom School research students will also take general courses that deal with global issues that are not necessarily related to their field of research, such as immigration, NGOs, or personal, social, environmental and personal well-being.

Working together, the University of Haifa family- our dedicated community - can change lives and our world for the better. I encourage us all to think locally and act globally. Doing so will bring us closer to our goals.

Prof. Gur Alroey,

Rector

Dean and Head of School's Message:

The Bloom Graduate School at the University of Haifa seeks to provide a supportive and stimulating academic framework that promotes the excellence of our graduate students. The school aims to foster future academic and professional leaders who possess deep and broad expertise in their chosen fields, and are creative thinkers who challenge convention and dare cross-disciplinary boundaries by asking provocative questions and articulating new perspectives.

We believe that our students are our most valuable asset. As such, we are committed to enhancing their experiences on campus and to providing them with the support they need to produce original, high-quality research. The Bloom Graduate School program offers a range of opportunities to help students develop academic and professional skills and competencies throughout their academic studies.

Our academic framework aims to achieve the following goals:
To promote outstanding academic experiences and opportunities to encourage cutting-edge research and professional development that prepares graduates and postdocs for success in their fields.
To encourage academic discourse that addresses critical and controversial global and local issues.
To develop initiatives that promote positive graduate student experiences (such as effective mentoring and mentored learning) so that our graduates will serve as advocates for the University of Haifa.
To foster the development of an academic community bound by a shared sense of identity and belonging to the university.
To enhance the prestige and visibility of graduate studies at the university.
To enhance the University's competitiveness in attracting the best-qualified doctoral applicants.
To build on and continue to strengthen the relationship between faculty and students and the Graduate School thereby enhancing comprehensive graduate education at the University of Haifa.
To build bridges between academia and the community, from the city of Haifa to northern Israel, throughout the country, and beyond, as we showcase the work of our young researchers.

I hope that the focus on building a broad range of skills to enrich and support our research students will prove valuable to them.

Prof. Irit Akirav

Dean, Bloom School for Graduate Studies

Lihi Yona

Research Title: Policing Whiteness

The project develops a first-of-its-kind theory of the way whiteness—as a sociological category—is internally policed by its members. It aims to uncover the way white people police other whites to "act white," according to white supremacist ideals regarding how they should act or with whom they may associate, and the role U.S. law plays in this dynamic.

Short Bio:

Lihi Yona is a researcher specializing in the place of identity within law, with a specific focus on critical race and gender theories. She began her academic journey at the University of Haifa, in a joint program for an LLB and an MA in philosophy, both of which she graduated with honors. Following her graduation, she served as a legal intern to the deputy attorney general (legislation branch). Subsequently, she enrolled at Columbia University for an LLM, and later a JSD. Following her graduation from Columbia University, Lihi served as a post-doctoral fellow at Harvard Law School's Labor and Worklife Program. Returning to her alma mater, Lihi is now a post-doctoral fellow at the Blum School for Graduate Studies at the University of Haifa.

Throughout the years, she has won multiple awards and honors, including the Jeffrey Williams Memorial Prize for Critical Rights Analysis from Columbia University, awarded to one student each year; the Norman E. Alexander Scholarship from Columbia University; and an honorable mention from the committee of the Halpern Award for socially-engaged legal writing.

Lihi's scholarship has been published in various journals, including the Yale Journal of Law and Feminism, Berkeley Journal of Employment and Labor Law, Columbia Journal of European Law, and the Michigan Journal of Race and Law.

Research description:

Lihi's research focuses on existing tensions between justice-making mechanisms and critical perspectives on identity, both in the U.S. and in Israel. In both localities, her research tracks marginal identities situated on the borders of legal recognition, to explore what their meeting points with the law teach us both about recognition and about the law itself.

More specifically, her current project employs legal analysis and critical race methodology to demonstrate how whiteness is a racial category enforced on white people, who are in turn reprimanded for crossing its borders. Put differently, it uncovers the intricate ways in which white people not only perform their whiteness to secure the material and symbolic benefits associated with whiteness, but they are also policed into performing this whiteness, and punished when they transgress it. Unlike masculinity, which has been recognized as an apparatus that is enforced upon men, whiteness was never similarly understood. My research reveals that white people are similarly expected to perform their whiteness in rigid ways and are harassed and discriminated against when they fail or refuse to do so. For instance, white people who associate with black colleagues, experience workplace harassment and discrimination and are called to 'stick with their own kind.' Likewise, poor whites, who are often referred to as 'white trash,' and as a group that 'contaminates the white race,' experience discrimination against them, due to—as I analyze it—their failure to perform their identity according to racial (and racist) expectations.

The recognition of whiteness as a category whose boundaries are internally policed has evaded legal scholarship. This project sheds light on this yet-to-be discovered phenomenon, and the law's role in maintaining it. Examining the intersection between whiteness-policing and the law would also offer an account of the role of law in preserving white supremacy and racial hierarchies. In addition, the project delineates the borders of whiteness as they are drawn by its gatekeepers. This delineation can, in turn, allow for whiteness' reconceptualization.

Etye Steinberg

Research Title: Artificial Intelligence, Radical Ignorance, And The Value Of Consent

Short bio:

I am a philosopher, working mostly in philosophy of action (including moral psychology and practical reason) and in philosophy of business and technology. In philosophy of action, I am interested in practical reasoning and agency. I am especially interested in cases of unthinkable action (in the sense expressed by Martin Luther when he claims: "Here I stand, I can do no other"), how such unthinkability is constitutive of the self, and how one may be responsible for one's own self so construed. Understanding the idea of responsibility for the self will help clarify issues pertaining to how one might be responsible for attitudes – including implicit attitudes, and consequently for actions that are motivated by such implicit attitudes (e.g., how one may be morally responsible for discriminating based on some implicit bias).

In philosophy of business and technology, I focus on questions in normative business ethics and on the ethical, moral, and political implications of the use of big data and AI in markets. I am especially intrigued by the idea of consent as it pertains to privacy agreements, and whether such consent is at all useful or valuable given current and predictable technological conditions. In more foundational issues in normative business ethics, I am interested in the question of the implicit morality of the market: what are the normative ideas and ideals underlining competitive markets? In work currently under review, I argue that one such ideal is an ideal of 'fairness', understood as different market participants having reasonable opportunity to gain substantial material benefits from taking part in the market.

Research Description:

In my research, I focus on the influence that Artificial Intelligence on our ability to provide informed, valuable consent. More and more, we face AI-based products and services in many different fields and domains of our lives (communications, medicine, insurance, social services, and more). Using these services often requires our explicit consent, e.g., by agreeing to the services' Terms and Conditions clause. Currently, AI operates by machine-learning or deep-learning. This means that the AI software evolves and changes its own modus operandi over time in such a way that we cannot know, at the moment of consent, what it is in the future to which we are now agreeing. Therefore, informed consent is impossible in contexts of machine-learning or deep-learning AI. This means that we need to either come up with a new practice (other than consent) or revise our conception of informed consent (and its necessary conditions). These two options are intertwined: I argue that, under certain conditions, consent can be valuable without being informed. By understanding these conditions, we can formulate practical solutions to foster valuable, albeit uninformed consent across various decision contexts.

Asaf Nissenbaum

Research Title: What makes a bad joke?
Comedians' tweet deletion practice and the public record

Short Bio:

Asaf Nissenbaum is a Bloom post-doctoral fellow at the Communication Department, University of Haifa, following a post-doctoral fellowship at the Open University of Israel and receiving his PhD from the Hebrew University of Jerusalem. His work has been published in journals such as New Media is & Society, Journal of Computer-Mediated Communication, Information, Communication & Society, and others, and addresses humor, digital culture, globalization, internet memes, and web-based identities.

Research description:

Humor has been put in a contentious and evocative position in current culture, as certain topics, expressions, and positions are met with harsh criticism as well as calls to ostracize or "cancel" those who are deemed harmful in their humor or actions. This underlines the main issue of this research - when and why comedian delete their tweets. As the legitimacy of humor to criticize or offend becomes strenuous, taking back a post via deletion signifies cultural boundaries and the limits of comic expression, as well as identity management by comedians and the possibilities of conserving the digital public records. In this way, the act of removing what was already posted is indicative of a wider social context, in which free expression is weighed against other meaningful considerations, such as oppression or misinformation spread. Put differently, tracking tweet deletion by comedians reveals what currently constitutes a "bad joke", and what are the implications of making one.

While political and journalistic use of deletion have been addressed, comedians have not been included in such investigations. However. digital humor represents a meaningful (if light-hearted) aspect of social identity, political participation, and discursive boundaries. As such, it constitutes both another avenue for studying content deletion and its implication on culture and memory, and a comparative case to outline similarities and differences to the political and journalistic fields.

Thus, my study will address three major questions:
a) What typifies the posts deleted by comedians on Twitter, and how are the limits of humorous expression negotiated through deletion? b) What are the main motivations for comedians deleting tweets? and c) How do these characteristics compare to those of journalists?

This research's findings are expected to address:
a) comedians' deletion practices, based on content analysis and interviews, and b) comedians' motivation and perception of content deletion, based on interviews and compared with journalists.

Sreehari Harikesh

Research Title: Observational Aspects Of Super Massive Black Holes

Short Bio:

I am an observational astronomer specialized in X-ray astronomy. I completed my PhD in astronomy and astrophysics from the Indian Institute of Science, Bangalore in December 2019. My thesis is titled 'Spectro-temporal signatures of accretion flows around Galactic Black Holes.' After that I worked as a post doctoral fellow in the Indian Institute of Astrophysics, Bangalore. I joined the University of Haifa in November 2022 under the supervision of Prof. Doron Chelouche and Dr. Shahar Hadar.

Research Description:

The existence of gravitating objects from which light cannot escape was hypothesized by John Michell in the 18th century. A mathematical formulation for such objects was found by Karl Schwarzchild in 1916 based on Albert Einstein's General Theory of Relativity. Recently, Reinhard Genzel and Andrea Ghez shared the 2020 Nobel Prize in Physics for the discovery of a dark massive object – a supermassive black hole (SMBH) – at the center of the Milky Way Galaxy. They have accomplished this by observing the orbits of stars at the center of our Galaxy for about two decades. Consequently, much attention is shifting towards devising and improving methods that will allow accurate measurements of black hole parameters and precision tests of the theory that predicts them, Einstein's General Relativity, at the extreme environs of a black hole. In my postdoctoral term, I will attempt to shed light on how SMBHs grow during episodes of rapid accretion and what their properties (notably mass and spin) are, using a novel analysis technique on archival x-ray data. I will be tracking the propagation of light as it is emitted from the innermost environment of the SMBH, ultimately making its way to the observer. A simulation of what is expected in the energy spectrum corresponding to different photon paths from the accretion disc is presented in the included figure.
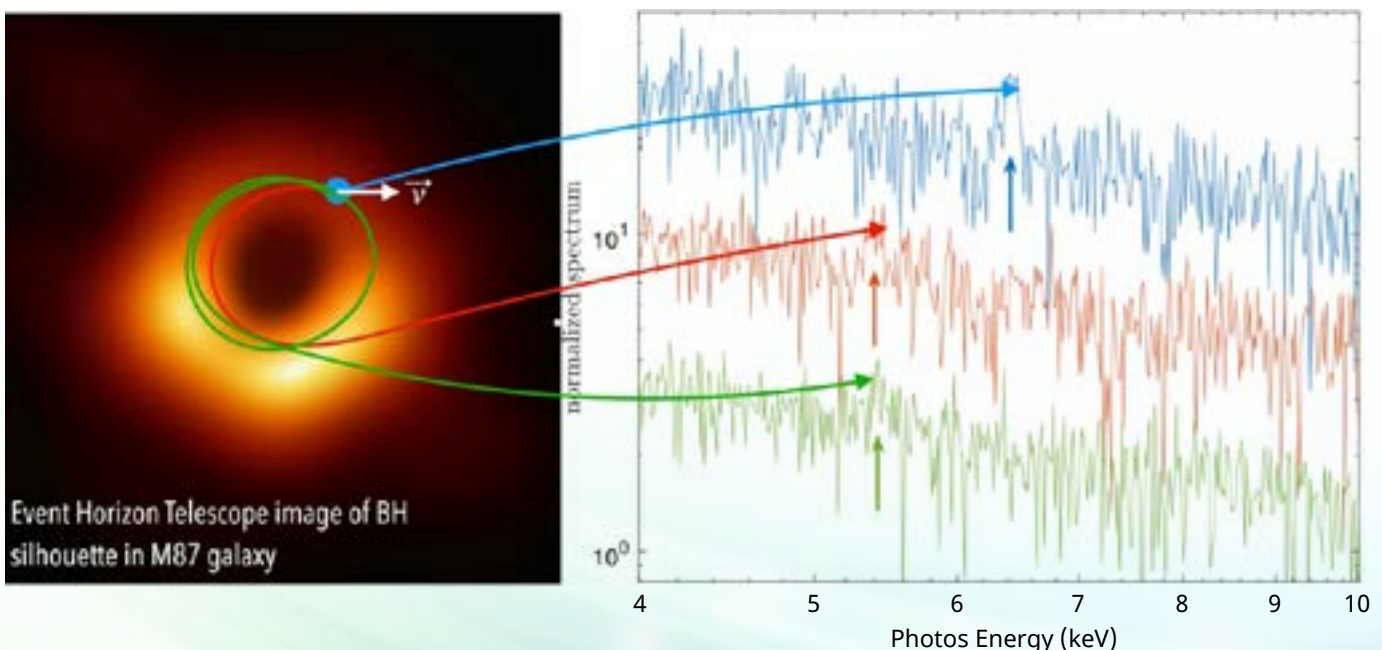

Figure 1: On the left panel is shown the image of the super massive black hole in the M87 Galaxy captured by the Event Horizon Telescope. The photons emitted from a particular region on the accretion disc are shown to take different paths to the observer. On the right hand panel we show the energy spectrum corresponding to these photon paths.

Thuraia Copti-Mshael

Research Title: Understanding And Promoting Internet Source Evaluation Among Native Arabic-Speaking Students

Short Bio:

Thuraia Copti-Mshael is a PhD student in the Department of Learning and Instructional Sciences in the Faculty of Education of the University of Haifa. She received her MA degree in learning disabilities in 2013 from the University of Haifa and her BA degree in psychology and special education in 2010 from Tel-Aviv University. She also has a teaching certificate from Oranim Academic College of Education. Thuraia has worked as a team leader in the Arabic language unit of the Center for Educational Technology (CET) for 13 years. In parallel, she worked as a research manager of studies on the development of Arab students' literacy skills and as a teaching assistant at Oranim College. Thuraia's PhD dissertation, under the supervision of Dr. Srait Barzilai, focuses on finding ways to promote Internet source evaluation among native Arabic-speaking middle school students. Thuraia's research relates to the fields of digital literacy and information literacy. It also draws on theories of multiple text comprehension and epistemic cognition.

Thuraia lives in Shefara'm with her husband and three children: Celine, Daniel, and Rita.

Research Description:

The Internet offers diverse and multimodal information. Yet, alongside reliable information, the Internet is flooded with misinformation and disinformation. Can students cope with this challenge? This question is crucial because in order to become life-long learners, students need to be able to independently gather and judge information online and to use it to draw informed conclusions. Source evaluation, which involves attending to and judging the creators of the information and how it was created, can be a useful tool for evaluating the information students encounter online. Recent studies show that source evaluation competence is affected by individual differences, such as reading skills, epistemic beliefs, and socio-cultural backgrounds. However, there is still little understanding of how students' socio-cultural backgrounds shape their source evaluation competence and how source evaluation instruction might address this.

The current research aims to understand native Arabic-speaking students' source evaluation competence as a function of individual differences (in reading comprehension, epistemic thinking, age, and gender). Furthermore, the research aims to design and test an intervention program for fostering source evaluation competence in middle school that will address the special characteristics and needs of Arab students. The research has two innovative aspects. First, source evaluation competence and its relationship with individual differences have rarely been studied among Arabic speaking students. Second, the study will shed light on how source evaluation interventions can be culturally adapted to address students' ethnic and cultural backgrounds.

Rona Mashiach

Research Title: Autobiographical inventiveness in a borrowed mother tongue: Re-thinking the oeuvre of global south and diasporic jewish writers

Short Bio:

My academic fields of interest are cultural studies, comparative literature, gender, and postcolonial critique. I am a graduate of two master's degrees from the Tel Aviv University. The first was completed at the Interdisciplinary Program in the Arts and the second at the Gender and Women Studies. My thesis was supervised by Prof. Hannah Naveh, a scholar of literature and gender studies, and Dr. Rivka Shusterman, an art historian. In it I analyzed a series of lithographs by the Portuguese-English painter Paula Rego, inspired by Jane Eyre, Charlotte Bronte's famous Victorian novel. The study explored the multi-layered interpretative quality of Rego's work using the critical tools of postcolonial and feminist theory. For the past four years I have been working as a research assistant for Dr. Dana Kaplan, senior faculty member of the social sciences department at the

Open University. Dr. Kaplan's research explores the intersection of class and ideals of beauty in the Israeli society.

In addition, in the recent years I have initiated the translation and publication of literary and theoretical works by women authors such as Jamaica Kincaid (Locus, 2016), Jaqueline Kahanoff (Hakivun Mizrah, 2020) and Audre Lorde (Pardes, 2022). I consider the success of securing a publication house for the work of Audre Lorde this year an important opportunity to open a little bit the gates of academia's 'Ivory Tower' and to engage the general Israeli public with issues concerning the politics of racial and gender inequalities.

Research Description:

The aim of my study is to examine an oeuvre of Jewish Indian writers, particularly that of Esther David and Sophie Judah. Both authors are chroniclers of a fast-disappearing ethnic minority as well as witnesses of national and social upheavals in modern-day India. In my doctoral research, supervised by Prof. Ayelet Ben-Yishai, I examine the ways in which their work deepens our understanding of the diversity of contemporary Indian literature written in English. For this aim I utilize postcolonial critique, feminist literary perspectives and the cultural study of religious minority groups in diasporic contexts. My work focuses on deciphering the main literary modes and themes that these authors apply in light of their unique and dualistic existence as both locals and foreign inhabitants of a "diasporic homeland" to which their community has belonged for so long. Further to this, I intend to juxtapose these oeuvres with the scholarly writings of late twentieth century intellectuals, such as Jacqueline Kahanoff, Sara Suleri and Ella Shohat. These diasporic women's oeuvres form a discursive, cultural,

and political context within which David and Judah's literary work can be more comprehensibly understood. Thus, my research aims to contribute to the field of Anglophone Indian Literature while also enriching theory related to the studies of postcoloniality, literature, and gender.

Gadi Buskila

Research Title: Substitution and complementarity of agi (artificial general Intelligence) and hgi (human general intelligence) assessed by economic and Subjective measures.

Short Bio:

I am 46 years old, married with four children, Adjunct Lecturer at the Western Galilee College in economics, statistics, and computer applications for undergraduate students. I earned my BA in economics and information systems from Yezreel Valley College (2003) and my MBA from the Open University (2010), both with distinction. I have recently completed my master's thesis in the field of consumer behavior at Bar-Ilan University. Currently, I am a PhD student in the School of Business Administration, University of Haifa in the field of information economics. My doctoral advisor is Assoc. Prof. Daphne R. Raban. As of this academic year, I have been honored by the Bloom Scholarship for doctoral students. I serve as a logistics officer (Major) in a maneuvering division in the reserve forces.

Research description:

Information is a unique economic good. First, it is an experience good, meaning that its full value is revealed only after consumption. Second, competition in information markets relies on traditional factors of supply and demand alongside unique challenges such as zero marginal cost and the wide availability of free information goods. Third, the cost of producing the first unit of information is high and the cost of producing the following units is cheap to negligible. This phenomenon is known as "the first copy effect" and is often associated with a sunk cost.

Today, information of high quality is produced by rapidly improving artificial intelligence algorithms (such as Chat-GPT, MidJourney, Copy-AI, etc.). Information production, which traditionally was a human achievement, is now shared with advanced algorithms.

My research explores the effect of the identity of information producer (AI and Human) on value perception of information and on its price elasticity of demand. Moreover, my research seeks to determine whether human and AI are perceived as substitutes or as complements in producing information.

Danna Tal-Savir

Research Title: Promoting middle school students' competence to identify, understand, and resolve scientific disagreements in the media
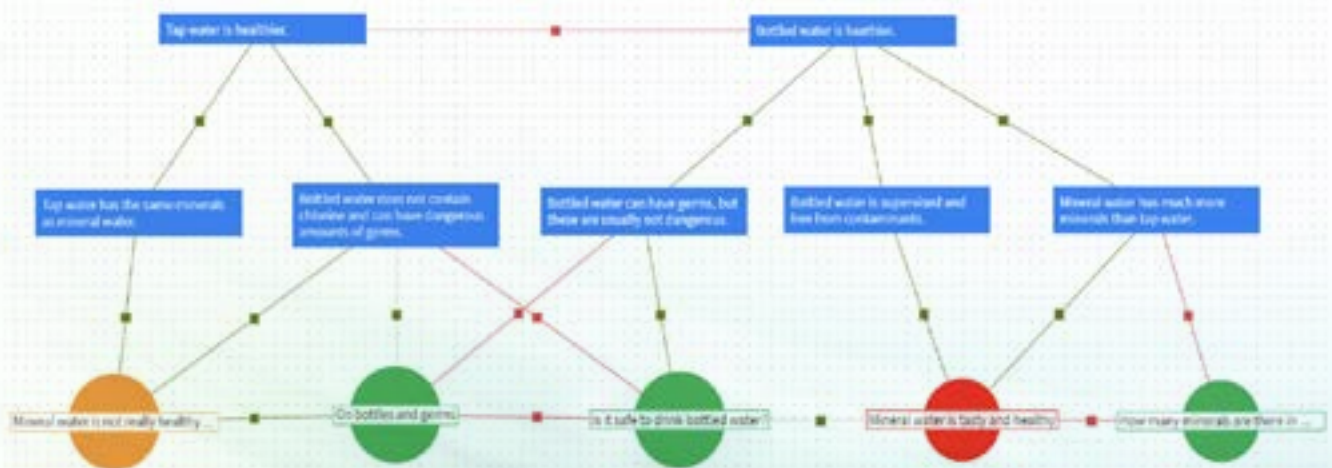
Short Bio:

I am a PhD student in the Department of Learning and Instructional Sciences in the Faculty of Education of the University of Haifa. I hold a BA. in mathematics with computer science from the Technion - Israel Institute of Technology and an MA. in learning, instruction and teacher education from the University of Haifa. I have been a mathematics teacher and educator in the Hebrew Reali School since 2010.

My PhD research, which is guided by Dr. Sarit Barzilai, addresses middle school students' abilities to identify, understand, and resolve scientific disagreements that are reflected in popular media. I also study how visual scaffolds and discourse prompts can promote students' digital literacy and epistemic thinking (i.e., thinking about knowledge and knowing).

Research Description:

The "post-truth" era, in which students have easy access to abundant information online, presents two major epistemic challenges. First, widespread misinformation online can cause confusion regarding the level of scientific consensus on critical issues, such as climate change. This can make it difficult to distinguish between real and pseudo-scientific disagreements. Second, new media exposes many legitimate scientific disagreements on topics that experts continue to debate. Expert disagreements pose a real challenge for drawing conclusions about important issues, for example, about environmental action. Hence, students need to learn how to understand and evaluate scientific disagreements that are communicated online. However, to date, there is scant research into how to develop students' competence to productively cope with the scientific disagreements.

The overall aim of my study is to investigate whether and how epistemic scaffolds can help middle school students identify, understand, and resolve scientific disagreements. My study will examine how scaffolds, such as mapping conflicting information sources and engaging in discourse about disagreements, can promote students' abilities to cope with scientific disagreements. For many students, middle school is the last opportunity for learning scientific literacy. Hence it is critical to find ways to improve their abilities to reason about conflicting scientific information. The findings of the study will inform the development of curricula and learning materials that will help foster students' scientific literacy "post-truth" times.

Multiple Documents Mapping Scaffold

Romi Oren Schwartz

Research Title: The Decoupling Model Of Equanimity

Short Bio:

My name is Romi Oren Schwartz. I completed MA studies in pediatric medical psychology at the Academic College of Tel Aviv–Yafo and am in my final year of clinical residency at Tel Aviv Sourasky Medical Center. I am now a first year PhD student at the University of Haifa, working with Prof. Amit Bernstein in the Observing Minds Laboratory.

I am broadly interested in the mechanisms of action through which mindfulness and compassion impact mental health. I am particularly interested in the translational applications of this work among marginalized populations, such as forcibly displaced refugees.

Research Description:

My PhD research is focused on what, I argue, is a fundamental mental building blocks of mental health and thereby one of the most fundamental salutary mechanisms of mindfulness – equanimity. Equanimity has been historically conceptualized as an attitude that is capable of embracing either pleasure or pain without reflexively reacting to them. Grounded in interdisciplinary theory bridging neuroscience of wanting and liking and canonical Buddhist theory of mind, scholars in the Observing Minds lab at the University of Haifa proposed the Decoupling Model of Equanimity proposed that equanimity is subserved by the decoupling of desire (wanting and not wanting) from the hedonic tone of current or anticipated experience (pleasant or unpleasant). They posited that in a state of high equanimity a person has reduced hedonic-based desire, wherein wanting or not wanting is not determined by the degree to which an experience is pleasant or unpleasant, respectively. Instead, in an equanimous state, wanting or not wanting are determined by values, long-term goals, or pro-social intentions rather than the hedonic tone of experience. They theorized that this decoupling sub-serves a number of manifestations or expressions of equanimity or lack thereof such as the attitudinal willingness to tolerate and engage with various experiences regardless of their hedonic-tone as well as non-effortful reactivity (i.e., habitual mental and behavioral reactions) to the hedonic tone of current or anticipated experience. Despite promising theory, there is a very limited number of studies of equanimity or the theorized decoupling mechanism in mental health or mindfulness training. My PhD research will therefore focus on two central and inter-related aims. First, I aim to test theory that decoupling of desire (wanting and not wanting) from the hedonic tone of current or anticipated experience (pleasant or unpleasant) contributes to maladaptation and common stress- and trauma-related mental health problems. I aim to explore whether the theorized (de)coupling mechanism can account for multiple risk and protective processes (e.g., avoidance, emotional and behavioral reactivity, distress intolerance) that have been implicated in prevalent mental health problems. Second, I aim to better understand the factors and processes that facilitate decoupling of desire from the hedonic tone of current or anticipated experience and the conditions that promote (de)coupling. I will test theory that mindfulness meditation and various processes mindfulness facilitates (e.g., meta-awareness, reduced identification with experience, compassion, acceptance) lead to decoupling of wanting from liking and thereby the salutary effects of mindfulness training.
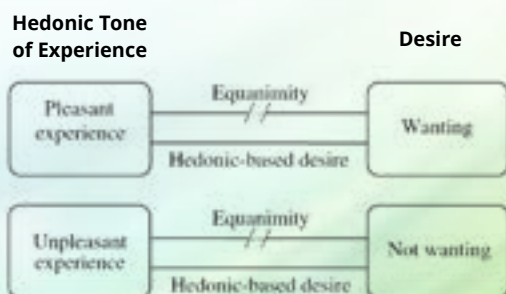

Fig. 1 The decoupling model of equanimity. Note that in states of high equanimity, desire is not based on the hedonic tone of experience: (1) Wanting is decoupled from pleasant experience- a person does not want to have or prolong an experience only because it is pleasant; and (2) not wanting is decoupled from unpleasant experience- a person does not want to avoid or stop an experience only because it is unpleasant. States of non- equanimity are characterized by hedonic-based desire: (1) Wanting is coupled with pleasant experience- wanting to have or prolong an experience only because it is pleasant; and (2) not wanting is coupled with unpleasant experience- wanting to avoid or stop an experience only because it is unpleasant

Shimon Pruss

Research Title: Learning abstract words in a foreign language

Short Bio:

I have a bachelor's degree in psychology, another bachelor's degree in business administration, and a master's degree in learning disabilities. My research focuses on methods for learning English as a foreign language, which is important for success in life. In my master's thesis, under the supervision of Prof. Anat Prior and Prof. Avi Karni, I presented a new method for learning vocabulary in English as a foreign language.

As part of my PhD under Prof. Anat Prior supervision, I am continuing to investigate other methods for learning English vocabulary. Before beginning my Doctorate, I served as a research assistant of the Israel Prize winner, Prof. Asher Koriat. I believe that research on methods for English learning can help many people succeed in their professional and personal lives.

Research Description:

In foreign language vocabulary learning, abstract words are harder to learn than concrete words. The reason is that abstract words have ambiguous meanings that varies based on the context, unlike concrete words. For example, the word "danger" can have different senses depending on the context (dangerous road or dangerous statement), while the meaning of a concrete word like "balcony" is less dependent on the context. Many studies have investigated effective methods for learning foreign language vocabulary and have drawn different conclusions, but most of these studies were conducted on concrete words. We believe this is a methodological bias, and it is possible that learning methods will show different effects when it comes to abstract words. Therefore, we plan to investigate the effectiveness of various learning methods on both concrete and abstract words. We hypothesize that methods that are ineffective for concrete words may be effective for abstract words, and conversely, methods that are effective for concrete words may be less effective for abstract words. Specifically, we will examine the effectiveness of semantic elaboration and different types of contexts in learning abstract and concrete words. We hope this study will result in practical, research-based learning methods to aid English learners.

Sabrin Shaban-Rabah

Research Title: "Multilingualism And Deafness: Evidence For Typical And Atypical Language Acquisition"

Short Bio:

Sabrin Shaban-Rabah is a speech and language therapist with 12 years of experience, 9 of which working with deaf and hard of hearing children. She is first-year PhD student in the Department of Communication Sciences and Disorders at the University of Haifa. Her research is on "Multilingualism and deafness: Evidence for typical and atypical language acquisition". Her current study builds on her MA thesis which resulted with 2 publications. The proposed research will explore language interaction and atypical language in the domains of morpho-syntax and lexical-semantics in students who communicate in Israeli Sign Language and Arabic. This novel study aims to characterize typical and atypical processes of language acquisition of bilingual bimodal deaf signing students.

Research Description:

Arabic-speaking children with a hearing impairment who use sign language are exposed to three different linguistic systems in three different modalities: Israeli Sign Language (ISL) in signing, spoken Arabic in speech and the Standard Arabic in writing. Each language has its own linguistic characteristics and is learned in a different context. The linguistic knowledge of these children consists of three linguistic systems and the interaction between them. To date, the interactions between these languages have hardly been studied. The present study aims to examine the language of deaf Arabic speaking children in three different modalities: ISL, spoken Arabic, and standard Arabic. It will explore typical language interaction phenomena in the domains of lexical-semantic and grammar (morphology and syntax), and atypical phenomena.

A total of 100 school age students will be recruited: 25 deaf and hard of hearing (DHH) bimodal bilingual students (from deaf families who use sign language as their home language), 25 DHH monolinguals (non-signers, whose main language is spoken Arabic), 25 hearing bimodal bilinguals (from deaf families who use sign language as their home language), and 25 hearing monolinguals (non-signers). Note that while two of our groups are labelled as monolinguals here, in reality, they are also exposed to multiple spoken and written languages (spoken Arabic and Modern Standard Arabic, and in addition, Hebrew and English which are part of the curriculum in school), but we differentiate them here from bimodal bilinguals, who know a signed and spoken language.

The research materials, procedures and coding schema will be developed as part of the research project.

The results of the current study will contribute towards our understanding about the interaction between these three modalities and will give us essential information about language acquisition in the context of multilingual environments and specifically in environments with deaf children. This is also important for speech and language therapists, educators and those who work with Arab deaf students using these three modalities across Israel. In addition, it will support the development of accurate evaluation and intervention tools.

Diogo Cordeiro

Research Title: A precision modeling of Parkinson's disease into dopaminergic neurons and midbrain organoids using induced pluripotent stem cells (ipscs).
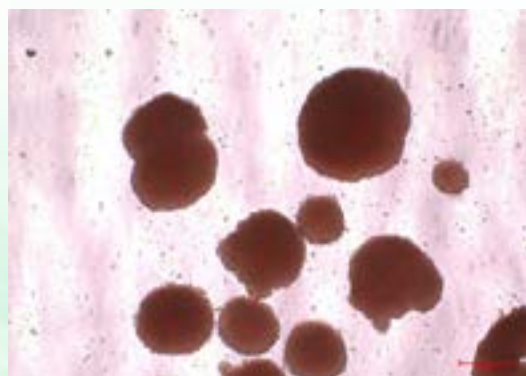
Short Bio:

I am Diogo Pinheiro Cordeiro, a first year PhD student in the Sagol Department of Neurobiology, University of Haifa. I was born in Brazil, in Araraquara-SP,.and was raised in a family of physicians. I am also a physician, but before medical school, I studied three years of economics in Brasilia-DF. During my six years' term of medical school in Rio de Janero, I have spent one year as a medical Lieutenant of the Brazilian Air force (FAB), and five years of neurological surgery residency. I have also worked in trauma and emergency hospitals during this time. After that, I returned to Brasilia, and I did a short-term fellowship at Rede Sarah in neurosurgery and then started my private practice as a neurosurgeon.

I was selected at the University of Virginia in Charlottesville, USA, under the supervision of Dr. Jason Sheehan, where I did a research fellowship in stereotactic radiosurgery and I had more close contact with basic and clinical research. During this time in the USA, my curiosity about neuroscience increased and I was very interested in doing a PhD in neuroscience and started searching for opportunities outside Brazil, when Dr. Shani Stern selected me in her lab at the University of Haifa.

Research Description:

James Parkinson first described Parkinson's disease as a neurological syndrome in 1817 as a "shanking palsy", although early descriptions can be found in Indian and Chinese sources from 1000 BC and Sylvius de La Boe wrote about rest tremor in 1680, and Sauvages in 1768. The hallmark of the disease is often considered to be Lewy's body neural inclusions in the substantial nigra and other brain areas. The aggregation of α-synuclein species is the major constitutes of these Lewy bodies, although not all patients have Lewy bodies. Patients exhibit massive neuronal cell loss in the substantia nigra pars compacta, which is associated with motor symptoms. Having a family history of PD can increase the risk of the disorder 3-4 times, which shows the contribution of genetic factors to the disease. In the last years, several genes have been implicated in the pathogenesis of PD; these genes can be of low penetrance, for example, CGH1, GAK, MAPT, and some SNCA variants, genes of moderated penetrance as LRRK2 variants and GB1 and genes of high penetrance such as PINK1, PRRK7, and PRKN.

In this project, we have fibroblasts that were reprogrammed into induced pluripotent stem cells (iPSCs) from human patients with different PD causing mutations, as well as sporadic PD and healthy individuals. We differentiate them into dopaminergic neuronal cultures and midbrain organoids enriched with dopaminergic neurons. We will study the electrophysiological phenotype, RNA and protein expression, perineuronal nets (PNN) alterations, and extracellular matrix (ECM) differences in dopaminergic neurons and midbrain organoids that were derived from PD patients and compare them to healthy controls. In the second step of the research, we will implant midbrain organoids of PD mutations in mice and see if the organoids will incorporate into brain mice, if they will have vascularization, and PNN and ECM and we will evaluate if the mice present any PD phenotype. All this research will be conducted in conformity with the ethical protocol of the University of Haifa.

Pictures:
Embryoid bodies (EBs) formed from induced pluripotent stem cells (IPSCs) with mutations of Parkinson's Disease (PD):

Ashutosh Ahire

Research Title: Amplification of a critical memory

Short Bio:

Ashutosh Ahire is pursuing a PhD at the Sagol Department of Neurobiology, the University of Haifa, under the guidance of Professor Edi Barkai. Ashutosh has a particular interest in the fields of learning and memory. His work focuses on understanding memory amplification, and he utilizes techniques such as electrophysiology (patch clamp) to do so. Prior to his PhD studies, he held the role of Senior Research Fellow, and completed his postgraduate education at the National Institute of Pharmaceutical Education and Research, India in the areas of pharmacology and toxicology.

Research Description:

I aim to study a new learning mechanism that was recently discovered in our lab, which promotes a normal memory into a strong memory. We report a learning-induced mechanism that amplifies the strength of an already formed engram via doubling the strength of all inhibitory and excitatory synaptic inputs in the engram cells. I will study whether the induction of this mechanism on the fear memory promotes it into a traumatic memory. Moreover, I will study possible drugs that can block these mechanisms and as such can be used in the future to alleviate the symptoms of PTSD.

Legend for attached images:

Here we report novel learning-induced amplification mechanism that intensifies the strength of an already formed engram via doubling the strength of all inhibitory and excitatory synaptic receptors in the engram cells.
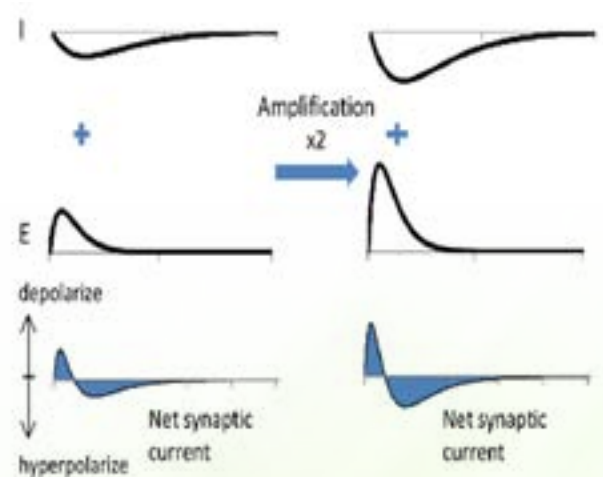
Wote Amelo Rike

Research Title: Deciphering the electrophysiological and molecular patterns of suicide among bipolar disorder patients

Short Bio:

Wote A. Rike is currently a PhD student at Stern's precision disease modeling lab, Sagol Department of Neurobiology, University of Haifa, Israel. He earned his bachelor's degree in pharmacy from the University of Gondar and a master's degree in pharmacology from Addis Ababa University, Ethiopia. He worked as a teacher, researcher and community educator for over ten years in Jimma University, Ethiopia. He also served as an external examiner and guest lecturer at different Universities in Ethiopia. Wote has conducted researches on rational drug use and also preclinical studies on animal models with the aim of discovering new products. He has more than ten published articles from these research works and is interested in research areas related to disease mechanisms and drug discovery/development.

Research Description:

Patients with bipolar disorders (BD) are 10 times more likely than the overall population to experience suicidal ideation, attempts, and deaths as a result. Despite a wealth of literature documenting the clinical and neuropsychological risk factors for suicide in BD patients, it is still challenging to comprehend this complicated condition. The interplay of numerous genetic, neurochemical, and environmental variables is thought to be the genesis of BD and associated suicide. Due to the lack of an appropriate model, biochemical, molecular, and functional aspects of suicidal tendencies are still unclear. Here in this study, unlike most of the previously reported animal models and postmortem brain-based studies, we will apply in vitro disease modeling techniques using induced pluripotent stem cell technologies, thereby generating neurons that functionally resemble live human brain neurons. These models circumvent the heterogeneities brought on by using animal models and postmortem brain research. To model BD in vitro, we will generate neurons from induced pluripotent stem cells (iPSCs) of BD patients who have successfully completed suicide, attempted suicide and those who have never attempted suicide. In the Stern's precision disease modelling lab, we received patients' lymphoblastoid cell lines (LCLs) from our collaborators at Dalhousie and Cagliari Universities. These immortalized lymphoblastoid cell lines (LCLs) were reprogrammed into iPSCs using episomal vectors that deliver the Yamanaka factors into the cells. These iPSCs will next be differentiated into hippocampal neurons and examined for electrophysiological recordings, calcium imaging and molecular alterations.
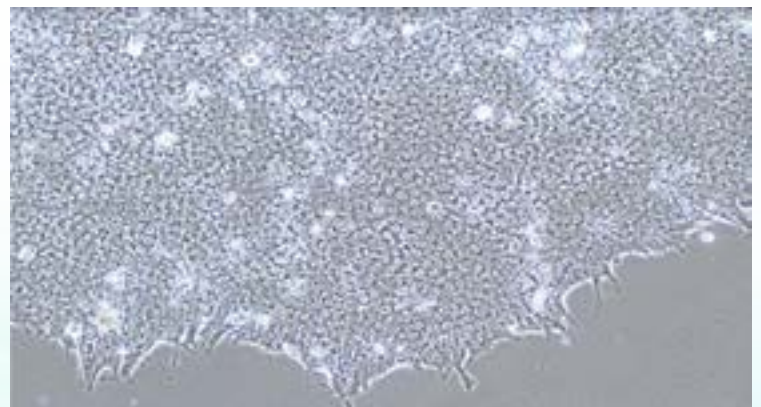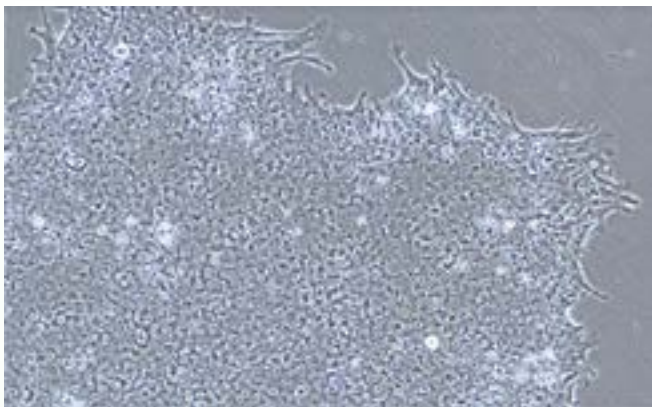
iPSCs reprogrammed from LCL

Coffee with the Dean - meeting with Bloom Scholarship's recipients 22.2.2023

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בי״ס ללימודים מתקדמים ע״ש בלום
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