

ON THE MOUNTAIN, IN THE CITY & BY THE SEA THE POWER OF PLACE

REPORT OF THE PRESIDENT 2024

EIGHT-YEAR SUMMARY

UNIVERSITY OF HAIFA'S AMBITIOUS GROWTH STRATEGY INITIATED IN 2018

H A I F A B A Y

> Israel Oceanographic and Limnological Research Institute

Marine Hub for Science and Education Computer and Information Sciences at the Downtown Campus

Faculty of Design and Architecture Downtown

Mount Carmel Campus

Faculty of Engineering

Marine Sciences at Kibbutz Sdot Yam

Marine Sciences Satellite (Ashdod)

Cover: Marine research students shark-tagging at the Morris Kahn Marine Research Station (Photo: Hagai Nativ); Data science students at the Robotics and Big Data Lab in the City Campus (Photo: Nitzan Zohar); Graduate students in the Breast Cancer Research Labs (Photo: Nitzan Zohar); Students participating in the Jewish-Arab Community Leadership Program.

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Global Academic Partnerships



Building a Shared Future Inspiring Growth, Excellence and Community



UNIVERSITY OF HAIFA REPORT OF THE PRESIDENT 2024

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MESSAGE FROM THE

CHAIRMAN OF THE BOARD OF GOVERNORS

n behalf of the Board of Governors of the University of Haifa, I extend our heartfelt gratitude to President Ron Robin on his exceptional leadership over the past eight years. Your dedication and vision have steered our esteemed institution through a period of both immense challenges and remarkable accomplishments.

We are particularly proud of the physical transformation of our campus under your guidance. The expansion of facilities, including the development of the Lokey Technology City Campus, the establishment of a new School of Medicine, the acquisition of WIZO, and the launching of the Bloom School for Graduate Studies, has not only modernized our learning environment, but also created a vibrant hub for scholarship and innovation. Your deep commitment to social mobility initiatives, including the Social Mobility Project supported by the Tami Foundation and the Frieze Program for Personal, Academic and Professional Growth for First-Generation Students, has ensured that a diverse range of talented students have access to our world-class education. This focus on inclusion is a cornerstone of the University of Haifa's identity, and your leadership has significantly strengthened it.

Your tenure has also been marked by periods of unforeseen adversity. The global Coronavirus pandemic necessitated a swift and decisive response. Your leadership ensured a smooth transition to online learning, minimizing disruption for our students and faculty. Similarly, during the Swords of Iron War, you worked tirelessly to foster a strong sense of community resilience; led fundraising efforts that secured life-saving equipment for those on the front lines; and embarked on a speaking tour to offer your perspectives on the rising wave of anti-Semitism, the steps that led to the tragic massacre on the 7th of October, and the wider context of the war.

As you conclude your presidency, we at the University of Haifa acknowledge the profound impact you have made. You leave behind a legacy of academic excellence, social responsibility, and unwavering commitment to our students.

The Board of Governors is deeply grateful for your service and wishes you the very best in your future endeavors.

Sincerely,

Bradley M. Bloom Chairman, Board of Governors

We are particularly proud of the physical transformation of our campus under your guidance.

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Thank you Ron for eight years of visionary leadership!

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PRESIDENT'S

MESSAGE

Dear Members of the Board of Governors, Colleagues, and Friends,

In the heart of the dynamic landscape of Mt. Carmel, where the mountain and the city meet the sea, the power of place emerges not just as a backdrop but as an ongoing force shaping our identity, aspirations, and achievements. The University of Haifa stands as a testament to the transformative influence of our geographical and cultural milieu. Our institution, marked by resilience, innovation, and inclusion, embodies the unique spirit of Haifa, a city renowned for its diversity and harmony.

A Journey Rooted in Place

The University of Haifa's remarkable evolution from a modest liberal arts college into a leading global university is intricately linked to the unique essence of its location, where it intersects with diverse religions, ethnicities, and cultures. The majestic Mt. Carmel, our home, has not just been a backdrop but a catalyst for growth, inspiring us to reach new heights in academic excellence and community engagement. Our connection to this place, with its rich history and diverse cultures, has been a source of strength, driving us to embody the values of mutual respect and creativity.



Building on Our Foundation

The establishment of the University's major initiatives, such as the new School of Medicine, made possible by the generosity of the Amir Family, the Bloom Family and our philanthropic community, draws on the inclusive spirit of our city, Haifa. Located at the crossroads of cultures and communities, our new School will be uniquely positioned to address the complex health challenges of our time, integrating cutting-edge research with compassionate care that reflects the diversity and fortitude of our society. The Herta and Paul Amir Health Sciences Building, the Max Silverstein and Elizabeth Blume Silverstein Law Building, the union with the NB Haifa School of Design and the establishment of the vibrant Lorry I. Lokey City Campus reflect our commitment to intertwining

our physical growth with the social fabric and technological forefront of Haifa. These developments not only serve our academic community but also reinforce our role as a central pillar in the regional ecosystem, fostering collaboration and community well-being. The next pivotal step in our evolution into a comprehensive university involves adding an engineering program, which will no doubt be the focus for the incoming administration.

Inclusion as Our Compass

The diverse tapestry of Haifa, characterized by its coexistence of various communities, mirrors our dedication to creating an inclusive academic environment. This commitment is manifested in our response to the challenges and opportunities presented by our locale, such as the initiative to support students affected by The Swords of Iron War, ensuring that our campus remains a beacon of tolerance, respect, and support amidst adversity.

In the wake of the October 7th attack, our immediate focus pivoted to supporting our students' well-being. Thanks to the generosity of our donors and friends, we awarded scholarships to our 1,500 student reservists - which included a comprehensive package of financial aid, mental health resources and academic guidance to ease their reintegration into the academic year. Through robust fundraising initiatives, we provided crucial assistance to the IDF, including safety and medical equipment. We bolstered our mental health services for students and faculty members by opening a 24/7 hotline for individuals in distress in need of emotional support.

We also prioritized training our staff in multicultural conflict resolution, equipping them to navigate potential tensions. Moreover, we actively fostered an environment of tolerance and respect among our students, encouraging them to have faith in our campus as a haven of inclusion. Our strength in the face of adversity speaks volumes about our character and unwavering commitment to tolerance and respect. It is a testament to our character and our commitment to our just cause.

The Be 50 Capital Campaign: A Vision Emboldened by Place

The successful culmination of the Be 50 Capital Campaign, exceeding our \$150 million goal, is a milestone that not only marks our 50th anniversary but also signifies the power of collective belief in our mission. This campaign has harnessed the spirit of our place, rallying support from around the globe to foster academic innovation, provide for deserving students, and advance groundbreaking research initiatives that resonate with the global challenges and local needs. This achievement represents an unprecedented achievment in the University's history, a monumental achievement made possible through the collective effort of the entire University community.

Academic Excellence Inspired by Location

Our academic and research endeavors are deeply influenced by the interdisciplinary and integrative nature of our setting. Programs that address the pressing issues of sustainability, social equity, and technological innovation draw inspiration from the complexities and opportunities inherent in our regional landscape. The **Bloom School for Graduate Studies**, and our various research hubs focusing on Brain and Behavior, Inequality, Religious Studies and Sustainability, stand as examples of how place-based challenges inspire pathbreaking scholarship and societal contributions.

Embracing the Power of Place for a Shared Future

As we look ahead, the University of Haifa remains committed to leveraging the unique power of our place to foster a community where diversity is celebrated, innovation is nurtured, and resilience is built into the fabric of our identity. Our story is one of growth, innovation, and endless possibilities, guided by the rich legacy and dynamic spirit of our location.

Eight years ago, the University of Haifa embarked on a path to become a comprehensive university. I am proud to say that, despite multiple challenges, we have achieved most of our goals. The global pandemic and the tragic events of October 7 have, indeed, tested our resilience. And yet, we have persevered. The tenets of the Multiversity - multiple physical settings and new combinations of academic activities, all within the context of our shared society, have laid the foundations for the University's future growth. Together we have fostered a culture of excellence, embraced inclusion, and nurtured a generation of changemakers ready to tackle the world's pressing issues. We are now a university in-andof-the-city, with both national and global aspirations. Our presence downtown, our global reach and our willingness to change bodes well for the future.

As I step down, I carry cherished memories and optimism for what lies ahead. The University of Haifa is poised to continue its transformative journey, and I am proud to have been part of this remarkable chapter.



Let us continue to strive for greatness, united in our commitment to knowledge, integrity, and progress. Thank you for entrusting me with this honor.

With Warm Regards,

Prof. Ron Robin President





MESSAGE

Dear Members of the Board of Governors, Colleagues and Friends,

The past year has presented Israeli universities with a unique set of challenges. The October 7 massacre and ensuing war cast a long shadow, disrupted academic life, and tested our resilience. Despite these difficulties, our University community faculty, staff, and students - rose to the occasion, demonstrating unwavering commitment to education, research, and a spirit of "keep learning together".

I am pleased to present a progress report on several key academic initiatives at the University of Haifa.

Israeli President Isaac Herzog visits the University of Haifa on the first day of the new semester, December 31, 2023.

Design for a Sustainable Future:

We are thrilled to announce the historic merger with the WIZO Haifa Academic Center. Under the esteemed leadership of Prof. Leah Perez, the innovative School of Design will offer cuttingedge programs in sought-after disciplines, including visual communications, architecture, photography, graphic design, fashion, and environmental design. By introducing new fields in design and architecture, the University of Haifa will promote interdisciplinary cooperation, especially in sustainability-related fields. Students will benefit from streamlined pathways to advanced degrees and a vibrant, multi-disciplinary environment.

The establishment of the School of Design underscores our commitment to the city of Haifa. This undertaking aligns perfectly with our vision of social and environmental sustainability, areas where design and architecture play a crucial role.



Meet the inaugural cohort of Bloom Fellows, joined by Prof. Irit Akirav, Head of the Bloom School of Graduate Studies and Rector Gur Alroey (middle of the back row).

Elevating our Global Presence:

We are pleased to announce the appointment of Prof. Tally Katz-Gerro as the inaugural head of our Division of Global Engagement. Prof. Katz-Gerro's extensive background in international research collaborations and leadership positions makes her the perfect choice to spearhead this critical initiative. The Division's strategic framework focuses on amplifying the University's global presence through a range of programs, including:

- ⊖ Strengthening the International School
- ⊖ Hosting international researchers and conferences
- ⊖ Fostering faculty and student exchange programs (e.g., Erasmus+)
- ⊖ Building international research collaborations
- Θ Defining clear policies and strategies for internationalization



Morocco, signed in November 2022.

The Division has already yielded significant progress, including launching a new program for education reform, developing resources for hosting researchers, and maximizing Erasmus+ opportunities. We are actively forging partnerships with prestigious institutions such as Vanderbilt University, University of Hamburg, and University of Fine Arts Hamburg.

Leading the Way in Sustainability:

The University of Haifa remains the first in Israel to align its operations with the UN Sustainable Development Goals (SDGs). Our unique location fosters learning opportunities immersed in nature, and our unwavering commitment to the SDGs has been recognized by Times Higher Education, ranking us among the top 200 institutions globally. We are particularly proud of our achievements in:

- ⊖ Gender Equality (SDG 5) Now ranked 9th, a major leap from 55th place
- ⊖ Sustainable Cities and Communities (SDG 11) Ranked 25th, up from 101-200 place
- ⊖ Peace, Justice, and Strong Institutions (SDG 16) Ranked 28th, a significant improvement over our 95th place ranking last year
- ⊖ Life Below Water (SDG 14) Up to 28th from 98th place last year

Overall, the University ranks in the top 50 in seven of the 17 development goals, and 51-100th in two more. Building on this momentum, we are launching the "Impact Projects" program to encourage teaching and research that creates real-world change. This program will solidify our role as a knowledge-based interface for sustainability, shaping a more just and sustainable future.

Streamlining Academic Collaborations:

To foster stronger interdisciplinary research and collaboration, we are initiating a reorganization process. Departments with strong disciplinary connections will be merged into Schools, facilitating collaborative research, curriculum development, and faculty integration. This process will begin with the Faculties of Education, Humanities, and Natural Sciences in the upcoming academic year.

We are confident that these initiatives will position the University of Haifa as a global leader in innovation, sustainability, and interdisciplinary collaboration.

We thank you for your continued support.

Sincerely,

Gur Abraey

Prof. Gur Alroey Rector and President-Elect



FROM BLUEPRINT TO REALITY

The Dylan Tauber Educational Complex



THE CITY CAMPUS PHYSICAL EXPANSION PROGRAM

Situated in the heart of Haifa's port district, the Lorry I. Lokey City Campus is a cornerstone of urban renewal and a hub for pioneering research in digital health, AI, robotics, and big data. This strategically located campus serves as a catalyst for regional development, featuring state-of-the-art labs and educational facilities that foster partnerships with the local high-tech industry. Integrated into Haifa's historic fabric, the campus is easily accessible by major rail links, enhancing its role as a dynamic center for economic development and social change. It also promises a vibrant academic and recreational environment, fostering a community of scholars and innovators and linking education with local businesses.



The Herta and Paul Amir Technology Complex



The Dr. David Drahi AI Academic Complex

Located in Haifa's vibrant port area, easily accessible by public transport via Israel Railways, the Metronit Rapid Transit System, and a cable car linking to the Mount Carmel Campus.

HAIFA

PORT

City encompassing The Campus, the Departments of Data Sciences and Computer Science, spans The Dylan Tauber Educational Complex, The Herta and Paul Amir Technology Complex, and the Dr. David Drahi AI Academic Complex. It boasts modern classrooms, faculty offices, and collaborative hubs for MA, PhD, and post-doctoral students, all designed to encourage academic collaboration. Strategically located near Road2, Haifa's hub for startups, municipal offices, and nonprofits, the campus promotes strong regional ties.



Scenic port views adjacent to residential buildings.



Contemporary Learning Hubs: Open Space Workstations for Graduate Students.



The University of Haifa's new School of Design (formerly the Neri Bloomfield Haifa School of Design WIZO), located in the heart of the city's multicultural German Colony and just a short walk from Haifa port, is poised to become a key component of the City Campus. As one of the only university-integrated design schools in Israel, the School of Design fosters unique collaborations across disciplines, from arts like theater and cinema to innovative partnerships with the Charney School of Marine Sciences for sustainable materials.



Perched atop Mt. Carmel, with panoramic views of Haifa and the Mediterranean Sea, the University of Haifa's Carmel Campus is home to the largest institution of higher education and research in northern Israel

CARMEL CAMPUS

8-Year Physical Expansion Plan in Review The Mt. Carmel campus is a dynamic hub where a diverse



mix of ethnicities, religions, and social backgrounds

come together. Here Jews, Arabs, Druze, Ethiopians,

new immigrants, and long-standing residents - each

with unique religious beliefs and political perspectives

- unite under shared values of equality and upward

mobility. Together, they pursue study and research fueled by intellectual curiosity and mutual respect.

Over the past eight years, significant physical

expansion has dramatically transformed the University

of Haifa's Carmel Campus. Three years ago, a cable car system was established, providing direct connections to the Technion-Israel Institute of Technology and the city's main transport hub. This unique feature enhances accessibility and integrates the campus more closely with the local scientific community. As we continue to expand, we plan to recruit dozens of new faculty members and invest in state-of-the-art facilities to further our commitment to innovative research and teaching.

Projects Under Construction

The Shani Family Art Gallery and Senate Building



A state-of-the-art meeting space designed for Faculty Senate meetings, featuring updated infrastructure and advanced multimedia conferencing capabilities. The building will also accommodate international conferences at the University.

University Main Entrance Gate



Generously donated by Talia and Gad Ze'evi









The Lady Barbara Davis Wild Cereal Gene Bank



(l-r) Sir Mick Davis, President Robin and Lady Barbara Davis.

The Max Silverstein and Elizabeth Blume Silverstein Faculty of Law

(ŀr) Claudia Harel, Nathan Royce Silverstein, 2023 Honorary Doctorate recipient, and President Ron Robin

The Refurbished Aviva and Sammy Ofer Observation Gallery and the Eyal Ofer Family Conference Hall

Located on the top floor of the University of Haifa's Eshkol Tower, the Aviva and Sammy Ofer Observation Gallery boasts panoramic views of Haifa, the Israeli coastline, and northern Israel. This favored venue hosts a variety of events, from prestigious academic gatherings to public functions. Notable visitors in 2023 included Reza Pahlavi, Crown Prince of Iran, and Israeli President Isaac Herzog.



(I-r) Dr. Efrat Sopher (Co-Chair of University of Haifa UK), Minister of Intelligence Gila Gamliel, Crown Prince Reza Pahlavi



(l-r) University President Ron Robin and Israeli President Isaac Herzog



The Herta and Paul Amir Health Sciences Building

(I-r) President Ron Robin, Herta Amir, and Rector Gur Alroey during the June 2022 dedication of the new building for the Faculty of Social Welfare and Health Sciences.



The Bloom School for Graduate Studies



(I-r) President Ron Robin, Sen. Bill Cassidy, M.D. (R-Louisiana), StrongArm Technologies Executive Director Ross Bloom, and University of Haifa board member Eli Feinstein.

Additional Completed Building Projects: Enhancements and Improvements

- \odot The Integrated Brain and Behavior Research Center (IBBRC)
- ⊖ Climate and Environmental Sustainability Hub
- ⊖ The Hub for the Study on Politics and Inequality
- ⊖ The Haifa Laboratory for Religious Studies

Hecht Museum Sculpture Garden



by Boaz Vaadia, 1994



by Amos Kenan, 1994.

Funded by the Generous Support of the Reuben and Edith Hecht Trust Trust, the new Garden features works by prominent 20th-century Israeli artists.

Additional Major Projects Underway

- ∋ The Herta and Paul Amir School of Medicine
- \bigcirc The Amir Family Grove
- ⊖ The Hecht Museum Expansion and Renewal Project
- ⊖ The German-Speaking Jewry Heritage Wing
- Philanthropic Contributions from German and Austrian Governments and Private Donors
- The Younes and Soraya Nazarian Library Renovation Project Including the addition of an Art Gallery
- ⊖ Main Building Upgrade: Modernizing Lecture Halls and Classrooms
- \odot New Marine Science Research and Teaching Complex on the Seacoast

INVESTING IN THE FUTURE OUR COMMITMENT TO ACADEMIC GROWTH

Nurturing Israel's Future Leaders Bloom School for Graduate Studies

The Bloom School for Graduate Studies has ushered in a new era of doctoral education at the University of Haifa. This pioneering initiative brings together PhD and postdoctoral students from diverse fields to tackle pressing global challenges such as combatting inequity and promoting environmental sustainability through collaborative coursework and research. Guided by a commitment to interdisciplinary excellence, the Bloom School not only empowers graduates with specialized knowledge, but also cultivates a comprehensive understanding of the critical issues shaping the 21st century.



(l-r) Rector Gur Alroey, Prof. Irit Akirav, Head of the Bloom School for Graduate Studies, and President Ron Robin at the Bloom School inauguration ceremony.

riven by social responsibility and a multidisciplinary approach, the University of Haifa is forging new paradigms to address the world's greatest challenges. We have expanded academic programs and unveiled a bold vision committed to social and environmental sustainability, aligning with the United Nations' Sustainable Development Goals. Leveraging our unique geographical location spanning mountain, city, and sea as a "living laboratory," researchers have established an international network contributing insights that illuminate local issues with global impact. The University has embarked on an ambitious plan to significantly grow, with investments in new facilities, faculty, and academic hubs spanning cutting-edge fields like brain and behavior, cybersecurity, sustainability, and digital humanities. By encouraging different perspectives and unusual pairings our graduates will be equipped to tackle modern challenges like climate change, poverty, hunger, and discrimination.



Researcher at the newly established Functional Metabolomics Lab, headed by Dr. Tal Luzzatto Knaan. Cutting-edge equipment facilitates the exploration of the diverse roles of natural products in bacteria and algae for applications in food tech, cosmetics, and medical fields.

Making Higher Education More Accessible Ahavat Olam

The University of Haifa launched two extraordinary scholarship funds, thanks to generous donations from Brazilian-Jewish businessman Elie Horn. The "Ahavat Olam" scholarships supports students delving into Jewish religion, heritage, and history. Additionally, a dedicated fund is assisting female students in overcoming financial barriers. These scholarships not only open doors to higher education, but also foster social change, bridging gaps and empowering young minds.



New Degrees in Architecture & Design Merger with the NB School of Design

The University of Haifa and the WIZO Academic Center finalized a merger agreement, expanding the University's course offerings to include design fields like architecture, fashion, and graphic design. The new School of Design will offer unique opportunities for students, preparing them for the job market and fostering groundbreaking cross-disciplinary collaboration in areas like smart clothing, sustainable architecture and augmented reality design.



(I-r): Anita Friedman (Chairperson of World WIZO), Zvika Rak (Chairman of the Board of Directors of the NB Haifa School of Design), Architect Ori Ronen (Interim President of the WIZO Academic Center), Rector Gur Alroey, Sharon Zaid (University VP and CEO), and Prof. Leah Peretz (Head of the School of Design). | Credit: Yossi Carasso

Expanded Global Reach Internationalization & Regional Partnerships

The University of Haifa actively fosters collaborations with academic institutions around the world, participating in numerous international research projects and student exchange programs. Regionally, it has well-established partnerships with universities across the Middle East, including joint degree programs that promote cross-cultural understanding and knowledge sharing. The University's global outlook and extensive network allow its students and faculty to benefit from a rich diversity of perspectives and resources.

Forging New Paradigms & Solutions to Pressing Global Issues Sustainability Goals for a Changing World

The University of Haifa is proud to be the first Israeli university to fully embrace the UN's 17 Sustainable Development Goals (SDGs) as its guiding vision. This commitment permeates the University, with faculty, staff, and students all working together to advance these goals through research, coursework, and campus initiatives. Our far-reaching efforts extend to forging partnerships, raising awareness, and

cultivating a new generation of leaders committed to creating a more equitable and environmentally conscious future.



Shaping Israel's Future Healthcare Landscape Establishing the Herta and Paul Amir School of Medicine

Israel's healthcare system is facing a critical doctor shortage that will increase by 2030, threatening healthcare quality and accessibility, exacerbated by an aging population and regional conflicts. To address these challenges, the University of Haifa plans to establish a new 6-year Medical School program focused on comprehensive training across all care settings, cutting-edge medical technology and rehabilitative sciences, and personalized AI-driven care. Building upon its robust pre-medical education, the School will capitalize on the extensive expertise available within the distinguished Faculty of Social Welfare and Health Sciences. The Herta and Paul Amir School of Medicine will train the next generation of promising physicians who will be at the forefront of healthcare in Israel.



The new Herta and Paul Amir School of Medicine at the University of Haifa promises to usher in a new paradigm in medical education.

"Continuing to Learn Together" +8,000 bracelets handed-out in the first week by participants in the Shared Society Trustees Initiative

EDUCATING IN DIVERSITY



FOSTERING UNITY AND RESILIENCE IN A MULTICULTURAL CAMPUS

I n October 2023, the University of Haifa inaugurated its Division for Diversity, Inclusion and Community, led by Prof. Arin Salamah-Qudsi (Department of Arabic Language and Literature) and Dr. Yael Granot Bein. This initiative reflects our unwavering commitment to creating an environment that prioritizes inclusion, safety, and accessibility for all member of our University community.



Arab-Jewish Student Leadership Projects

The University of Haifa persevered through challenges and triumphs in the past year, fostering a diverse environment that fuels innovation and excellence.

> – Prof. Arin Salamah-Qudsi Academic Head of the Division for Diversity, Inclusion, and Community

We are proud to highlight several flagship programs led by the Division:

I. Empowering Futures: The Soft Skills Pilot Program offers workshops to equip students from peripheral regions and first-generation backgrounds with essential 'soft skills' for today's job market. Our goal is to boost their confidence, foster a sense of belonging, and significantly reduce dropout rates.

II. Bridging Divides: Overcoming the Hebrew Language Barrier facing Arab youth, we lead pioneering projects such as The Metaverse Project. The AI-based learning platform is designed for culturally sensitive Hebrew instruction.

III. Cultivating Leaders: Preparing Young Arab Students for Higher Education: This unique summer program, exclusive to the University of Haifa, offers intensive Hebrew language training and community engagement,



preparing future students for the transition to a Jewish and secular campus. Participants develop essential life skills like self and group management, engage with diverse communities, volunteer, and sample academic courses relevant to their future studies.

IV. In the Wake of Adversity: Navigating the Unprecedented

The onset of the Swords of Iron War presented an array of unparalleled challenges. In response, we introduced three initiatives to strengthen our campus community:

IGNITING **YOUNG** MINDS THE UNIVERSITY OF HAIFA YOUTH DIVISION

The University of Haifa Youth Division serves as an integrated hub for youth programs emphasizing environmental, cultural, and scientific education for students from grades 7 to 12. Its main mission is to connect the University's centers of excellence with the community in the North, particularly in Haifa.



Biology Exploration Program in collaboration with the Department of Biology, engaged 160 teens from Reut School of Arts

Fostering Tomorrow's Leaders: Program Highlights

Last year, over 3,600 students participated in "Culture and Science Days," offering enrichment and exposure to diverse fields of knowledge and immersion in the University's research and academic environment. These days feature engaging lectures, workshops, and tours, customized to the organizer's requests, educational staff's input, and tailored to various student groups (gifted, outstanding, curious). Innovative academic programs such as the "Etgar" program for computer science and collaborative enrichment programs with schools from Haifa, Carmel coastal communities and as far south as Ashkelon, covering areas such as "Archaeology of the Mediterranean Sea and Mount Carmel," "Technology in the Animal World," and "My Greek Roots" History Workshop linking the past to the present, highlight the University's dedication to academic excellence and community engagement. Beyond student enrichment, the Youth University offers seminars for educational staff and conferences, emphasizing the importance of lifelong learning and academic pursuit. Aligned with the University of Haifa's vision of social and environmental sustainability inspired by the 17 UN Sustainable Development Goals (SDGs), the initiative endeavors to expand its offerings.



450 outstanding 8th graders from Haifa attended a full-day event entitled Introduction to Science: Body. Mind and Environment

Ambitious Plans on the Horizon

The University of Haifa Youth Division has ambitious plans for future initiatives that will include "Youth Neuroscience" and the promotion of centers of excellence in Arab society with the Branco Weiss Organization, aimed at guiding authorities to effect social change among youth in Israel's geographical and social periphery. Our goal is to make higher education accessible and relevant to young minds, thereby nurturing the next generation of scholars, researchers, and informed citizens.

+15,000 Students are anticipated to take part in our Programs this year

The University of Haifa for Youth has been chosen to join the prestigious IDEA Program by the Future Scientists Center and the Ministry of

Education for gifted youth. starting in 9th grade, academic research in the sciences. Culminating in a supervised by University תוכנית למחקר בתחומים הומניסטיים



The three-year program, focuses on advanced humanities and social rigorous research project researchers, students earn

5 credits toward their final matriculation requirements. IDEA cultivates personal growth, emphasizing ethical leadership and social responsibility.

Herta and Paul Amir at the festive 2016 Board of Governors Meeting event; where Herta received an honorary doctorate. Paul was similarly honored by the University in 2010.

HONORING THE HIGHEST TRADITIONS OF GIVING



THE HERTA AND PAUL (Z"L) AMIR LEGACY OF PHILANTHROPY As a Lifetime Member of the University of Haifa's Board of Governors, Herta Amir, along with her late husband Paul, has been instrumental in advancing the University's mission. Their longstanding commitment has profoundly shaped both the academic and physical landscape of the campus.

The crowning achievement of their philanthropy is the recent pledge by the Amir family to fund the construction of the new School of Medicine at the Mount Carmel campus. This significant contribution marks a transformative step in enhancing medical education and research in Northern Israel, positioning the School of Medicine as a hub of innovation and excellence. Herta Amir's philanthropic approach is deeply influenced by her personal

history and professional achievements. Born in Czechoslovakia and raised

in the U.S., she has been a prominent figure in the Los Angeles Jewish community and a dedicated member of the American Israel Public Affairs Committee (AIPAC). Her late husband, Paul Amir, a Holocaust survivor and co-founder of Kibbutz Yehiam in Western Upper Galilee, was passionate about developing northern Israel, saw the University of Haifa as a key institution for growth.

Together, they founded the Amir Development Co., a real estate firm operating across several southwestern states in the U.S. Their success fueled their decision to give back, extending their philanthropic efforts beyond the University of Haifa. The Amirs have supported a multitude of educational and cultural institutions in both Israel and the U.S., demonstrating their commitment to societal progress and the well-being of the Jewish community worldwide. Sharing a vision for the future of the Jewish nation, Paul

and Herta Amir dedicated a portion of their wealth to advancing Israeli education and culture, particularly in medicine, social sciences, and the arts, aiming to ensure not just the survival but also the prosperity and quality of life of the Jewish people.

As the University prepares to inaugurate the School of Medicine, it celebrates the Amir family's legacy, which exemplifies the highest traditions of giving, inspiring future generations of leaders and innovators. Their enduring legacy is evident not only in the structures that bear their name — the Herta and Paul Amir Faculty of Social Sciences building, the Dr. Reuben Hecht Arts Center, the new Health

Sciences Building, and the Technology Complex in the City Campus — but also in the opportunities they have created for countless individuals through scholarships and academic programs.



President Ron Robin, Herta Amir and Rector Gur Abroey raise a toast to the future School of Medicine during a recent campus visit.

(ŀr) Prof. Haim Bitterman (Founding Dean of the new School of Medicine), President Ron Robin, Herta Amir, Rector Gur Alroey, and Sharon Zaid (VP and CEO).



MEET OUR 2024 HONORARY DOCTORATE CONFEREES



B orn in 1954 in Haifa to Holocaust survivors, Batia Shani grew up during Israel's austerity period. Her deep connection to Haifa influenced her decision to study social work at the University of Haifa. During her studies, she engaged with bereaved families



and served in intensive care settings, developing a foundation in care that would later permeate her art. Despite a family appreciation for aesthetics, Batia was encouraged to pursue a more pragmatic career. However, she continued to engage with art, finding strength and wellbeing through her creative expressions. In the late 1980s, her move to the UK allowed her to formally study embroidery at the Royal School of Needlework.

Batia eventually made art her main occupation, living in cities like New York, London, Milan, and Israel. Her work, often using repurposed fabrics, reflects her caregiving background, weaving the stories of domestic abuse survivors, trafficked children, and refugees into her creations. Since the 1990s, Batia's art has been showcased worldwide, and her philanthropic efforts with her partner Shaul have significantly supported the University of Haifa, establishing **The Shani Family Art Gallery and Senate Building**. Batia is also a mother of three and grandmother of six.

B orn in South Africa in 1930, Morris Kahn immigrated to Israel in 1956 and quickly established himself as a prominent business figure. His key achievements include founding the Israeli Golden Pages in 1968 and building the world's first underwater observatory in Eilat. He co-founded the Aurum Group in 1978, and played a pivotal role in introducing global

corporations like AT&T and AIG to the Israeli market. His entrepreneurial efforts, particularly through the cofounding of Amdocs in 1980, laid the groundwork for Israel's reputation as 'The Startup Nation', significantly boosting the economy and creating thousands of jobs. In his later years, Morris Kahn shifted his focus to philanthropy. He was honored with The Outstanding Leadership Award from the University of Haifa in 2013, recognizing both his business acumen and philanthropic impact. Among his notable contributions is the establishment of the Morris Kahn Marine Research Station, supporting advanced marine research. His philanthropic portfolio also includes the SpaceIL "Beresheet"

lunar mission and substantial support for medical and social initiatives such as pioneering cancer research, improving



healthcare in Ethiopian villages, and supporting Save a Child's Heart. Now at 94, surrounded by his family, Morris Kahn continues to inspire global entrepreneurs and philanthropists with his dedication to improving human welfare and securing a prosperous future for Israel and the world.



HOW HERITAGE TREES CAN HELP US THRIVE IN A CHANGING CLIMATE

he Mediterranean region boasts an incredible array of cultural heritage fruit trees, cultivated for millennia by historical farmers. These ancient, living relic trees (landrace trees¹) have survived in rural areas across the Near East and the Mediterranean, representing thousands of varieties with the potential to enhance food security and sustainable agriculture amidst growing environmental challenges.

Particularly fascinating to scientists are the autochthonous heritage fruit tree varieties bred by farmers in droughtprone, arid environments. These ancient trees are a largely untapped reservoir of cultural heritage, akin to an unexplored 'archaeological artifact,' holding secrets to resilience and sustainability that are yet to be fully discovered.

A new project, led by Prof. Guy Bar-Oz of the University of Haifa, is seeking to better understand the ecology and evolution of ancient orchards in the desert fringes of the Mediterranean region. "The Bio-Archaeology of Heritage Trees and Traditional Dryland Farming Horticulture in the Desert Fringes" project is being funded by a €3.5 million advanced grant from the European Research Council.

"The rich and diverse cultural history of these cultivars bear distinct identities and extensive individual histories for local adaptation, whose study can provide profound insights into their centuries of resilience," explains Prof. Bar-Oz The team is embarking on a cross-border journey, collecting samples from ancient trees scattered across the eastern Mediterranean. Examining the 'micro-archaeology' of the tree roots reveals their age and how they were planted through analyses of ancient fruit seeds found in nearby archaeological sites, we can uncover valuable insights about their growth patterns and genetic diversity. Archaeobotany, the study of ancient plant remains, will play a vital role in identifying the fruits and seeds unearthed at the archaeological sites, offering a glimpse into the diet and agricultural practices of

and farmed. By examining the lineage and

genetic history encoded in both living trees and

past civilizations.

Through these case studies, we can piece together crucial historical moments in plant domestication. We can track how these trees spread, mixed with other varieties, and maybe even adapted to their local environment. This kind

of detective work is not just about the past. It can connect what archaeologists learn about ancient farming with what farmers need today. By understanding these unique qualities of old trees, we can use them to improve future crops.

The cultural history of heritage fruit trees offers researchers a working model for conducting cross-disciplinary studies of living relic trees that extends the breadth of multidisciplinary research on past human activities. "By documenting the stories preserved in landrace trees, this sort of research extends the historical contract inherent in our relationship with the environment, thereby strengthening our moral obligation towards safeguarding relic trees for present and future generations," said Prof. Bar-Oz.

1 landrace - a local variety of a species of plant or animal that has distinctive characteristics arising from development and adaptation over time to conditions of a localized geographic region and that typically displays greater genetic diversity than types subjected to formal breeding practices





Project Objectives

Genetic Diversity:

Uncover the genetic diversity of ancient fruit trees in the Mediterranean's desert fringes, shedding light on their origins and adaptations.

Historical Insights: <u> Reconstruct the history of</u>

cultivation practices surrounding these orchards, deciphering the techniques employed by our ancestors.

Ecological Factors: 3 Ecological Factors. Understand the ecological and environmental factors that influenced the development and success of these orchards in harsh dryland conditions.

Conservation Strategies: Develop sustainable strategies for the conservation and management of these orchards, particularly in the context of the ever-pressing issue of climate change.

These ancient orchards are a living archive of human ingenuity and adaptation to climate change. By studying them, we can learn how to better manage and conserve these important cultural and natural resources in the face of climate change.

– Prof. Guy Bar-Oz School of Archaeology and Maritime Cultures





Prof. Guy Bar-Oz Head, Laboratory of Archaeozoology



European Research Council





EXPLORING A NEW LEARNING FRONTIER

UNVEILING THE MYSTERIES OF INTERBRAIN PLASTICITY

watch and mimic their move with a friend. As you watch and mimic their movements, your brains don't just observe and replicate; they synchronize, forming a temporary, unified network. This fascinating phenomenon, dubbed interbrain plasticity, is at the heart of Prof. Simone Shamay-Tsoory's groundbreaking research that seeks to revolutionize our understanding of how we learn in social settings.

"Traditionally, learning has been studied as an individual journey, focusing on changes within the brain. We propose a paradigm shift, one that places the interaction between partners at the heart of the learning process," explains Shamay-Tsoory. "This interbrain coupling enhances learning by aligning thoughts, emotions, and actions; creating a symphony of understanding."



European Research Council Through a combination of advanced neuroimaging techniques and innovative experimental models, researchers at Prof. Shamay-Tsoory's Social and Affective Neuroscience Lab are shedding light on the neural mechanisms that govern interactionbased learning. "We can actually see the observation-execution system and sensorimotor network lighting up in sync, revealing the subtle interplay of minds."

Awarded ERC an Advanced Grant for her proposal entitled: "Brains that Fire Together Wire Together: Interbrain Plasticity Underlies Learning in Social Interactions", Shamay-Tsoory's research has the potential to impact various fields, from education and healthcare to our fundamental understanding of the human brain. "It's important to note that 'interbrain plasticity' is a metaphor for the reconfiguration of a virtual network, and the model is still preliminary." Shamay-Tsoory believes that future studies will expand the model and examine additional networks related to interbrain plasticity. Ultimately, developing new paradigms to assess interbrain plasticity promises not only to expand our understanding of learning, but also to illuminate the very

essence of what it means to be human.







(A) When an individual learns how to dance from videos, there is no feedback.(B) In interaction-based learning there is mutual feedback: The interaction partners are components of a feedback loop with mutual feedback.

Key findings and implications:

- Social interactions lead to brain-to-brain coupling: During social learning, specific brain regions in interacting individuals become synchronized. This coupling strengthens as learning progresses.
- → The model has potential applications: Understanding interbrain plasticity could aid in developing interventions for individuals with social learning difficulties, such as those with autism spectrum disorder.

Mind Matters: Exploring the Intersection of Brain and Behavior

he Haifa Brain and Behavior Hub (HBBH) unites 45+ experts across disciplines to tackle medical, educational, and social challenges through the lens of brain and behavior.

Led by Prof. Simone Shamay-Tsoory, the Hub fuses humanities, social sciences, and life sciences to spark groundbreaking research in areas like:

- ⊖ Alleviating chronic pain with innovative strategies.
- ⊖ **Optimizing treatments** for neuropsychiatric disorders.
- Exploring the impact of social isolation on the brain and behavior.

The Hub's impact goes beyond the lab. It fosters the next generation of neuroscience leaders through innovative programs and attracts students from diverse backgrounds. Global partnerships and international conferences ensure that discoveries reach a wider audience.

From sleep and learning to how stressful experiences in early life affect the brain, the HBBH offers evidence-based solutions, aiming to improve healthcare, wellbeing, and ultimately, transform lives.



Prof. Simone Shamay-Tsoory School of Psychological Sciences Head, The Haifa Brain and Behavior Hub (HBBH) Head, Affective Neuroscience Lab

DECODING INEQUALITY

CHAMPIONING INCOME EQUITY THROUGH INNOVATIVE RESEARCH



As the chasm between the affluent and the less fortunate continues to expand, the pressing need to grasp and confront this issue grows increasingly urgent.

"Income inequity, a global phenomenon, has profound implications on societal stability and justice"

explains Prof. Tali Kristal, head of the Income Inequity Lab.

Kristal's journey into the heart of wage inequity research began with a simple question: why are wages rising for some and stagnating for others? The answer, she discovered, isn't a onesize-fits-all explanation. Technology, often blamed for job losses and income disparity, is just one piece of the puzzle. Kristal argues that a country's social and political landscape plays a crucial role. Strong labor unions and norms that prioritize fair pay can act as a buffer, ensuring that technological advancements benefit everyone, not just a select few.





Expanding the scope of research, Kristal contends that "A major gap in understanding income inequality exists because current research commonly studies the topic through the narrow prism of earnings and ignores other workplace factors like employee benefits, corporate profits and relative bargaining power." Drawing from a diverse background spanning labor studies, sociology, and economics. Prof. Kristal is pioneering a transformative methodology called "distributional workplace accounts" (DIWA). DIWA seeks to revolutionize the understanding of income by considering not only earnings, but also fringe benefits and capital for both employees and employers. Through DIWA, a comprehensive analysis of income distribution across various social and income classes becomes possible, ushering in a new era of insight into economic disparity. Kristal was recently awarded a prestigious ERC Consolidator Grant to advance this trailblazing research.

In her study focused on computers at the workplace, Prof. Kristal demonstrates that the benefits of using computers at work are not equal for men and women. Even though computers were supposed to help close the gender pay gap, the research suggests the opposite. The reason is that jobs that are traditionally done by women tend to see a minor if at all wage premium when computers are introduced, while jobs done by men tend to see a large wage increase. This is likely because society undervalues tasks typically done by women, and computers are seen as just another way to do those tasks. The study suggests that new technologies need to be introduced in a way that considers these social biases, and that more research is needed on how other new technologies like AI impact the gender pay gap.

Prof. Tali Kristal Department of Sociology

In addition, she teamed up with Prof. Meir Yaish (Haifa Center on the Politics of Inequality) to show that during COVID, in cases where both parents were working from home, women shouldered most of the increased housework burden, especially those with young children. This came at a cost, as women lost more paid work hours than men. While working from home offers flexibility, it also reinforces traditional gender roles, leading women to do more housework and potentially hurting their careers. The study suggests that flexible work arrangements alone will not solve gender inequality unless we challenge assumptions about who does housework.



In a recent international research project, Kristal participated in a team investigating gender-pay inequality. Researchers from over 20 institutions across the globe, utilizing data from 15 countries including Israel, the U.S., France, Germany, Japan, and Sweden, revealed a persistent pay gap for women even in the same jobs as their male counterparts. These findings, published in *Nature Human Behavior*, highlight the ongoing need for equalpay policies in the labor market.

As Prof. Kristal continues to challenge conventional wisdom and advocate for change, her work serves as a catalyst for meaningful progress in the ongoing struggle for economic justice and gender equality.



HOW ANCIENT HARBORS SHAPED THE MEDITERRANEAN WORLD

The ancient Roman ports scattered across the Mediterranean were the lifelines of the Roman Empire, serving as the arteries through which flowed the lifeblood of commerce, military power, and cultural exchange that sustained and expanded one of history's greatest civilizations. These ports were marvels of engineering and planning, showcasing the

Romans' unparalleled ability to dominate maritime logistics. They enabled the efficient movement of grain, wine, olive oil, and luxuries that fed and entertained the Roman populace, facilitated the rapid deployment of



legions to quell uprisings, and acted as melting pots where Roman, Greek, Egyptian, and other cultures intermingled, spreading ideas and technologies. Through these ports, Rome exerted its influence across three continents, knitting together a vast and diverse empire into a cohesive unit, a testament to the enduring legacy of Roman innovation and ambition in shaping the Mediterranean world and beyond.

According to Prof. Emmanuel Nantet (Head, Laboratory for Nautical History and Archaeology), ancient harbors served as the pulsating core of a community's economic and social life. "Far more than just stone and wood, they formed a vast, interconnected system, the very lifeblood of ancient trade and industry." Prof. Nantet, a historian and archaeologist proficient in Greek, Hebrew, and Latin, secured an ERC Consolidator Grant to explore ancient Roman ports. This funding will facilitate the identification of functional areas within harbors, their unified operation analysis, and the development of a standardized methodology for studying empirewide harbors. The project will also address

European Research Council nodology for studying empirene project will also address specific needs of Roman ships, including vessel types and seasonal variations, providing a contextual framework for unearthing shipwrecks like the hull discovered in Caesarea during Prof. Nantet's 2017–2018 excavations. By

examining case studies from Caesarea (Israel), Terracina (Italy), and Port-Vendres (France), this approach aims to establish a transferable methodology for global Roman harbor analysis.

Utilizing modern archaeology tools and methods, Prof. Nantet and his team are peeling back layers of history to reveal the intricate anatomy of ancient Roman ports. " Our research isn't just revealing the surprising sophistication of these maritime gateways, it's also illuminating their critical role in shaping the Roman Empire's enduring legacy – a legacy that still echoes in today's world."

The hull obtained during the 2018 excavation season: a photogrammetric model (left) and CAD orthomap (right).



Prof. Nantet is also leading a four-year project funded by the Israel Science Foundation to unearth the ancient harbor of Tiberias.

> The dig uncovered a section of the city wall built on a concrete jetty base, built with wooden caissons. Another southward wall, possibly a quay wall, was also identified. Unfortunately, high water levels in the Sea of Galilee limited the digs.

However, the team wasn't discouraged. What was initially planned as a land-based project evolved into an excavation conducted in a humid environment with the aid of pumps and, in certain areas, underwater with the

assistance of divers. To gain further insights, they conducted core samples along the long wall, revealing evidence of multiple rebuilds throughout history, suggesting a complex harbor structure. Drone photography also played a crucial role, capturing a comprehensive overview of the entire excavation site. The nearly twenty-person team, comprised mainly of students from the University of Perpignan Via Domitia in France, provided essential support throughout the initial dig. This first season offered a promising glimpse into Tiberias' harbor, and future excavations fueled by these findings are sure to shed more light on this hidden piece of history.



General view of the shipwreck during excavation in 2017.

Aerial photograph of the location of the shipwreck (from GovMap).

Emmanuel Nanter





Location map

THE RHYTHM OF CONNECTION

HOW SYNCHRONY SHAPES YOUR MENTAL HEALTH

E conomic uncertainty, social unrest and the lingering effects of the global pandemic have taken a toll on mental health, with millions of people worldwide battling anxiety and depression.

"In a world where uncertainty is the only certainty, psychotherapy serves as a compass, providing direction and purpose amidst the unknown. It is not just a tool to alleviate distress, but a journey of self-discovery and growth. Through the therapeutic alliance, we learn to navigate life's storms, not by avoiding them, but by developing the resilience to weather them. In the face of adversity, psychotherapy helps us find our inner strength and cultivates our capacity for change," explains Prof. Sigal Zilcha-Mano, head of the Psychotherapy Research Lab.

Prof. Zilcha-Mano's research is transforming psychotherapy from simple talk therapy into a powerful bridge between mental and physical health, effectively treating conditions like anxiety and depression while also equipping people to manage stress, develop coping mechanisms and prevent future problems. This not only improves well-being, but even reduces medical costs by addressing the root of physical symptoms linked to mental health. As healthcare embraces a more integrative approach, psychotherapy stands as a key player in this exciting shift towards total well-being. "In our day-to-day lives, we're constantly connecting and disconnecting with those around us, from our loved ones and casual acquaintances to complete strangers. This natural rhythm of connection, known as synchrony, is more than just a social dance; we believe that this process is a key survival tactic passed down through evolution." Recent technological advancements have allowed researchers to collect vast amounts of data on synchrony across various fields. These data hold immense promise, but also present a challenge. "By piecing together insights from

different studies, it becomes apparent that there are two prevailing views on synchrony: one sees it as a fixed trait, unique to each individual, while the other views it as a variable state that can be adjusted in controlled environments."



Everyone has a unique 'sync signature' that influences their physical and mental health. The closer we get to improving this signature through positive interactions (think laughter with a friend!), the better we feel.

- **Prof. Sigal Zilcha-Mano** School of Psychological Sciences

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To untangle these competing views and bridge these perspectives into a unified theory, Prof. Zilcha-Mano was awarded an ERC Consolidator Grant. Prof. Zilcha-Mano and her team at the Psychotherapy Research Lab believe that everyone has their own natural rhythm of synchrony, which influences their physical and mental well-being. They hypothesize that it is possible to tweak this rhythm in ways that promote better health. When individuals adjust their natural synchrony towards more adaptive patterns, mental health benefits emerge, and these adjustments are seen as therapeutic.

In essence, this approach calls for a more personalized understanding of synchrony, acknowledging both its inherent qualities in individuals and its potential for positive change. Through this lens, we can better appreciate how our innate ability to sync with others not only shapes our social experiences, but also holds the key to unlocking greater well-being.

Prof. Zilcha-Mano's groundbreaking research offers a glimpse into the future of mental healthcare, where personalized therapy empowers individuals to navigate challenges and build lasting well-being. By unlocking the potential of synchrony, we can tap into a powerful resource for mental and physical health that resides within us all.



European Research

Council

Figure 1



Synchrony as a multimodal phenomenon. Similar to other interpersonal interactions, synchrony between the patient and the therapist is multimodal such that the synchrony between them manifest across modalities. For example,

the therapist's breathing is synchronized with the rate at which the patient moves her foot while she talks. This multimodal reality is in contrast to the unimodal focus in scientific research.



Individuals have their own trait-like tendency to get in sync, which manifests differently in different interactions.

On the left, the individual's trait-like tendency is delineated. The trait-like signature is expected to be relatively stable across relationships, conditions, and contexts. On the right, state-like deviations from this trait-like tendency are delineated across interactions with different figures.

TRANSFORMING JUSTICE

HOW AI AND TECHNOLOGY ARE SHAPING DISPUTE RESOLUTION

I n a world where technology is redefining the boundaries of possibility, it's no surprise that the hallowed halls of justice are not immune to its transformative touch. Picture this: AI algorithms predicting the outcomes of legal battles, chatbots offering legal advice around the clock, and disputes being resolved without setting foot in a courtroom. It's not science fiction; it's the new reality of dispute resolution.

AI's Multifaceted Role in Dispute Resolution

AI is no longer confined to science fiction; it's here, and it's transforming the legal system. AI algorithms are now predicting case outcomes by analyzing vast historical legal

data. Prof. Orna Rabinovich-Einy explains, "By comparing current cases to similar past cases, AI can provide insights into the likelihood of success or settlement." This means lawyers and litigants can make more informed decisions about pursuing or settling disputes, potentially saving time and resources.

Furthermore, AI-powered tools are streamlining legal processes. They can review and categorize extensive

volumes of legal documents with incredible speed and accuracy, reducing the time and cost associated with manual document review in litigation. Legal research tools are also getting a boost, helping lawyers find relevant case law, statutes, and regulations more efficiently.

Chatbots, Virtual Legal Assistants, and Online Dispute Resolution (ODR)

Imagine receiving initial legal advice, getting answers to common legal questions, and understanding your legal

rights and options - all without needing a lawyer. This is where AI-powered chatbots and virtual legal assistants come into play, making justice accessible to those who cannot afford traditional legal representation.

These changes were preceded by the rise of Online Dispute Resolution (ODR). ODR platforms substitute the face-to-face courtroom encounter with some form of remote proceeding, and are starting to include AI to facilitate dispute resolution

online. They provide a digital space for parties to communicate, negotiate, and reach agreements. While most ODR processes currently rely on software and humans operating remotely, some are already implementing or experimenting with AI in assisting the resolution of disputes.





Justice Through Prevention

Dispute resolution is not just about resolving conflicts - it's also about preventing them. Technology is giving rise to early detection and prevention mechanisms. As Prof. Rabinovich-Einy notes, "Technology offers quick and accessible means for addressing disputes, but it can also generate processes that deliver procedural and substantive justice." Identifying patterns and addressing issues before they escalate is now within reach, but such activities can also be dangerous, as there is a fine line between prevention and pacification of disputes.

Challenges and Ethical Considerations

As with any revolutionary change, there are challenges to overcome. The need for reliable and secure technology, legal and regulatory frameworks supporting technology use, and training for legal professionals are critical. Furthermore, AI is not a magic wand; it's only as good as the data it's fed. Biases, conscious or unconscious, can creep into algorithms, affecting outcomes.

Dispute System Design: Where Justice Takes Shape

Dispute system design plays a pivotal role in ensuring that technology-driven dispute resolution is just, accessible, and effective. "Justice concerns may seem misplaced in private dispute resolution," says Prof. Rabinovich-Einy. "But as more dispute resolution processes are privatized, they must adhere to public norms ensuring fairness."

Designing dispute resolution systems involves setting goals, understanding stakeholders and their interests, considering the context, defining processes, allocating resources, and establishing accountability mechanisms. In essence, it's about crafting systems that prioritize justice and fairness for all involved.

AI and technology are fundamentally altering the legal landscape, making justice more accessible, efficient, and accountable. While there are challenges to overcome, the potential benefits are immense.





TAMING THE NOISE

Error Correction and the Quest for Reliable Communication

ave you ever marveled at how that mesmerizing sunset clip you sent to your friend across the globe arrives perfectly intact, despite traveling through countless wires and bounding between multiple satellites? The secret lies in a hidden world of errorcorrecting codes, unsung heroes of the digital age. These ingenious mathematical tools act like tiny data doctors, constantly patching up the inevitable glitches that occur during transmission. From that beautiful sunset to the secure transfer of your bank statements, error-correcting codes ensure our digital messages arrive clear and sound, making the magic of instant communication possible. "With billions of digital terabytes being shared each day, the need ensuring reliability and data to integrity has become even more critical," explains Prof. Noga Ron-Zewi.

Think of error-correcting codes as data shields, deflecting the errors that can plague information. These codes work by embedding redundant information within the data itself. But they are not just a practical tool. They are backed by a rich theory that connects the fields of mathematics, science, and engineering. A particularly successful partnership has been with computer science. This relationship has been a two-way street: computational methods have been instrumental in crafting efficient errorcorrecting codes, and conversely, these codes have found themselves powering a variety of tasks within computer science.

"Our project is poised to deepen these existing connections significantly. Our primary goal is to develop errorcorrecting codes that not only optimize the balance between redundancy and error-resistance, but also are paired with ultra-fast error-correction algorithms. We are convinced that these advanced codes will be key in enhancing the performance of critical computational processes."

The efficiency of these codes also directly impacts the sustainability of our digital infrastructure. Traditionally, servers store multiple copies of this data to ensure reliability. "By optimizing error-correcting codes, we can achieve the same level of data reliability with smaller server capacities. This reduction in server demand can lead to a significant decrease in the energy consumption of data centers, which are currently responsible for approximately 3% of global electricity usage." Enhancing the effectiveness and reliability of errorcorrecting codes is not just a technological challenge but a vital step towards more sustainable communication systems. contributing to reduced power consumption and a lower environmental footprint.



The objectives we're tackling are ambitious. Achieving even partial success in these areas would mark a significant breakthrough, with implications for both theoretical and practical applications. We believe that we are uniquely positioned to make substantial progress toward more reliable and efficient data transmission - impacting everything from clearer video calls to faster downloads.

-Prof. Noga Ron-Zewi Department of Computer Science



Prof. Ron-Zewi was awarded the prestigious Krill Prize (2019) for her pioneering research. The Krill Prize celebrates and supports exceptional academic faculty members and up-and-coming researchers from Israeli research universities.

In 2022, she received a prestigious ERC Starting Grant to fund her innovative work in designing error-correcting codes. These grants are awarded by the European Research Council to talented researchers who are in the early stages of their careers.





European Research Council

Error-correcting codes serve as data shields, deflecting the errors that can plague information.

UNIVERSITY OF HAIFA ESTABLISHED IN 1972

OPERATING BUDGET

2

Campuses Mt. Carmel, Haifa

Lorry I. Lokey City Campus, Haifa

	2022/2023 ACTUAL		2023/2024 BUDGET	
INCOME	NIS M	%	NIS M	%
Government Allocation	721.8	70%	707.2	69%
Tuition Fees	211.9	20%	220.9	22%
Other Income	103.4	10%	98.3	10%
Total Income	1037.1	100%	1026.4	100%
EXPENDITURE				
Salaries & Pension Payments	815.4	79%	815.7	79%
Other Expenditures	221.7	21%	210.7	21%
Total Expenditures	1037.1	100%	1026.4	100%

UNIVERSITY OF HAIFA WORLD RANKINGS

#1

Israeli university committed to focusing on the UN's 17 SDGs

Source: VATAT Research model measuring publications and grants awarded to faculty members

IMPACT RANKING **101-200 Worldwide** (moving up 100 places since 2022)

Ζ.

Marine

Satellites

1

Faculties

Published by Times Higher Education Impact Rankings 2023

UofH WORLD RANKINGS BY SUBJECT*



Source: Academic Ranking of World Universities 2023 (Shanghai Rankings)

TOP **100**

Sociology Public Administration Communications

TOP **150**

Education Law Nursing Psychology Marine Sciences Political Science

16 Schools	53 Interdisciplinary Research Centers	29 Departments & Units	+400 International Students	18 International MA Programs
The allocation of the second sec	and the second		From 69 Countries	ubansilar-

HIGHLIGHTS FROM THE 2023 SDG REPORT

ENVIRONMENTAL SUSTAINABILITY

14 UFE Worldwide '(moving up from 98th place)

4 QUALITY 3 GOOD HEALTH 11 #25 #30 #09 #7A #52 Worldwide Worldwide Worldwide Worldwide Worldwide * (moving up from 55th place) * (movina up from *(moving up from 101-200 place) 95th place)

SOCIAL SUSTAINABILITY

*Published by the Academic Ranking of World Universities 2020 (Shanghai Ranking)



In 2024, University of Haifa became Israel's first university to join the Age-friendly University Global Network (headed by the Center of the Study and Research of Aging), dedicated to fostering inclusive environments for all ages, supporting positive aging in the community through local and regional collaborations and promoting age-friendly policies, research, and services.

HIGHLIGHTS FROM THE 2023 CARBON FOOTPRINT REPORT



towards environmental responsibility by releasing a comprehensive analysis of its carbon footprint. The Report aimed to pinpoint the primary sources of emissions, setting the groundwork for implementing effective reduction measures. **READ FULL REPORT published in 2023**

7.5% decrease in campus energy consumption (compared with the pre-COVID-19 shutdown period)

2019-20 e-COVID

ň

2020-21

2021-22 2022-23



Meet Our Student Community



University of Haifa Response to Swords of Iron War

The events of October 7th reshaped Israeli reality, triggering a profound crisis felt by Jewish communities worldwide: a surprise brutal attack, massive hostage-taking, and ensuing war with heavy losses. In the wake of the conflict, supporting our students became our top priority.

UofH STUDENTS WHO SERVED IN THE SWORDS OF IRON WAR



Students in Uniform +670 Students with partners in Reserve Duty



During Passover, the University's iconic Eshkol Tower is illuminated as a tribute to the 133 hostages held in Gaza.



*Source: Office of the Dean of Students



Families evacuated to the University dorms gather to light the Chanukah candles. "Together we are a Powerful Light"

UNIVERSITY SUPPORT FOR THE WAR EFFORT



Scholarships of NIS 2,000 Awarded to Student-Reservists

** All applicants were granted scholarships.

The Dormitories served as temporary housing (October, 2023 to December, 2023) for:

+160

Evacuees from Israel's Northern and Southern communities (+40 families, among them +60 children)

+70 Soldiers

The Children's Center on Mt. Carmel provided +500 hours of activities

Office of the Dean of Students offered mental health and emotional support to student reservists, students whose partners are reservists, and students belonging to the IAF and Naval Cadet programs.

+550 calls made to the hotline

The Unit for Psychological Services at the

FUNDRAISING EFFORTS

The University of Haifa's Emergency Fund raised close to

\$1,000,000 (NIS +3.5 M)

In addition to scholarships for Student-Reservists, funds were allocated to:



OUR RESEARCH GRANTS





MAJOR RESEARCH GRANTS 2022-2024 Academic Years

Over 1 million NIS

EUROPEAN RESEARCH COUNCIL GRANTS*

Prof. Guy Bar-Oz

School of Archaeology and Maritime Cultures Bio-Archaeology of Heritage Trees and Traditional Dryland Farming Horticulture in the Desert Fringes

> NIS 13.85 M (\$3,850,000)

Prof. Tali Kristal

Department of Sociology The Role of Workers' and Employers' Bargaining Power in Distributional Workplace Accounts > NIS 8 M (\$2,200,000)

Prof. Emmanuel Nantet

School of Archaeology and Maritime Cultures Ships Harboring in Ports > NIS 11 M (\$3,055,000)

Prof. Noga Ron-Zewi

Department of Computer Science Error-Correcting Codes and Computation > NIS 5.98 M (\$1,660,000)

Prof. Sigal Zilcha-Mano

School of Psychological Sciences An Individual-Specific Understanding of How Synchrony Becomes Curative > NIS 8.4 M (\$2,330,000)

EUROPEAN COMMISSION*

Prof. Omry Barzilai

Department of Cultural Heritage LAST NEANDERTHALS: The physical, cultural, and bio-genetic landscape of the last Neanderthals > NIS 14.39 M (\$4,000,000)

Dr. Moshe Lavee

Department of Jewish History The Midrash Project: Migrations of Textual and Scribal Traditions via Large-Scale Computational Analysis of Medieval Jewish Literature > NIS 1.3 M (\$360,000)

Prof. Shaul Chorev

Haifa Research Center for Maritime Policy & Strategy East Med Cross-border Marine Environmental Risk Assessment > NIS 1.95 M (\$542,000)

Prof. Mordechai (Muki) Shpigel

Charney School of Marine Sciences Novafoodies Project > NIS 1.25 M (\$347,000)

Prof. Shlomo Wagner

School of Psychological Sciences Oxytocin-driven Territorial Mapping in the Mammalian Hippocampal Formation > NIS 2.5 M (\$695,000)

Professors Efrat Shadmi and Anna Zisberg

Faculty of Social Welfare and Health Sciences Stay Healthy through Ageing > NIS 1.7 M (\$472.000)

Prof. Yizhaq Makovsky

Charney School of Marine Sciences Restoration of Deep-Sea Habitats to Rebuild European Seas > NIS 1.5 M (\$417,000)

BINATIONAL SCIENCE FOUNDATION USA-ISRAEL (BSF-NSF)*

Dr. Tamar Degani and Prof. Anat Prior-Unger

Faculty of Education and Faculty of Social Welfare and Health Sciences The Dominance Shift in Mixed-Language Production vs. Comprehension > NIS 1.3 M (\$360,000)

Dr. Tal Luzzatto-Knaan and Prof. Tali Mass

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