



UNIVERSITY OF HAIFA  
אוניברסיטת חיפה جامعة حيفا

# MEET OUR AMBASSADORS

AMBASSADORS  
**LECTURE  
SERIES**





## MEET OUR AMBASSADORS



### ***Smadar Ben-Tabou de-Leon***

Associate Professor

Head of the Department of Marine Biology,

Head of the [GRD lab](#)

*Charney School of Marine Sciences*

#### **Field of Research:**

Biological regulation and evolution of embryo development

#### **SHORT BIO**

I obtained a PhD in theoretical physics from the Hebrew University in Jerusalem. I then transitioned to the field of developmental and evolutionary biology, received the Rothschild fellowship and the human frontiers fellowship to do a post-doctoral research on these topics at Caltech (the USA). I am the head of the lab of an associate editor of *Frontiers in Ecology and Evolution* and *Frontiers in Cell and Developmental Biology*.

In my lab we use the sea urchin embryo to decipher the biological regulation of embryo development. We discovered that the genetic program that drives sea urchin embryonic skeletogenesis is similar to the genetic program that humans use to build their blood vessels, during normal development and in cancer progression. Specifically, the same protein that tumor cell secretes to attract blood vessels that enable tumor growth and metastasis, is critical for sea urchin skeleton formation. We revealed a remarkable compatibility of human and sea urchin proteins which demonstrates the great potential of utilizing the sea urchin embryo for the development of [novel therapeutic approaches](#).

I am married, I have four kids and two cats, and in my spare time I like playing pokémon-go, jogging and hiking.

#### **FUNDRAISING NEEDS**

The department of marine biology was established in 2010 with the vision of combining cutting edge field and lab research, sharing our knowledge with the public and affecting marine related policies. **A gift will help us advance these goals and continue our research.** The research in the department analyzes the effects of climatic changes on marine animals, and produces and tests new strategies for the preservation of marine life in a changing climate. **Donations will help us to conduct our research and advance the understanding of life in the oceans, so that we can protect them. The donations will help fund scholarships for master's and PhD students, to carry out controlled research in the laboratory and to go on research cruises where we study marine life in the field.**



## MEET OUR AMBASSADORS



### **Ayelet Ben-Yishai, PhD**

Associate Professor

Chair, Department of English Language and Literature,  
Faculty of the Humanities

**Field of Research:** Literatures in English; Victorian and Postcolonial Literature; World Literature; Politics, Law, and Literature,

### **SHORT BIO**

I am Associate Professor and currently Chair of the Department of English Language and Literature, where I specialize in British and Postcolonial literatures and cultures. A comparatist by training, I have degrees in both Law (LLB, Hebrew University) and Literature (PhD, University of California, Berkeley). I have been an Honorary Fellow at the Institute for Research in the Humanities at UW-Madison, a Fellow at the Cornell Society of Fellows, a Visiting Scholar at Jadavpur University in Kolkata, and a recipient of several major grants for my research.

My research is animated by the conviction that literature carries important knowledge about our world and the way we comprehend it. It is a living lab of our societies and cultures and of the way we create meaning. My first book, *Common Precedents: The Presentness of the Past in Victorian Fiction and Law*, (Oxford 2013) argues that precedent constitutes a sophisticated mechanism for managing change in both literature and the law. Moving from Victorian Britain to twentieth-century India, my second book, *Genres of Emergency: Forms of Crisis and Continuity in Indian Writing in English*, (Oxford UP 2023) studies literary genre to understand the varied states of emergency and crisis that have become a fixture of our contemporary world.

### **FUNDRAISING NEEDS**

Legacies of colonialism continue to shape our world today. The initial promise of a more just *postcolonial* world-order seems to slip ever farther away, and the academic field of *postcolonial studies* must urgently reconceptualize the uneven global relations that continue to dominate our world. Scaling up ongoing research initiatives, **we would like to invite you to partner with us in founding the first Center for Postcolonial Studies in Israel**. Bringing together scholars from around the world to the complex social and cultural ecosystem of Haifa, we will address the most pressing needs of our world today: poverty, ongoing violence, the refugee crisis, and the environment. We will regard them as various manifestations of a single complex legacy; we propose a deep think and new vocabularies to produce innovative research with far-reaching impact.



## MEET OUR AMBASSADORS



### ***Amit Bernstein, PhD***

Professor

Director, [Observing Minds Lab](#)

Director, [Moments of Refuge Project](#)

School of Psychological Sciences,  
Faculty of Social Sciences

**Field of Research:** Clinical Psychological Science, Contemplative Science, Refugee Mental Health and Human Rights

### **SHORT BIO**

Born in Israel, I grew up in the US where I received a BA in psychology at the University of Wisconsin-Madison, a PhD in clinical psychology at the University of Vermont, clinical internship training at the Palo Alto VA, and postdoctoral research training at the Department of Psychiatry and Behavioral Sciences at Stanford University School of Medicine and the Palo Alto VA Center for Health Care Evaluation. In 2008, I returned to Israel to join the School of Psychological Sciences at the University of Haifa, where I am now a Full Professor and Director of the Observing Minds Lab and the Moments of Refuge Project. At the university, my students and I work to deepen scientific insight into mental health through the study of mindfulness, compassion and internally-directed cognition. Within refugee communities, I direct an ambulatory research and social impact laboratory dedicated to the mental health and human rights of forcibly displaced people. Our university and community-embedded research led to the Moments of Refuge Project – a global science-based social impact initiative, using mindfulness and compassion training, to empower forcibly displaced people to cultivate moments of refuge and thereby resilience and recovery. I am fortunate that my group's work has been recognized by the Israel Council of Higher Education Yigal Alon Fellowship, an EU Marie Curie Reintegration award, a Mind and Life Institute Research Fellowship, the Israel Young Academy of the Israel National Academy of Sciences and Humanities, and supported by a range of national and international scientific funding agencies and foundations.

### **FUNDRAISING NEEDS**

Today, more than 100 million people are forcibly displaced from their homes by violent conflict, persecution, and natural disaster linked to climate change. Forced displacement is a fast-growing global human rights and mental health crisis. Our capacity to help heal and prevent the generational and inter-generational trauma, stress and injustice of forced displacement demands critical investment and development. **We are therefore seeking partners who identify with the mission of *Moments of Refuge* to protect and promote the mental health and human rights of forcibly displaced people through rigorous, ambitious and compassionate science. We are working to raise an initial \$1.5 million investment to globally scale-up *Moments of Refuge*, through which we will be able to bring moments of refuge, healing, and restorative social justice to tens of thousands forcibly displaced people, their families and communities around the world.**



## MEET OUR AMBASSADORS



### ***Michal Biron***

Associate Professor

School of Business Administration

*Faculty of Social Sciences*

### **Field of Research:**

Human Resource Management; Organizational Behavior

### **SHORT BIO**

I am an Associate Professor at the School of Business Administration. I completed my post-doctoral research at Tilburg University (the Netherlands) and was a visiting Associated Professor at the University of Washington (USA). I am a Fellow at the Humboldt Foundation (University of Münster, Germany). As a former associate editor of the International Journal of Human Resource Management, I am currently on the editorial boards of several academic journals as well as local and international committees in the field of business management.

My research addresses questions aimed to improve employee well-being. I use a balanced approach whereby employees' physical and emotional health is considered alongside, and indeed as a facilitator of, high performance. In particular, I focus on employee relations with others at work (supervisors, colleagues) and outside of work (family, friends). For example, from a dynamic lens, I study how attitudes and behaviors at work (e.g., within teams) spill over to impact the wider community. In my free time, I love to travel with my husband and three girls, and running. One day I hope to become a DJ.

### **FUNDRAISING NEEDS**

#### **[The Center for the Study of Organizations and Human Resource Management \(COHRM\).](#)**

COHRM was established in 2000, with the key goals to (1) support research and disseminate knowledge in the field of organizations, human resources management and labor relations to faculty, students, professionals and the wider public, and to (2) create and coordinate opportunities for academia-industry collaborations. We seek to serve as a hub for students and provide them with opportunities to present and discuss their work, initiate research projects, and advance their skills via research colloquia and workshops. COHRM is unique in Israel. The Center publishes a Journal – "The Study of Organizations and Human Resource Management Quarterly", accredited by the Israel Institute for Higher Education. We also hold an annual conference, which attracts some 150 scholars and practitioners.



## MEET OUR AMBASSADORS



### ***Anna Brook***

Senior Lecturer

Spectroscopy and Remote Sensing Laboratory

Department of Geography and Environmental Studies

School of Environmental Sciences, Faculty of Social Sciences

### **SHORT BIO**

I completed my post-doctoral research at the DLR (German Space Agency, Munich) and was a researcher at the Signal and Image Processing Center, Royal Military Academy of Belgium in Brussels.

My research is fundamentally multidisciplinary and deals with an understanding of natural processes and human impacts on the biophysical environment. I am developing hybrid approaches, coupling physical processes with the versatility of data-driven machine learning to better understand the ecosystems, biodiversity, environmental responses to stressors, and emphasizing decision support system aligned with the UN Sustainable Development Goals (SDGs).

I advanced both theoretical/fundamental and practical aspects for applying image and signal processing in various environmental studies. The developed methodologies provide the interdisciplinary scientific community with tools to consider fully-integrated multi-source data on a selected environmental application.

### **FUNDRAISING NEEDS**

The SRSLab was established in 2017 at the department of Geography and Environmental Studies. Our ultimate goal is to bridge the gap between machine learning and geoscience for sustainability and environmental management at the national and international levels. We promote a holistic approach that involves technological and computational means for analyzing the dynamical processes, developing metrics, and examining the weights of policy measures to improve sustainability. The research focuses on technological, environmental and social change, embracing the complexity of the human-environment relationship, and physical model development for complex and non-trivial real-world problems in the era of climate change. Our novel, beyond the state-of-the-art, methodologies for multi-source data fusion enlarges the application envelope of each individual technology and contributes valuable information for environmental applications.



## MEET OUR AMBASSADORS

### Arik Cheshin



Associate Professor

Chair of Human Services Department

Director of the Laboratory for Research on Emotions in Organizations

Faculty of Social Welfare & Health Sciences.



מעבדה לחקר רגשות בארגונים  
The Laboratory for Research  
on Emotions in Organizations  
مختبر أبحاث المشاعر في أماكن العمل

### SHORT BIO

An 8<sup>th</sup> generation Jerusalemite on my father's side and 1<sup>st</sup> generation Israeli, on my American mother's side, there is no one prouder than myself to be part of the University of Haifa. There was no doubt that once I completed my military service I would study at the University of Michigan (Go Blue!). I earned a BA in psychology with high distinction and gained the love for research. Staying in Ann Arbor post-graduation, to work as a lab manager and research assistant, I was lucky to meet Prof. Anat Rafaeli from the Technion, who gave a talk at Michigan. This led to graduate studies in Organizational Psychology and exposure to the study of emotions in organizations at the Technion- Israel Institute of Technology. After a postdoc at the University of Amsterdam, I joined the Human Services Department at the University of Haifa in 2014 and have been the Chair since 2021.

I study emotions in organizations. My research addresses questions aimed at harnessing and utilizing the powerful role emotions play in our interactions at work. Whether it is within teams (supervisors, colleagues), or service interactions (service providers, customers), my work explores the interpersonal elements of emotions and their impact on interactions. This includes displays of emotions in our digitally advanced world. My work has been published in leading journals and received international media attention. I am an active member of several academic organizations.

### FUNDRAISING NEEDS

The [Laboratory for Research on Emotions in Organization](#) was formed in 2021. The lab's mission is to harness the power of emotions to the benefit of societies, organizations, workers and customers. Our goal is to better understand displays of emotion in order to utilize the powerful and functional influence these have on the dynamic relationships within and between individuals in the workplace. The lab trains young researchers and hopes to raise a generation of scholars that will lead the field of emotions in academia and industry. **The lab draws inspiration from the late Prof. Sigal Barsade, a native of Haifa, and a Professor at the prestigious Wharton Business School who revolutionized the field of emotions in business. We lost Sigal tragically at the age of 56 due to an illness. The laboratory intends to organize a yearly memorial seminar and offer scholarships to young researchers in her memory.**



## MEET OUR AMBASSADORS



### ***Roe Diamant***

Associate Professor

Department of Marine Technologies,

*Charney School of Marine Sciences*

### **Field of Research:**

Underwater Acoustics; Marine Observation; Noise Pollution

### **SHORT BIO**

I completed my BSc and MSc at the Technion-Israel Institute of Technology, my PhD at the University of British Columbia (Canada) where I received the Vanier Fellowship and a post-doctoral fellow at the University of Padova (Italy), all in Electrical Engineering. My background also includes an MA in Philosophy (University of Haifa) and a long career in Industry, where I was an algorithm designer at several startups and a project manager at Rafael Ltd. Currently, I am an Associate Professor at the Hatter Dep. of Marine Technologies, and the head of the University of Haifa Marine Observatory THEMO. I am also an EU ERA Chair Professor at the University of Zagreb (Croatia). I serve as an editor of the IEEE Journal of Ocean Engineering, the Coordinator of the EU H2020 project SYMBIOSIS, and the acoustic in-charge of Project CETI to decode the Language of Sperm whales.

My research is directed to marine remote sensing for sustainability and focuses on underwater acoustics and marine observatories. I develop technologies for underwater communication, navigation, object detection, and noise measurements. Research application examples are studying the effects of noise pollution, detection of dolphins, finding submerged mines, and marine robotics. In my free time, I am a Karate Instructor and love to scuba dive, hike and ski with my family.

### **FUNDRAISING NEEDS**

**THEMO** is a complex of two marine observatories located in the coastal zone of the Levant Basin of the Mediterranean Sea (125m) and after the continental shelf (1500m). The two moorings transmit data from 50 sensors and serve as Israel only offshore marine observatory that freely shares information in real-time. This makes THEMO ideal for exploration of marine pollution, analysis of climate change rates, and alert of catastrophic events like Tsunami waves and oil pollution. **The project is directly funded by the University of Haifa. In order to continue its operation, THEMO requires a stable, long term, budget commitment. The impact is huge: time series of marine data to foresee climate changes. See more in [LINK](#).**

We are also looking for funding to support our efforts to explore the impacts of noise pollution on marine animals: dolphins, fish and sea turtles, with the aim to standardize radiated noise from vessels.





## MEET OUR AMBASSADORS

### *Assaf Distelfeld*

Full Professor

Head of the Institute of Evolution

Department of Evolutionary and Environmental Biology,

Faculty of Natural Sciences



### **Field of Research:**

Plant genetics; Wheat domestication, Genomic resources

### **SHORT BIO**

I graduated from the University of Haifa in 2006 and continued to a postdoctoral training at UC Davis, California. My laboratory and its collaborators have changed wheat genomics by being the first to develop a unique approach that led to the sequencing of wild emmer wheat (Avni et al 2017, Science 357 93-97), and many other wheat genomes. In 2020, I was appointed as the Head of the Institute of Evolution at the University of Haifa. My laboratory specializes in developing genetic and genomic resources to study wheat domestication and reveal the regulatory mechanisms that enabled wheat to become one of humanity's most important crops. I think that a major key for a sustainable humanity is to transform our agriculture system from extensive to regenerative. This shift will protect our environment, however, more knowledge and development of genetic materials are needed to support regenerative agriculture. The mission of the Institute of Evolution is to promote regenerative agriculture and develop the expertise that will help implement this environmental revolution. In my spare time, with my family, I like to hike in the wilderness, and I am fully committed to the idea that our future generations should live in a healthy world while preserving and enjoying nature.

### **FUNDRAISING NEEDS**

It is widely accepted that future agriculture will face the challenge of increasing productivity under limited resources. New genomic technologies offer a great potential to advance our understanding of plant productivity together with resistances to biotic and abiotic stresses. **Therefore, the Institute of Evolution is currently establishing a Genome Center (IoE<sup>GC</sup>) for supporting activities related to regenerative agriculture. While I was able to obtain a grant for equipment, funds are needed to support IoE<sup>GC</sup> personnel and operations. Funds are also needed for fellowships for students and postdocs choosing to study regenerative agriculture.** We have recently signed an agreement with the 'Model Farm for Sustainable Agriculture' in the nearby Neve Ya'ar research center which is expected to attract many students. This collaboration will position the University of Haifa as an expertise hub in sustainable and regenerative agriculture.



## MEET OUR AMBASSADORS



### ***Yael Granot-Bein, PhD***

Director of the Social Engagement Unit

Office of the Dean of Students

**Fields of activity:** Community out-reach programs; social entrepreneurship; social mobility; students from minority groups and first generation to higher education

#### **SHORT BIO**

I hold a Ph.D. in history from the University of Haifa. In 2012, I co-founded the Weiss-Livnat International M.A program in Holocaust Studies which I directed for 10 years and in 2019 I established and ran its International Innovation Hub for Holocaust Commemoration and Education. The Hub was a collaborative, highly dynamic, supportive, and empowering environment for people passionate about the future of Holocaust memory. It brought together young social impactors from diverse backgrounds, nationalities, and cultures who worked on turning their innovative ideas into sustainable educational projects.

When I assumed my position as Director of the Social Engagement Unit, I brought the spirit of social entrepreneurship with me in the aim of creating opportunities for students to train as agents of social change. My unit works under the belief that anyone and everyone should be made aware of their potential to make a change and given the opportunity to do so.

#### **FUNDRAISING GOALS**

The time young people spend at university is usually the final opportunity – right before life takes over – to become aware of the social environment we live in, its challenges and needs and work to design and implement possible solutions. Together with a team of passionate professional, the unit initiates, designs and manages a rich variety of out-reach programs that include shared society programs on campus and in mixed cities; empowerment programs for young women students from minority groups; programs that promote social mobility through higher education for youth living in the periphery of Israel; programs for children with special needs, youth at risk and the elderly; financial Literacy programs for disadvantaged youth and families; urban regeneration in run-down areas in Haifa; and education programs about climate change and sustainability for Arab children and youth.

Hundreds of University of Haifa students are involved in these programs every year and receive scholarships of 5,000-10,000 NIS for their participation. These scholarships enable them to focus on their studies while dedicating time and energy (between 120-140 hours a year) to social causes and work.

**Thousands of students apply each year for these scholarships. Our limited funds enable us to support and thus engage app. 500 students annually. More funds are needed in order to support more students in their education and as agents of social change.**



## MEET OUR AMBASSADORS



### ***Claudia Harel***

Founder and Administrative Director

University of Haifa for Youth

A Young Scientists Hub that exposes young pupils from the full spectrum of Israeli society to the arts and sciences - and sparks their interest in higher education. We motivate pupils to fulfill their academic potential, help reduce economic disparities and strengthen Israel society.

#### **SHORT BIO**

I earned my MA in Leadership and Policy in Education and an MBA from the University of Haifa in 2012. I have years of experience managing academic entities through my role as the administrative director of the prestigious *Edmond J. Safra Center for Brain and Learning Disabilities Research*.

When I took on the task of establishing the unit, I did it all with great commitment, passion and with the understanding that this was a position filled with an important social mission and of great significance to the university and society.

Since the inauguration of the unit in April 2022, thousands of teens have been involved in our enrichment programs and about a hundred in full degree programs; Etgar, a prestigious undergraduate program for high school seniors studying computer science; and Kodkod, an intensive mathematics program for undergraduates

#### **FUNDRAISING NEEDS**

Early exposure to a positive academic experience will help our youth explore their interests, develop a sense of belonging in higher education and lay the groundwork for future success.

The Hub is a place for growth for youth and students alike. We employ outstanding graduate students in our programs as lecturers and instructors.

Access to high-quality educational academic experiences combined with fun social activities helps pupils experience learning in a new and meaningful way. The Hub allows pupils from Haifa and periphery communities to broaden their horizons in a safe and nurturing environment. However, not all have the means to pay. A "Culture and Science Day" costs \$600 for a group of 20 participants. A series of meetings costs much more.

I invite you to partner with us in promoting higher education, reducing inequalities and strengthening Israeli society by supporting schools, associations, municipalities and any educational entity that wishes to reach us without the ability to finance the programs.

We need support for funding full degree scholarships for academic studies (\$15,000), subsidy for "Culture and Science Day" a program that is a series of meetings (\$15,500); developing new programs in the field of neuroscience, human biology, art and entrepreneurship (14,000\$ each).



## MEET OUR AMBASSADORS

### *Tammy Harel Ben Shahar*



Senior Lecturer

Academic Director of the Clinics for Law and Social Change

*Faculty of Law*

#### **Field of Research:**

Theories of Justice, Educational Equality, Human Rights

#### **SHORT BIO**

I completed my post-doctoral research at New York University and Columbia University (NYC), and I was a visiting Professor at the University of Pennsylvania Graduate School of Education.

My research tackles issues of distributive justice, and especially educational justice, from both legal and philosophical perspectives. I am interested in investigating the moral duties we owe individuals from various social groups—race, gender, ethnicity, social class, as well as what justice demands with relation to students with low academic abilities. I also research how legal rules affect individuals from these groups, for example through enrollment policy, ability grouping, and funding.

Alongside research and teaching, I am also the Academic Director of the Legal Clinics, which brings together my passion for teaching, research and activism.

#### **FUNDRAISING NEEDS**

The Clinics for Law and Social Change were established twenty years ago to promote three goals: 1) create positive social change and promote human rights using a wide variety of legal tools--pro bono legal services, mediation, high impact litigation, legislative change, public outreach and advocacy, and more; 2) provide law students with quality experiential legal education; and 3) perform applied legal research that addresses social injustices.

**The clinics employ 6 full time lawyers, all leading jurists in their field, who carry out the legal work, teach and tutor the students, initiate coalitions with other civil society organizations, and perform legal research. The Clinics enroll about 100 students every year who are involved in more than 500 cases and projects every year that affect thousands of people in Israel.**



## MEET OUR AMBASSADORS



### **Hanin Karawani Khoury**

Assistant Professor

Director of the AudioNeuro Lab

Department of Communication Sciences and Disorders

Faculty of Social Welfare and Health Sciences

#### **Field of Research:**

Brain plasticity and auditory processing

#### **SHORT BIO**

I am a clinical audiologist and speech pathologist, received my BSc from the University of Haifa (*summa cum laude*, Wolf foundation award) and entered a direct PhD track to study auditory learning. I completed my post-doctoral research at the University of Maryland (USA) in Neuroscience. I received the prestigious MAOF Fellowship for Excellent Young Scientist from the Council for Higher Education and joined the Faculty of Social Welfare and Health Sciences in 2018. My work as a clinical scientist has led me to pursue a path that has the potential to have important implications for prevention of cognitive function decline in older adults through novel pathways that show that restoration of sensory input improves both cognitive and cortical function suggesting a neural mechanism for the sensory-cognitive connection. Today my lab investigates brain plasticity and auditory processing across the life span using perceptual, cognitive and electrophysiological measures. I am interested in neuroplasticity following altered sensory experience induced by auditory training and hearing rehabilitation, and recently, I have been investigating brain plasticity mechanisms through the experience of bilingualism.

#### **FUNDRAISING NEEDS**

My [AudioNeuro](#) lab investigates brain plasticity and auditory processing across the life span but with a particular interest in older adults, as the population over the age of 60 is predicted to increase to up to two billion people by 2050. Aging can eventually lead to sensory impairments such as age-related hearing loss that is known to accelerate cognitive decline and increase social isolation and depression. Therefore, there is a pressing need to develop methods to address the health needs of this growing population. My core mission is to ensure healthy lives and promote well-being for older adults, an expanding population worldwide. I am working in the lab to build home-based training software for older adults that promotes psychological well-being and healthy lifestyle given the worldwide increased life expectancy, and that can be implemented also in developing countries. This innovative integrated approach was generated based on my insights of developing ways to maximize communication abilities in older adults. Without my excellent students nothing of this can be promoted. **Therefore, there is special need for student fellowship funding & equipment and software funding.**



## MEET OUR AMBASSADORS



### ***Itzik Klein***

Assistant Professor

Hatter Department of Marine Technologies

*Leon H. Charney School of Marine Sciences*

### **Field of Research:**

Intersection of artificial intelligence, navigation, and sensor fusion. [Link](#) to Lab.

### **SHORT BIO**

I received the B.Sc. and M.Sc. degrees in Aerospace Engineering from the Technion - Israel Institute of Technology, in 2004 and 2007, respectively. I hold a Ph.D. degree in Geo-information Engineering from the Technion - Israel Institute of Technology which I received in 2011. I am currently an Assistant Professor, heading the **Autonomous Navigation and Sensor Fusion Lab**, at the Hatter Department of Marine Technologies. Prior to joining the University of Haifa, I worked at leading companies in Israel for than 15 years on navigation issues. I am an IEEE Senior Member and a member of the IEEE journal of Indoor and Seamless Positioning and Navigation (J-ISPIN) Editorial Board. I supervise 22 graduate students (12 Ph.D.) researching at the intersection of artificial intelligence, navigation, and sensor fusion aiming to create value and opportunities for ocean and environment protection, identifying illnesses and wellbeing in humans and animals, and developing tools for autonomous vehicles teamwork.

### **FUNDRAISING NEEDS**

#### **Unlocking the potential of AI navigation for marine ecology protection.**

The world's oceans are under threat from carbon dioxide emissions and plastics pollution, to overfishing and the destruction of coral reefs, human activities are damaging the marine ecosystems. To counter these threats we need to invest in ocean exploration.

My lab is at the forefront of the critically important field of underwater navigation and precise data collection. We seek support to advance our innovative research in the fields of autonomous navigation, data-driven based navigation, inertial navigation systems, and estimation theory for different types of platforms such as robots, drones and underwater vehicles.

The lab requires **two portable AUVs** equipped with unique, modular sensor suites. Deploying two lightweight AUVs, that are able to exchange information, will allow us to accelerate our applied research agenda, improve our navigation algorithms, expedite the development of innovative commercial products and services and create value and opportunities for ocean ecology protection.



## MEET OUR AMBASSADORS



### Estee Kurant

Associate Professor

Head of the Department of Human Biology,

Faculty of Natural Sciences

#### Field of Research:

Development and ageing of the brain, neurodegenerative diseases

#### **SHORT BIO**

I completed my post-doctoral research at Rockefeller University in New York and afterwards established my own lab at the Technion -Institute of Technology. Six years later, I accepted a position at the University of Haifa. I serve as the Israeli representative on the board of the European *Drosophila* Society and on the editorial boards of several international academic journals as well as international and national committees of different grant foundations.

My research team studies development and ageing of the brain. Specifically, we focus on molecular mechanisms controlling elimination of dying neurons by other brain cells, which is crucial for embryonic development and maintenance of the healthy and functional brain. This process also plays a critical role in multiple neurodegenerative disorders including Alzheimer's and Parkinson's diseases. Our research goals are to discover molecular markers for early diagnosis of these devastating disorders and expose new directions to prevent neuronal loss and reverse pathology. We developed several models of different neurodegenerative diseases and recently found that blocking elimination of stressed neurons can protect them and hinder neurodegeneration.

[My Lab's Website](#)

In my free time, I love to travel, especially to ski resorts with my husband and two kids, and I love dancing.

#### **FUNDRAISING NEEDS**

The Human Biology is the youngest department in our Faculty. Our primary investigators focus mostly on molecular mechanisms of healthy ageing and pathological conditions such as neurodegeneration, inflammation and cancer. Our graduate students perform their research in experimental laboratories in a full-time capacity and need financial support. **My first priority is to establish a fellowships fund for excellent graduate students including travel grants for presenting their research at international conferences and establish a scientific network in their field. This will support and encourage young Israeli scientists to continue their academic career.**

**My second priority is to fundraise for a new building of research laboratories for the Faculty of Natural Sciences, which will expand current research by enlarging research teams (now limited by space) and student teaching lab. We need to increase the number of undergraduate and graduate students in the Faculty. This new building will improve interactions between senior and young researches and intensify the use of interdepartmental equipment, provide space for scientific seminars, national and international meetings, and outreach activities.**



## MEET OUR AMBASSADORS

### **Sarit Larisch**

Full Professor

Head of the Cell Death and Cancer Research Laboratory,  
Department of human Biology,  
Faculty of Natural Sciences



#### **Field of Research:**

Molecular mechanisms of cell death, Cancer research, developing anti-cancer therapies

**Link to lab website:** <http://larischlab.haifa.ac.il>

#### **SHORT BIO**

I received my B.Sc. in Biology from the Hebrew University in Jerusalem and both my M.Sc. (summa cum laude) and Ph.D. from the Lautenberg Center for General and Tumor Immunology, Hebrew University-Hadassah Medical School, Jerusalem. I received the Fogarty International Research Fellowship Award for my post-doctoral studies at the National Cancer Institute (NCI), National Institutes of Health (NIH), Bethesda, USA. At that time, I discovered a novel protein which I termed **ARTS**. My lab and others have found that **ARTS is a central switch to initiate cell death and prevent tumor formation**. ARTS suppresses the initiation of many types of cancers, and is associated with regulation of other diseases such as Parkinson's disease and inflammatory bowel disease.

I am a **Visiting Professor at the Rockefeller University in New York, NY (USA)** since 2002. My work has been recognized with numerous awards and funded through a number of competitive grants from both national and international agencies. Many articles describing our work were published in high-profile scientific journals, and I have registered **twelve patents and patent application based on my discoveries**.

#### **FUNDRAISING NEEDS**

##### **Stopping Breast Cancer before it begins**

Although treatment of patients diagnosed at early stages of Breast Cancer (BC) is critical for long-term survival, there are currently no optimal drugs that can stop tumor development at that early stage. We suggest a completely novel approach for stopping BC progression; using small molecules that can specifically reverse early-stage BC cells back to their normal state. We have discovered that the ARTS protein which I have discovered provides an essential "checkpoint", preventing normal cells from becoming cancerous. In early stage "pre-cancerous" breast cells, ARTS is inactivated. We have found that treatment of these "pre-cancerous" breast cells with small molecules that mimic the function of ARTS can reverse these cells back to normal. We are now investigating the molecular events leading to this unique phenomenon of "tumor reversion", with the ultimate goal to develop our proprietary molecules to novel preventive drugs for the clinic. We envision that women diagnosed at early stages of breast cancer will be treated with cancer-reversing drugs similar to other chronic diseases. This would transform the potentially lethal disease to a drug-manageable condition. This approach has the potential to revolutionize global care and the quality of life for millions of women at high risk to develop BC. **Funds are needed for investigating the "tumor reversion" phenomenon and establishing "proof of concept" pre-clinical studies for developing the new reverting drug for prevention of BC.**





## MEET OUR AMBASSADORS



### *Adi Livnat*

Associate Professor

Department of Evolutionary and Environmental Biology  
and Institute of Evolution, Faculty of Natural Sciences

### **Field of Research:**

Evolution; interdisciplinary research in biology and computer science; broad implications for biology, medicine, and AI

### **SHORT BIO**

I earned my B.Sc. with honors at Stanford University, M.Sc. and Ph.D. at Princeton University, and was then a Fellow at the Miller Institute for Basic Research in Science at UC Berkeley—one of the most prestigious fellowships for young investigators in the Natural Sciences.

My lab studies evolution—the process that generates life on this planet. For organisms to gradually change over the millennia, changes in the DNA, called mutations, must accumulate. For over a century, it has been thought that mutations are random, i.e., accidental, and that the survival of the fittest allows random beneficial mutations to accumulate. Having developed what is currently the most accurate mutation-detection method in the world, my lab has discovered that mutations are not random at all but instead are guided by internal information that is accumulated in the genome over the generations. This finding challenges the most basic assumption regarding how evolution happens, with profound implications for biology, medicine and beyond. As an example, my theoretical work has been cited as a source of motivation for the development of an algorithm that played a role in enabling the global artificial intelligence revolution.

### **FUNDRAISING NEEDS**

My goal is to revolutionize evolution, with far reaching implications in biology, medicine, computation and beyond. My lab has secured over NIS 8 million in recent years and these funds have brought us so far. **To upscale our efforts and bring about a revolution with far reaching implications, we would like to establish a dedicated research center.** As our research is counter-dogmatic in a world of conservative government agencies, this presents a unique opportunity for donors to make a difference.



## MEET OUR AMBASSADORS



### Tal Luzzatto Knaan

Assistant Professor

Department of Marine Biology,

*Charney School of Marine Sciences*

### Field of Research:

Metabolomics; Natural Products; Drug Discovery; BlueTech

### SHORT BIO

I earned my MSc in biotechnology and PhD in Biochemistry from the Hebrew University of Jerusalem. As a Vaadia-BARD postdoctoral fellow, I interned with Prof. Pieter C. Dorrestein at the Skaggs School of Pharmacy and Pharmacological Sciences at the University of California, San Diego (UCSD), and a second fellowship with Prof. Daniel Sher in Marine Biology at the University of Haifa.

My lab pioneers the field of 'functional metabolomics' by combining analytical chemistry with molecular biology to understand the expression patterns and functions of molecules. In exploring the diversity, distribution, and potential drug discovery we follow key questions: What molecules are produced? When and where are they expressed? What are their biological and ecological roles? and how can we benefit from them, as innovative drugs, bioremediates or nutrition substitutes? Thus, understanding the ecological context of marine natural products and utilities "from Seabed to Bedside". I am passionate about science, chemistry, and ocean life and eternally amazed by how a single molecule can make a huge impact on living organisms.

### FUNDRAISING NEEDS

**The Interdisciplinary Center for Metabolomics and Natural Products**, currently under establishment, was funded with the support of the Council of Higher Education and the University of Haifa. Its main goals are: 1) to facilitate the study of small molecules, peptides, and polymers that are fundamental for marine sciences, life sciences as well as for archeological and medicinal research. 2) to train young scientist in cutting-edge technologies. 3) to provide a platform for Industry-Academia collaborations, including services, consultations, and joint development, from basic research to product.

**To achieve the above goals and increase the center versatility, we need 5 years operational costs for methods development and setting standard operating procedures.**



## MEET OUR AMBASSADORS



### Shunit Marmelstein

Deputy Director and Curator

Hecht Museum

#### SHORT BIO

Born and raised in Haifa-Israel, I graduated from an American high school in Salzburg, Austria, and hold a Master's degree in communications from Clark University in Boston.

I started my work at Hecht Museum as a first-year archaeology and arts student, 32 years ago. Since then, the museum has become my second home. During the last few years I serve as the museum's curator and acting director, always eager to explore new channels for collaboration and synergy with the museum's unique academic surrounding.

I have always been attracted to the fascinating combination between archaeology and art, as they both represent the aesthetic heritage of humanity. The archaeological excavations I have participated in were a source of inspiration for exhibitions I initiated at the Hecht Museum – a retrospective exhibition of ancient pottery discovered in archaeological sites, alongside ceramic works by contemporary artists; a photo-archaeology exhibition reviling earliest 19<sup>th</sup> century photographs from archaeological sites in Palestine, next to photos taken in the same sites nowadays, by a living Israeli artist using the same old photography techniques.

#### FUNDRAISING NEEDS

Hecht Museum offers a unique combination between cultural and educational activities, as well as research and teaching derived from its immediate academic surroundings.

The museum is currently on the verge of a conceptual transformation thanks to new strategic projects:

- **Redesigning and updating the displays of the main archeological wing**, founded by Dr. Reuven Hecht in 1984.
- **Construction of a new wing dedicated to the Heritage of German-Speaking Jewry.**
- **Building a sculpture garden on our scenic lawn** housing 29 canonical sculptures, until recently displayed at the Tefen Open Museum.

The reopening of the museum complex will adapt it to the 21<sup>st</sup> century and attract new and younger visitors. It will allow the museum to expand its collaborations with museums and other research institutions, loaning art and artifacts, and **create diverse new temporary exhibitions.**

Together with the school of the arts and the cable car, it will create a cultural and artistic complex poised to become a touristic venue for a wider audience.



## MEET OUR AMBASSADORS



### ***Shira Rotman***

Assistant Professor

Department of Medical Imaging Sciences

*Faculty of Social Welfare and Health Sciences*

### **Field of Research:**

Medical imaging, artificial intelligence, computer vision.

### **SHORT BIO**

Prior to being recruited by the University of Haifa, I was a research fellow at Faculty of Bio-Medical Engineering at the Technion and collaborated with Boston's Children's Hospital at the Harvard Medical School.

I received my doctoral degree from the Andrew and Erna Viterbi Faculty of Electrical and Computer Engineering at Technion - Israel Institute of Technology (2020). I hold a double first degree (*Summa Cum Laude*) in Electrical Engineering and Physics from Technion and I am an alumna of the Technion's Excellence Program.

My research focuses on machine learning, artificial intelligence and computer vision for medical imaging, and specifically on advanced deep learning methods for Computer Aided Diagnostics (CAD). My research lies at the interface of two major technological revolutions, namely, advanced medical imaging devices and artificial intelligence, the combination of which has the potential to provide state-of-the-art automatic medical decision tools to assist radiologists in their daily clinical practice. Such automatic tools may revolutionize the radiological workflow and improve its reliability and accuracy, in a manner that will significantly improve quality and accessibility of medical services to patients, both in hospitals as well as in the community clinical settings.

I am the proud mother of three children: Noga (12), Yair (10) and Eviathar (4).

### **FUNDRAISING NEEDS**

#### ***HU-CoMLab: Haifa University Computational Medical Imaging Laboratory***

**Lab's Mission:** To harness the enormous potential of Artificial Intelligence (AI) systems for daily clinical practice, practices which include providing accessible, accurate and reliable medical diagnostics for the benefit of public healthcare in Israel and worldwide.

**HU-CoMLab** is currently being established as part of the new Department of Medical Imaging Sciences at the University and aims to closely collaborate with the Unit of Medical Imaging and the MRI Center at Rambam Healthcare Campus, Haifa. **HU-CoMLab's** planned location is at the new "Discovery Tower" adjacent to the Rambam Healthcare Campus, with the goal of promoting research and cutting-edge technologies in the field of AI for Computer Aided Diagnostics. **Funds are needed for the infrastructure of our new laboratory as a center of excellence and in order to support student research scholarships and travel grants for international collaborations.**

## MEET OUR AMBASSADORS



### ***Anna Zamansky***

Assistant Professor

Head of [Tech4Animals Lab](#)

Information Systems Department

Herta and Paul Amir Faculty of Social Sciences



### **Field of Research:**

Artificial Intelligence and Machine Learning for Animal Health, Welfare and Wellbeing

### **SHORT BIO**

I received my B.A. and M.Sc. degrees in Computer Science from the Technion - Israel Institute of Technology, and my Ph.D. degree in Computer Science from Tel Aviv University. I spent two years as a Marie Curie Postdoctoral Fellow working in Logic and AI at the Technical University of Vienna. Our unique and multidisciplinary Tech4Animals Lab strives to unlock the power of AI to improve the welfare of animals and our communication with them. More than 20 researchers are currently working in the lab, including graduate students, postdocs and research assistants from diverse backgrounds such as Computer Science, Information Systems, Veterinary Medicine, Cognition, Anthropology, Applied Behavior, etc.

The lab is in the forefront of affective computing and automated behavior analysis in animals, and has developed and published first of their kind AI models for detection of pain and positive emotions from facial expression and body language analysis in cats, dogs, sheep, horses and rabbits. We work on digital solutions for monitoring welfare of sheltered dogs, helping handlers take better care of captive tigers and lions, supporting vets in early detection of neurological disorders and eye pathologies, detecting pain and stress in farm animals and many more. We have active international collaborations with veterinary hospitals, NGOs for animal welfare, shelters and research groups studying animal cognition, behavior and communication. Our projects are funded by Israel Ministry of Technology, Ministry of Agriculture and Rural Development and Ministry of Defense.

### **FUNDRAISING NEEDS**

[The AI revolution is finally here: DALL-E creates better art, ChatGPT creates better text.](#)  
[DrDoolittl-E will create better lives for animals everywhere on the planet.](#)

We are committed to becoming the world's leading hub on applying AI, ML and Data Science techniques for promoting welfare and health of animals worldwide, so that any organization – be it an NGO, veterinary hospital, farm or a nature reserve that wishes to take better care of its animals using digitalization can receive our help and support.

**We need resources to (1) attract leading data scientists, graduate and postdoc students to our hub to be able to attend the needs of organizations that need our support, (2) collect, annotate, analyze data and train models that will lead to creating DrDoolittl-E – the first of its kind AI model that can read animals' body language, facial expressions and internal states, such as pain, distress and positive emotions.**