



The Boris Mints Institute
for Strategic Policy Solutions to Global Challenges
The Gershon H. Gordon Faculty of Social Sciences
Tel Aviv University

THE BORIS MINTS INSTITUTE

FOR STRATEGIC POLICY SOLUTIONS TO GLOBAL CHALLENGES

6th Annual Report | **2021**



SUSTAINABLE
DEVELOPMENT



INEQUALITY



RENEWABLE
ENERGY



INEQUALITY



WATER



CONFLICT
RESOLUTION





 **Members of BMI's Advisory Board and Academic Committee:** Armenia, Bulgaria, Czech Republic, Finland, Germany, Kenya, Luxembourg, Montenegro Russia

 **BMI Research:** California, India, Kenya, OECD, Rwanda, NEPAL

 **BMI Conferences:** Armenia, Finland, Georgia, Italy, Malta, Montenegro

TABLE OF CONTENTS

Letters	4
Letter from Founder and President, Dr. Boris Mints	6
Letter from Head of BMI, Prof. Itai Sened	8
BMI Vision	10
BMI Structure	11
Steering Committee	11
International Academic Committee	13
International Advisory Board	15
Management	19
Research	21
Water Lab	22
Inequality Lab	29
Conflict Resolution Lab	35
Renewable Energy Lab	42
Demography Lab	48
Sustainable Development Lab	51
Research Updates and Graduating Fellows	52
The 2021 BMI Prize	54
BMI Webinars	55
Other BMI Activities	58
Future Activities	60

LETTER FROM FOUNDER AND PRESIDENT, DR. BORIS MINTS



One and a half years after the Covid-19 Pandemic has begun – the world is still trying to adapt to the situation. This past time has uncovered various fundamental flaws in modern local and global institutions and individual leaders. The next focus of the work of our Institute is related to creating a New Global Agenda, enabling cooperation on an international level to combat such challenges as the pandemic and subsequently improving human life for each individual. Ignoring global challenges could lead to catastrophic consequences for humanity. In our opinion, it is exactly the lack of a recognized and accepted global agenda that leads to new problems for contemporary civilization. Our work consists of a strategic scientific-policy approach towards creating such an agenda through academic work, conferences, and partnerships. The first step towards accomplishing this ambitious mission is that we have decided to award the 2021 BMI Prize to a scientist that successfully combated the pandemic and challenges that it imposes through academic publications and the practice of public health. The prize will be awarded in October at Tel-Aviv University. Furthermore, another step was taken toward developing the aforementioned global agenda: our planned conference in Vienna, Austria, in November 2021 in collaboration with the University of Vienna. The conference will be dedicated to scientific solutions to the challenge facing the democratic, political, and economic institutions that govern our lives in the modern, globalized world. Subsequently, we aim to continue developing successful scientific work and partnerships with other leading academic institutes and universities towards the same goal.

Despite the challenges imposed by the pandemic, this past year has been filled with new events, connections, and academic work at the Institute. We were able to organize several webinars on various topics, including the U.S. Elections, Food Security, Globalization, and Blockchain, in order to substitute our annual in-person conferences. Four of our students have successfully completed their PhD. We have taken a major part in the “Green Naftali” project, which aims to revitalize the Naftali building at Tel-Aviv University and make it a sustainable ecosystem. This initiative is being completed with the generous support of the Matanel Foundation by

building the Matanel Garden – a sustainable environment for research and other activities. Furthermore, we were able to continue our existing scientific partnerships and develop new collaborative projects with various organizations.

I am certain that through the connection of academia and politics, using an interdisciplinary approach – the world will overcome the challenges that face us today, which is one of the central missions of our Institute. On a personal note, I would like to thank the leadership of Tel-Aviv University for their continuous support, as well as all the staff, administration, and students of the Institute, headed by Prof. Itai Sened, for all the completed work throughout this year and to wish all more success and accomplishment of various goals in the 7th year of our operation.



Dr. Boris Mints

Founder and President of the Boris Mints Institute
for Strategic Policy Solutions to Global Challenges

LETTER FROM HEAD OF BMI, PROF. ITAI SENED



I would like to start by thanking Dr. Boris Mints, yet again, for his initiative and generosity in offering to fund and then, hand in hand with all of us, put together this significant research institute, that has grown so much in the six years of its existence, to become a world renowned and highly respected research institute of great global significance.

This year was once again, marked by a very significant growth not only of the institute itself but by everything the institute has touched upon in the seven years of its very fruitful and fertile existence.

This has definitely been a challenging year for all of us as we struggle to cope with the COVID – 19 pandemic, together with pretty much everyone else around us. It is, therefore, not surprising that we have decided to dedicate this year's Boris Mints Prize to the person(s) we judge to have done the outmost to help us all cope with this tremendous challenge.

Still, we remain committed and fully active in pursuing our other goals as well. We are so proud of launching, with the generous gift of the Matanel Foundation, our Green Naftali Building initiative, creating an ecosystem like no other where students will be pursuing their daily routine activities of research and study, within a sustainable ecosystem of minimum emission of carbon and other pollutants, where energy comes from solar panels, water are either recycled or come literally from the humidity of 'thin air'. The idea is to show to anyone that cares to know that this is actually feasible and most recommended for any public and private medium to large scale structures.

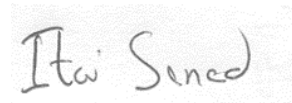
Meanwhile, in spite of all the trouble, the institute continues its work in India, helping poor farmers significantly improve their quality of life. In Africa, we have just launched a couple of projects in Tanzania and Kenia of the same nature with added emphasis on water purification which is a special challenge to the local population, continuing our close collaboration with *icip*e headed by Dr. Segenet Kelemu to strengthen the collaboration of the two institutes.

Next year promises to be just as exciting – we will inaugurate the Matanel Green Wall structure at the back of the Naftali Building, in October 2021, cover two major structures of the Gershon H. Gordon faculty of Social Sciences with Photo Voltaic panels to provide a significant part of the energy consumption of these structures and start putting together our roof top lab structures on the roof of the social sciences and business library building.

Our teams will continue our research effort on all fronts, we will lay the foundation cornerstone of the new TAU International Graduate School of Social Sciences for which we will serve as the research and development arm and we will inaugurate a major new lab on the current demographic global trends headed by Dr. Isaak Sasson.

We hope to extend our sustainable agriculture effort further as soon as the COVID-19 pandemic recedes. After inaugurating the new MA program for Developing Countries that grew out of our initiative to foster sustainable agriculture in India and Africa, we hope to inaugurate a new program in climate change that will be taught almost entirely on line.

With the wonderful BMI community of researchers, mentors, board members and administrators, even the skies are no limit to what we hope and will achieve in the future.

A handwritten signature in dark ink that reads "Itai Sened". The signature is written in a cursive, slightly slanted style. The background of the signature is a light, textured grey.

Professor Itai Sened

Dean of the Gershon H. Gordon Faculty of Social Sciences

Head of the Boris Mints Institute for Strategic Policy Solutions to Global Challenges

» BMI VISION

The Boris Mints Institute was founded with the intention of encouraging research, planning and innovative thinking in order to promote significant positive changes in the world. BMI is focusing on designing strategic innovative plans to enhance the welfare of communities around the globe.

The world is thirsty for innovative and groundbreaking policy solutions to promote environmental sustainability, ensure food security, health and energy to all, and eradicate poverty. Yet, there is a dearth of applied, practical, policy-directed research on these issues. BMI addresses these challenges by operating on two levels: extending research grants and scholarships to research students and organizing conferences focusing on contemporary global challenges.

BMI supports applied, practical and solution-driven research, conducted by M.A, Ph.D. and Postdoc students under the supervision of internationally renowned senior scientists. The Institute ensures that no good idea goes to waste due to lack of funding and brings Israeli technologies to the world's neediest populations – harnessing Israel's startup mentality in the service of humanity.

As a globally influential research institution, Tel Aviv University is committed to applying its know-how and experience toward solving real-world problems. As a result, Tel Aviv University is uniquely positioned to be the home base of BMI. Yet, BMI is mostly an international organization with a very wide reach globally.

BMI's DNA requires that its innovative ideas be transferred in real time to policy makers. BMI has already held many academic events and extended significant support to research projects in all our fields of activity.

Steering Committee



Dr. Boris Mints, President

Dr. Mints has been one of the most influential businessmen in Russia in the 2004 – 2017. Currently Boris Mints is the Vice President of the World Jewish Congress, which is one of the largest and most significant organization that represents Jewish people from over 100 countries, representing their pluralism. He is also the Chairman of the Council of Patrons of the Conference of European Rabbis (CER), which is the primary Orthodox rabbinical alliance in Europe. Awarded the Dashkova's Prize "Philanthropist of the Year" and Honorary Fellow of Tel-Aviv University..



Prof. Milette Shamir, Vice President for Foreign Affairs at Tel Aviv University

Milette Shamir's research focuses on U.S. literature and culture in the nineteenth century. She is the author of *Inexpressible Privacy: The Interior Life of Antebellum American Literature* (Penn University Press, 2005) and the editor of *Boys Don't Cry? Rethinking Narratives of Masculinity and Emotion in the US* (with Jennifer Travis, Columbia University Press, 2002). Her work appeared in several journals and essay collections devoted to the study of American literature and cultural history. Shamir is the editor-in-chief of the journal *Poetics Today* (with Irene Tucker of UC Irvine). From 2015 to 2019 she served as Vice Dean of the Humanities for Academic Affairs. She co-founded TAU's American Studies program in 2006, and served as its head for thirteen years.



Prof. Tami Ronen-Rozenbaum, Former Dean of the Gershon H. Gordon Faculty of Social Sciences at TAU and the Founding Head of the MA program in Developing Countries

A researcher in the field of the Cognitive Behavioral approach and Positive Psychology. Her research focuses on the function of self-control skills, positive emotions and social support as a way of overcoming stress and developing happiness. In her work, Prof. Ronen-Rozenbaum links a complex theoretical model of understanding human strengths and coping abilities to techniques for developing useful interventions in the field.



Mrs. Irina Buylova, Representative of BMI President

Executive director of the Yegor Gaidar Foundation (Russia), a prominent journalist and internationally recognized expert in building effective interaction models for Russian and international NGOs—including educational, economic and social development institutions. In the 1990s and 2000s she reported on social policy and development issues in the context of the turbulent Russian economic and political transitions.



Prof. Itai Sened, Head of BMI, Founding Head of the School of Social and Policy Studies at TAU and the Dean of the Gershon H. Gordon Faculty of Social Sciences

Prof. Sened is the Dean of the Gershon H. Gordon Faculty of Social Sciences at Tel-Aviv University. He returned to TAU after serving for 12 years as director of the Institute for New Institutional Social Sciences at Washington University, which was established by Nobel Laureate Douglass C. North. He is the founding head of the Boris Mints Institute for Strategic Policy Solution to Global Challenges and the founding Head of the School of Social and Policy studies at TAU.

International Academic Committee



Prof. Yossi Rozenwaks, Dean of the Faculty of Engineering, Tel-Aviv University

Prof. Rozenwaks is a leading researcher in various fields, including nanotechnology, electrostatic force microscopy, atomic force microscopy, nanoscale charge injection in memory devices, solar cells, organic semiconductor devices, biological field effect transistors, charge carrier dynamics in semiconductors, and recombination processes.



Prof. Miranda Schreurs, Professor of Environment and Climate Policy, Bavarian School of Public Policy, Technical University of Munich

Previously the director of the Environmental Policy Research Center and professor of Comparative Politics at the Freie Universität in Berlin and an associate professor in the Department of Government and Politics at the University of Maryland. Prof. Schreurs' focuses on comparative environmental politics and policy in Europe, the United States, and East Asia. She is a member of the German Advisory Council on the Environment.



Dr. Segenet Kelemu, Director General of the International Center of Insect Physiology and Ecology (ICIPE) Nairobi, Kenya

Dr. Kelemu is the Director General of the International Center of Insect Physiology and Ecology (ICIPE) in Nairobi, Kenya. She is a molecular plant pathologist whose work focuses on the elucidation of molecular determinants of host-pathogen interactions, development of novel plant disease control strategies—including genetic engineering—biopesticides, pathogen population genetics and dynamics, and endophytic microbes and their role in plant development. She has first-hand experience with both the challenges and successes associated with African agriculture, from tending to fields to directing world-class laboratories.



Prof. Itai Sened, Head of BMI, Founding Chair School of Social and Policy Studies at TAU and Dean of the Gershon H. Gordon Faculty of Social Sciences

Prof. Sened's specializes in the study of institutions and how they affect policy at all levels. These institutions include not just formal institutions at the national and local level, but also the informal institutions which determine social norms and cultural habits and may enhance or impede economic development and social prosperity. In recent years his research has become less technical and more applied to the fields of renewable energy and institutions that protect the growing inequality in income and assets around the globe.

International Advisory Board



Mrs. Joelle Aflalo, Co-Founder of the Matanel Foundation

In 2006, she founded, together with Mr. Gad Boukobza, the Matanel Foundation. This charitable institution encourages social entrepreneurship and is a testament to Mrs. Aflalo's sense of responsibility, spirituality, dedication to philanthropy, and constant desire to help create a better world.



Prof. Armen Darbinyan, Chairman of the Board, Rector of the Russian–Armenian University, Yerevan, Armenia

Prof. Darbinyan is an initiator of economic and political reforms in Armenia, including the development of the private sector and the formation of new governmental institutions. He led important reforms in the fields of telecommunication, agriculture, infrastructure and tourism. In addition, he is the author of national legislation regarding banking, stock companies, anti-trust provisions, and state regulation of public services. He is renowned as an international expert on transition economies and was granted the Young Global Leader award by the World Economic Forum.



Dr. Simeon Djankov, Senior Fellow, Visiting Professor, London School of Economics

Dr. Djankov was deputy prime minister and minister of finance of Bulgaria from 2009 to 2013. Prior to his cabinet appointment, Djankov was chief economist of the finance and private sector vice presidency of the World Bank, as well as senior director for development economics. In his 17 years at the Bank, he worked on regional trade agreements in North Africa, enterprise restructuring and privatization in transition economies, corporate governance in East Asia, and regulatory. Dr. Djankov was declared “Bulgaria’s Most Successful Politician” and awarded the President’s Award of the World Bank.



Prof. Sergei K. Dubinin, Member of VTB Capital Supervisory Board, Russia

Prof. Dubinin is an economist and professor at Lomonosov Moscow State University. In addition to positions in the Russian government, he served as chairman of the Russian Central Bank from 1995-1998. In addition, he has served on the board of governors of several banks and leading financial institutions.



Prof. Jacob A. Frenkel, Chairman, TAU Board of Governors, former Governor of the Bank of Israel

Prof. Jacob A. Frenkel serves as the chairman of the TAU Board of Governors and chairman of JPMorgan Chase International. In addition, he serves as Chairman of the Board of Trustees of the Group of Thirty (G-30), a private, non-profit, consultative group on international economic and monetary affairs. In addition to filling executive positions for international investment and financial services companies, Prof. Frenkel is also the former head of the Bank of Israel.



Hon. Václav Klaus, Former President of the Czech Republic, Head of the Václav Klaus Institute

An economist by training, Prof. Klaus was forced out of the Czechoslovak Academy of Sciences after the Soviet invasion in 1968. He returned after the Velvet Revolution of 1989 as one of the founders of the Civic Forum Movement. He was the country's first non-Communist Finance Minister and served from 1992 to 1997 as Prime Minister of the Czech Republic. In 2003 Klaus was elected President of the Czech Republic and won reelection in 2008. Since 2012 he has headed the institute which bears his name, a think tank based in the Czech Republic. He is a member of the Mont Pelerin Society, has published more than 30 books, and is the recipient of numerous honorary degrees and international awards.



Igor Luksic, Former Prime Minister of Montenegro, Founder and Member of the Board of the Institute for Security of Montenegro

Mr. Luksic was an official candidate for the position of UN Secretary General in 2016 and served as Prime Minister of Montenegro from 2010-2012, Deputy Prime Minister and Minister of Foreign Affairs and European Integration from 2012-2016, Minister of Finance from 2004-2010, Member of the Parliament of Serbia and Montenegro from 2003-2006 and Member of the Parliament of Montenegro from 2001-2003. Today, Luksic is the south-east Europe public sector director of PwC. Dr. Luksic holds a Ph.D. in economics and is an associate professor at the University of Donja Gorica Podgorica (UDG). Dr. Luksic is an advocate for transparency and dialogue in a proactive approach to both internal and foreign relations. During his time as Prime Minister, Montenegro opened accession talks with the EU and completed accession to the WTO.



Prof. Itamar Rabinovich, Founder and President of the Israel Institute, Former Ambassador of Israel to USA and President Emeritus of TAU

Prof. Itamar Rabinovich is the president of the Israel Institute (Washington and Jerusalem), Israel's former Ambassador to the United States and the former president of Tel Aviv University (1999-2007). He is professor emeritus of Middle Eastern History at Tel Aviv University, Distinguished Global Professor at NYU and a Distinguished Fellow at the Brookings Institution. Prof. Rabinovich has been a member of Tel Aviv University's faculty since 1971 and served as the Ettinger Professor of the Contemporary History of the Middle East, chairman of the Department of Middle Eastern Studies, director of the Dayan Center for Middle Eastern and African Studies, Dean of the Humanities Faculty, and Rector. Prof. Rabinovich's book "Syrian Requiem" was recently published by Princeton University Press: <https://press.princeton.edu/books/hardcover/9780691193311/syrian-requiem>



Seppo Remes, Co-Founder and Chairman of the Board, EOS Russia

Mr. Remes is a Finnish citizen and holds a Licentiate of Economics degree from the Turku School of Economics. Working in Russia from 1993-2015, he is the former CEO of the Investment Company Vostok Energo and director of Vostok Nafta, both of which operate in the Russian energy sector. He was selected as the Director of the Year in 2013 by the Independent Directors' Association and the Russian Council of Industrialists and Entrepreneurs. In 2007 he was among the founders of the EOS investment firm and has been company chairman since its inception. He was awarded an honorary Doctorate from the Plekhanov Academy of Economics in Moscow and Turku School of Economics in Finland. He was member of Boards of UES, Rusnano, Rosseti, OMZ, Sollers and Sibur Holding.

Management



Prof. Itai Sened, Head of BMI, Dean of the Gershon H. Gordon Faculty of Social Sciences

Prof. Sened is the new Dean of the Gordon Faculty of Social Sciences at Tel-Aviv University and founding head of the Boris Mints Institute for Strategic Policy Solution to Global Challenges and the Academic Institute for Structural Reforms.



Dr. Alexander Pesov, Representative of BMI President

Dr. Pesov holds a Ph.D. in biology and is the author of several scientific publications. Dr. Pesov has previously worked as a journalist, writer, and editor of several top journals and newspapers and served as vice president of the International Press Center in Moscow. From 1998 to 2012 Dr. Pesov was an advisor to the prime minister of the Russian Federation Eugene Primakov, chief of staff of the Ministry of Agriculture of the Russian Federation and vice governor of the Voronezh region.



Dr. Haim Ben-Yaakov, Representative of TAU President

Ben-Yaakov is a senior executive for regional development and public affairs at Tel Aviv University. He served as CEO of the Euro-Asian Jewish Congress, head of the Jewish Agency for Israel in Russia and the Baltic States and as an educational adviser for the Jewish Agency for Israel.



Ayelet Fishman. Adv., Administrative Director of BMI

Mrs. Fishman received her LL.B. from the Hebrew University in Jerusalem as well as an M.A. in Public Policy, with distinction, from Tel-Aviv University. She formerly served as the Israeli Ministry of the Interior's National Elections Supervisor.



RESEARCH

As the Boris Mints Institute entered its 6th year of activity, we inaugurated a new research lab for Demography. Each of our research labs is comprised of a Lab Leader – a senior TAU faculty member who is an expert in the relevant field, and a group of research students under his/her supervision. BMI labs are the operative channel of co-operation with BMI's partners, both in TAU and with international partners. BMI's research seeds have grown into academic and policy publications, international academic collaborations with several international foundations. Last year BMI was also supporting Post-Doc Fellows and will continue to do so for the foreseeable future.



Water Research Center
Tel Aviv University

Water Lab

In collaboration with the Water Center at TAU

Lab Heads:



Prof. Dror Avisar, Head of TAU Water Center,
Faculty of Exact Sciences



Prof. Hadas Mamane, Head of the Environmental Engineering Program,
Faculty of Engineering

Prof. Hadas Mamane and PhD student Dana Pousty had won the Merage DeserTech competition in the water technology category with SoLED technology – off the grid no chemical disinfection in rural communities in the desert.



Ariel Aviram, BMI Fellow

Academic Advisor: Prof. Hadas Mamane, Faculty of Engineering

Research project: Impact evaluation of iA water-wells intervention on the dietary intake and drinking water consumption in rural communities in Tanzania

The study carried out by Ariel is the first of three to examine the impact of water interventions, technology, and knowledge (WTs) on rural communities in Tanzania. In part one, he examines water and food security, in part two, the focus falls on water, sanitation and hygiene (WASH), and in part three, socio-economic empowerment is discussed. This research is a multidisciplinary study in which Ariel conducts surveys to analyze socio-economic variables in the field. In addition, he collects water samples for analytical analysis in the laboratory. The study is conducted in collaboration with Innovation Africa (iA) – a non-profit organization operating for over a decade in various countries in Africa, developing and establishing local water supply systems in remote villages. To understand the impact of the intervention, Ariel will examine some changes at the individual, family, and community levels following the intervention by doing an Impact Evaluation. The research framework is based on surveys in four villages from the Dodoma area: two villages after the intervention and two randomly selected non-treated villages will serve as the control group. All four villages have similar ethnic, geographical, and socio-economic characteristics and have the same tribal affiliation (the Gogo tribe). A random sample of 100 people will be selected in each village from 30 different households. Particular emphasis will be given to women in the study because women are traditionally responsible for transporting water from the well and household needs. The review will be conducted by a local team of reviewers who are familiar with the local culture and language. Following the iA water-wells interventions, significant changes are taking place that affects the amount and the way water and food are consumed in rural communities in Tanzania. The traditional way of consuming water (before the intervention) costs time and money. As a result of the interventions, less time is wasted on water transport. Money is saved because there is no need to pay the local well owners and water transportation. The money saved is used to consume food products that were not available before and increase nutritional diversity.



Ariel in Tanzania

Eitan Yosef Benson, BMI Fellow

Academic Advisor: Prof. Hadas Mamane, Faculty of Engineering

Research project: Heavy Metal Contamination in Developing Countries & Affordable Self-maintaining Ultrafiltration Home Water Treatment

Industrial pollution has generated ecocides across the planet, and few types of industrial pollution are more pernicious or persistent than heavy metals. Poor regulation, or poor enforcement of regulation, has allowed for gross negligence on the part of mining companies, scientific instrument factories, and other industrial enterprises, spilling large quantities of heavy metal elements into their surrounding environments. Without proper remediation, these elements remain – permanently – in the areas they're dumped in, wreaking havoc in those ecosystems. Eitan's research focuses

mainly on Kodaikanal, a lake and valley in Western Ghats mountain range of Tamil Nadu, South India, where a thermometer factory – at the time of operation the largest of its kind in the world – was found guilty of improperly handling its mercury contaminated waste. Data that was collected in the field in 2018 demonstrated that mercury contamination has not decreased in over a decade.

Currently, a much larger study of the entire valley is conducted in order to validate these results. For contaminated water, a regenerative filtration medium for treating heavy metals in the Professor Hadas Mamane water technology lab is being developed. This process uses biochar as a consumable material, and as such, is entering into a collaboration with the Israel Biochar Research Network (iBRN), the Volcani Institute, and the new Cocoa Cure Centre (CCC). As part of the upcoming RISE[1] lab– Eitan plans to conduct research to find the optimal plants for phytoremediation of mercury-contaminated soil, crucially using indigenous plants. This research will be a collaboration with an Israeli commercial partner (to be confirmed), and will develop a sustainable intervention to protect the ecology of this region.

Eitan's research in India that was conducted through the Nitsan Lab, headed by Dr. Ram Fishman, had demonstrated that one of the key reasons for the broad incidence of morbidity and mortality from unclear water is due to a gap between available technology and real-world behavior. The ultrafiltration technologies available to people in economically under-developed regions actually have – when properly maintained – the capability to drastically reduce the incidence of waterborne disease. However, the behavior required to operate these maintenance protocols is poorly practiced, and as a result, ultrafiltration systems broadly fail in their ability to operate effectively. To counter this issue, Eitan and a number of students have iteratively designed a new device for household-level water treatment (point of use), named the 'POP' valve for the subtle pop sound the device makes as it transitions between its 'filer' and 'maintenance' modes. This device is designed to be manufactured and assembled in low-income settings and installed in individual households as part of a conventional community-level water pretreatment/pumping system. The POP project – with three other teams – won the TAU Entrepreneurship POC contest last month and is currently being reviewed for a national contest to win 100,000 NIS. The project is on track to develop a working prototype within the summer semester and to move towards a pilot project in early 2022.



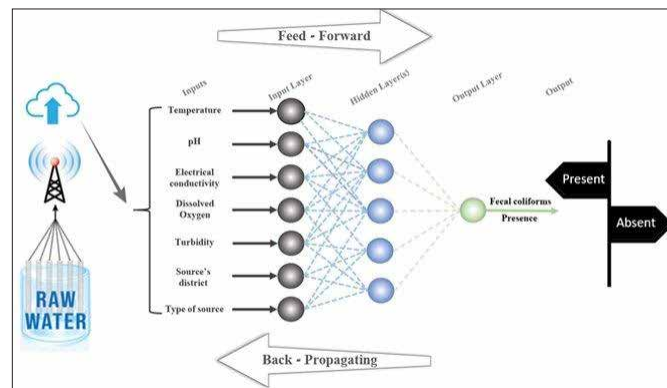
Asaf Pras, BMI Fellow

Academic Advisor: Prof. Hadas Mamane, Faculty of Engineering

Research project: Water research in India, continued in Israel: Nowcasting water quality parameters Using Deep Neural Networks

At least 2 billion people worldwide use drinking water sources that are contaminated with feces, causing waterborne diseases; poor sanitation, poor hygiene, and unsafe drinking water result in a daily death rate of more than 800 children under 5 years of age from diarrheal diseases. This study shows the feasibility of a novel method to monitor the presence of fecal coliforms (FC) in drinking water sources by applying a multilayer perceptron artificial neuron network (MLP-ANN) model. The model gives a binary answer for FC presence or absence in raw water using a minimum of water quality and geographical parameters, which can be monitored in real-time as predictors with low-cost equipment. Using 62,000 samples to train, validate and test the model, and after tuning the parameters, Asaf improved the model's performance and raised the accuracy to 87.2%. Water-quality inputs were obtained using temperature, pH, electrical conductivity, turbidity, and dissolved oxygen. The water source type and the district where it is located were geographical inputs; sensitivity reached 92.0%, meaning that most of the FC-contaminated samples were classified correctly. Thus, low-cost monitoring of inputs in real-time for nowcasting the FC presence in drinking water is possible.

Results show that the MLP-ANN model can be used as a tool for bacterial monitoring and management in water, reducing the need for time-consuming or expensive tests. Another new database of water samples from the state of Maharashtra was used to nowcast whether the irrigation water used for freshly eaten crops meets the WHO standard of 200 MPN/100ml. By applying the same method, with slight changes in the model's structure, Asaf achieved a great result of 83.2% accuracy, meaning that most of the samples were classified correctly whether they are under or over the criteria. In this case, the model's sensitivity was lower as 60% of the contaminated samples were classified correctly, but the precision (which indicates if the model is correct when it says the sample is contaminated) was 71%. As public health is the primary goal, this can be slightly fixed as sensitivity will get better, but it will lower the precision. Yet, these results show the feasibility of the model for nowcasting with good accuracy if irrigation water meets the criteria for freshly eaten crops.



The method being used for nowcasting the FC presence in drinking water.



Michale Goldenberger, BMI Fellow

Academic Advisor: Prof. Hadas Mamane, Faculty of Engineering

Research project: Real-time, Low-cost Nitrate Detection in Water

Nitrogen is an essential nutrient for plant development and is, thus, commonly found in fertilizers. However, direct ingestion of nitrogen due to agricultural runoff in water supplies can be harmful to the human body, particularly for babies. For example, “Blue Baby Syndrome” is a condition caused by the consumption of nitrogen that restricts the transportation of oxygen in the body. In addition to negative health effects, nitrogen runoff can have negative environmental impacts, such as polluting and destroying life in lakes and reservoirs (eutrophication). Electrochemical techniques are an effective way of measuring ionic content in a solution. Given that ions have an electrical charge, the magnitude of current that flows through a solution can be measured and determine the analyte’s concentration. However, while it is simple to measure the conductivity of a solution, it is difficult to measure the conductivity of a specific ion. In order to detect the presence of a specific ion, the ion of interest has to be differentiated from other substances such as chloride, sulfate, phosphate, and sodium by understanding specific reaction kinetics. Michale’s research is focused on developing a simple, inexpensive electrochemical sensor for detecting nitrates in water through the use of voltammetry. The sensor will measure the ionic content of the water and interface with the internet to send information about contamination to consumers. By monitoring their water, consumers can prevent the consumption of polluted water and determine their need for a more complex purification system. This semester, Michale spent two months in Cyprus learning how to develop sensors through screen printing. She created sensors with several different designs that allow the researcher to measure different parameters.



One of the sensors developed by Michale



Selda Edris, BMI Fellow

Academic Advisor: Prof. Hadas Mamane, Faculty of Engineering

Research project: Biodegradable carriers for improvement of wastewater quality for irrigation and food society

In the rural areas of India, the wastewater is discharged without any treatment into the village ponds or rivers, polluting the water sources used for drinking and agricultural irrigation. 58% of the income source of India's population is agriculture, mainly focusing on the wheat-paddy cycle, which requires a huge amount of water. In the dry season, when water is scarce, the use of raw untreated wastewater in agriculture is very common. In recent years there has been a significant decrease in the groundwater level because of poor management of resources, especially in low-middle income countries. The expectation is that by 2037 most of the area of the Punjab in India will have very low groundwater levels. This research project aspires to treat wastewater in the rural areas of the state of Punjab, India. A biological remediation treatment is applied, which uses a natural and sustainable synergy between different microalgae and bacteria to reduce organic and inorganic compounds concentrated in wastewater, while utilizing nutrients that could be used for agricultural irrigation afterward. Different shapes and materials were tested to find the optimized carrier, which allows the accumulation of Biomass to form layers of active biofilm, efficiently removes pollutants from wastewater, and increases microalgal production. The combination of bacterial microalgal activities has a significant benefit on wastewater treatment; microalgal–bacterial symbiotic relations have the potential to reduce the energy demands for aeration, used to enable the activity of aerobic bacteria.

In this research, an experiment compared between control and BDC treatment. Raw sewage was sampled from the Shafdan wastewater-treatment plant in Israel after primary treatment. The effect of BDC treatment was tested on the wastewater quality. Results have shown

ANALYSIS	Day 0	1 day		4 days		7 days	
		Control	BDC	Control	BDC	Control	BDC
BOD	161.6					50 ±27	116 ±78
COD	505	326 ±1	246 ±85	156 ±36	132 ±29	127 ±21	414 ±137
soluble COD	308	255 ±122	140 ±20	110 ±11	113 ±11	82 ±9	146 ±35
Nitrates (NO ₃ -)	12.75					0.7365 ±0.04	0.9635 ±0.3
Phosphorous (P)	6.053					1.172 ±0.2	1.625 ±0.77
Ammonia	48			65 ±0	9.60	31 ±0	1 ±0
Ph	7.19			7.6 ±0.2	10.8 ±0.5	9.2 ±0.1	10.8 ±0.02
Conductivity	1548			1504 ±1.2	1265 ±23	1316 ±29	1202 ±12
Temperature	23.5			23.8 ±0.6	23 ±0.1	24 ±0.3	24.6 ±0.1
Turbidity	116.5			15.4 ±4.1	21.1 ±4.3	14.2 ±2.4	34.1 ±9.3
UV (254nm)	0.324			0.043 ±0.1	0.011 ±0	0 ±	0 ±
TDS	778					731 ±11	708 ±43
TSS	62					17 ±1	160 ±78
Chlorophyll	0			0.089 ±0.05	0.162 ±0	0.108 ±0.1	0.313 ±0.1

Results of Selda's study

that after one day, the BDC decreased the Chemical oxygen demand (COD) to a quality which it can use for irrigation, and after 4 days the Phosphorus was decreases to zero. Safe levels of Phosphorus in irrigation water are 0–2 mg/L., while the control performance showed increase of the Phosphorus. In this case, microalgae can provide the oxygen needed for the aerobic bacteria through photosynthesis, while consuming the carbon dioxide released from bacterial respiration, hence creating a sustainable cycle between the two, without the need for external aeration. Furthermore, usage of microalgae to treat wastewater lies in their ability to utilize organic and inorganic carbon, as well as inorganic Nitrogen and Phosphate in wastewater for their own growth, resulting in reductions in the concentration of these substances in the water. By reducing the levels of N and P in wastewater to the desired concentration, the project aspires to allow the re-usage of these nutrients in further fertilization of crops, post treatment. Overall, the presence of microalgae improved the removal of organic compounds and added produced oxygen to the water.

Inequality Lab

Lab Head:



Prof. Itai Sened, Dean of the Gordon Faculty of Social Sciences and Head of BMI



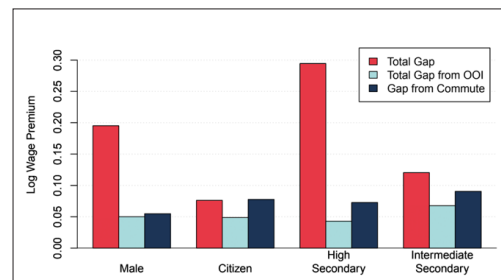
Dr. Oren Danieli, BMI Researcher, Berglas School of Economics

Research topic: Outside Options in the Labor Market

In a new paper, Dr. Danieli and his colleague Sydnee Caldwell develop an empirical procedure to uncover a key latent parameter in most wage-setting models: the value of an individual's option set. If similar workers are concentrated in a certain region, industry, or occupation, then the worker's options are more limited. They quantify this concentration in a single "outside options index" (OOI), which, in the model, is a sufficient statistic for the effect of outside options on compensation. The OOI is similar to a standard concentration index: workers with more options are those who, in equilibrium, are found in a greater variety of jobs.

Under standard assumptions on the distribution of match quality, the OOI is equal to the entropy index. With a negative sign, this index is used in the industrial organization literature as a measure of market concentration. Workers with more options (higher OOI) are those who are less concentrated across jobs, on all dimensions observed by Dr. Danieli. Given discrete covariates, the OOI can recover standard concentration measures based on, e.g., occupational concentration or occupational transitions. The OOI allows the incorporation of continuous characteristics, such as distance or task intensity. The OOI is calculated without using any information on wages or wage offers. This research shows that the OOI predicts the relative rate of recovery for workers involved in the same mass-layoff, an event that forces workers to move to one of their outside options.

The research compares workers who work in the same industry, but have outside options in different industries because they reside in different parts of the country. This approach yields a semi-elasticity between the OOI and wages of approximately 0.19, implying that access to 10% additional outside options increases wages by 1.9%. Combining this elasticity with the estimated distribution of the OOI, Dr. Danieli finds that differences in outside options lower the compensation for women by five percentage points, explaining roughly 25% of the overall gender wage gap in Germany. Differences in outside options also account for a five-percentage points difference in compensation between immigrants and natives, which is 64% of the overall gap. The research also finds large effects on the return to education. In the last part of the paper, the researchers examine the reasons workers face different options. They use the underlying model to create a counterfactual distribution of the OOI, if workers had the same implicit commuting costs. This exercise shows that the heterogeneity in the ability to commute or move is a key factor in explaining variation in outside options. This factor can account for the full gender gap in outside options. From a policy perspective, the results on gender differences in outside options suggest that efforts to reduce women's commuting constraints are likely to help close the gender wage gap. These policies may include making childcare more widely available.

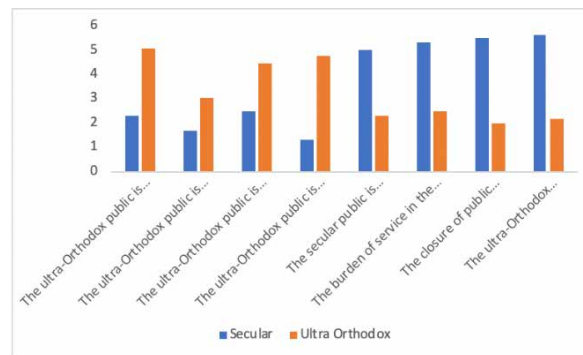


Graph from the study



Dr. Nechumi Yaffe, BMI Researcher

One of the main rifts in Israeli society exists between the secular and the ultra-orthodox. This rift that divides Israeli society has direct social, cultural, and economic implications for the future of the state. Despite the unique and specific context of Haredi-secular relations, this rift can be conceptualized in terms of intergroup relations and the operation of socio-psychological barriers between the groups. (Arrow, Mnookin, Ross, Tversky, & Wilson, 1995; Bar-Tal & Halperin, 2011; Ross & Ward, 1995). It is essential to conduct studies that trace this conflict and to think of new ways to intervene and affect change. During 2020, Dr. Yaffe designed a study aimed to map and discover for the first time the main social psychology barriers between the secular and Haredi. In the first phase, she conducted an exploratory qualitative study to identify the different possible threats existing between the two communities. In the second phase, she conducted large-scale mapping surveys in the secular and Haredi communities to explore threats operating in this conflict and offered a new concept of threat. Finally, in phase three, she manipulated the different threats and mechanisms to establish possible ways to reduce the mutual threats. The results showed that each side is threatened by the other community. Both sides feel that they are being exploited. In the coming year, we would like to discover ways to intervene and reduce this feeling of victimhood.



Results of Dr. Yaffe's Study



Eve Guterman, BMI Fellow

Academic Advisor: Prof. Itai Sened, Dean, Faculty of Social Sciences

Research project: The Monopolies Behind the Wicked Problems: Decentralizing Institutions for Equality

Eve's study focuses on monopolies over three fundamental variables: information, governance, and capital. These three categories of monopoly control represent the common denominator of modern monopoly power, and the ways in which they interact to create and protect socio-economic inequality and exploitation. The hypothesis that Eve is evaluating is as follows: A DLT intervention that *breaks monopolies on capital formation* will mitigate the *redistribution problem*, resulting in *increased individual purchasing power and increased social welfare*.

Eve analyzed uses a case study of "The Sarafu Network", a group of interoperable community currencies functioning in a number of urban and rural communities in Kenya. Started in 2010, it was an attempt to solve the dire problem of liquidity in communities that experience pockets of recession. The Network is comprised of communities, all of which suffer from capital scarcity, unused labor potential, and multi-dimensional poverty as defined by the Alkire-Foster method (2019), resulting in underdevelopment, degradation of individual and community welfare, and decreasing resilience to shocks. Between 2010 and 2018, Sarafu tokens were issued as paper vouchers alongside the Kenyan schilling by the NGO "Grassroots Economics", and in 2018 this system was digitized and put on a Blockchain using the Bancor protocol. Taking advantage of the popularity and functionality of existing mobile payment systems in Kenya via smartphones and traditional devices, the digital DLT intervention integrated smoothly into their daily patterns of

Category of Transaction	Description	Unit	Dataset Source
Food	Basic goods (Oil, maize flour, bread, milk)	Amount spent in KES AND # of unique trans	Self-reported on the Sarafu network DLT
Savings	Wallet intended to save in Sarafu	Amount spent in KES AND # of unique trans	Self-reported on the Sarafu network DLT
Labour	Hired day labor for farming, etc.	Amount spent in KES AND # of unique trans	Self-reported on the Sarafu network DLT
Shop	Local retail shopping, non-food goods	Amount spent in KES AND # of unique trans	Self-reported on the Sarafu network DLT
Farming	Seeds, fertilizer	Amount spent in KES AND # of unique trans	Self-reported on the Sarafu network DLT
Water	For drinking and cooking	Amount spent in KES AND # of unique trans	Self-reported on the Sarafu network DLT
Fuel/energy	Gasoline, diesel for cooking stoves, et al	Amount spent in KES AND # of unique trans	Self-reported on the Sarafu network DLT
Health	Medication, clinic visits	Amount spent in KES AND # of unique trans	Self-reported on the Sarafu network DLT
Environment	Waste removal, conservation, Recycling collection	Amount spent in KES AND # of unique trans	Self-reported on the Sarafu network DLT
Education	School fees, supplies	Amount spent in KES AND # of unique trans	Self-reported on the Sarafu network DLT
Transport	<10km motorcycle ride	Amount spent in KES AND # of unique trans	Self-reported on the Sarafu network DLT

exchange without requiring Blockchain-specific training or education. Between August 2018 and July 2019, as a result of the digitization of the program, the Sarafu network grew from 1,000 users in 10 communities to 4,400 users in 11 communities with an unprecedented velocity of exchange on new digital tokens, and a corresponding influx of data analytics and insights about local commerce, spending behavior, currency flows, and local networks.

During the 2020 Coronavirus pandemic, the Kenya Red Cross and Rebecca Mqalemo (2021) conducted the first randomized control trial on this Network, investigating its efficacy as a delivery mechanism for disaster relief using the unprecedented level of trade data available via Blockchain analytics. The study showed that small-scale transfers of \$30 sent as community currency tokens had a significant economic impact on beneficiaries. Eve's study aims to add to this discourse by measuring the welfare impact on individuals and households born from participation in the DLT community network. More specifically, welfare was freed up via the elimination of monopoly control. The expected results of the study are the following: using an experimental design, this study will separate users into experimental and control groups. Members of the experimental group will receive the equivalent of \$10 USD in a direct digital cash transfer, while members of the control group will receive the equivalent of \$2 USD. The data will show that greater access to and participation in the decentralized community currency network increases both the purchasing power and welfare of the individual users, which Eve expects to see quantified in the following ways on the individual wallet level, represented in the table on the left.



Stav Cohen, BMI Fellow

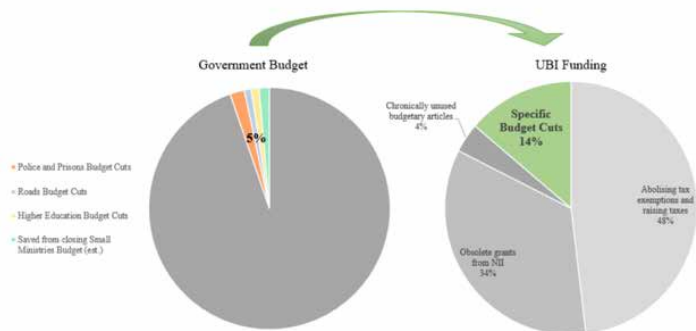
Academic Advisor: Prof. Itai Sened, Dean, Faculty of Social Sciences

Research project: Budgeting a Universal Basic Income in Israel

Neoliberal policies have enabled inequality to reach extreme levels since the 1980s. Today, 26 of the richest people in the world own as much as the poorest 50% of the global population. Inequality has been shown to have dire effects on health, education and social mobility (Wilkinson and Pickett 2009). Most troubling is the cycle by which economic power garners more political power, which leads to potential more economic power and so forth. UBI (Universal Basic Income) is a key policy tool aimed at significantly reducing economic inequality in an effort to improve citizen's quality of life by supplying a no means tests grant to every citizen, on an individual basis.

While no country has yet to implement a full UBI program, the recent limitations imposed by the Covid-19 lockdowns have urged many to reassess this unique proposal in an attempt to guarantee citizens stay even the direst of economic storms. Israel is an appropriate case study for this research as it is one of the poorest OECD nations with high inequality (Ben-David and Bleikh 2013). This suggests that if UBI can be successfully implemented in Israel, then funding could likely also be found in the richer OECD countries as well. Furthermore, in recent decades Israel's expenses on social welfare has decreased, with the system becoming less universal and more reliant on means-tests (Natanzon, et al. 2017), meaning that it could benefit greatly from the implementation of UBI. Coinciding with this, the government's budget has expanded greatly, without any correlation to the increase in population. This means that there is currently a potential waste of expenses which could be redirected to fund a UBI.

This work aims to prove that UBI can be funded from existing resources in the Israeli economy, adding to studies that already suggest funding methods such as taxation and cuts to the National Insurance Institute. Stav will add to the existing funding methods by examining the governmental budget articles that can be repurposed to fund UBI, defined as those which adhere to one of the following: they have been significantly overfunded compare to the population size without any real improvements in services provided, or they will become obsolete in a nation post the implementation of UBI. In the second semester, Stav continued refining the research and suggested several budgetary articles which may be cut to add funding to a potential UBI program, such as the police, roads, and higher education budgets as well as closing some unnecessary Government ministries.





The Evers Program
in Mediation and Conflict Management
The Gershon H. Gordon Faculty of Social Sciences
Tel Aviv University

Conflict Resolution Lab

In collaboration with the Evers Program in Mediation and Conflict Management and the Academic Institute for Structural Reforms

Lab Head:



Dr. Sami Miaari, Department of Labor Studies,
Faculty of Social Sciences



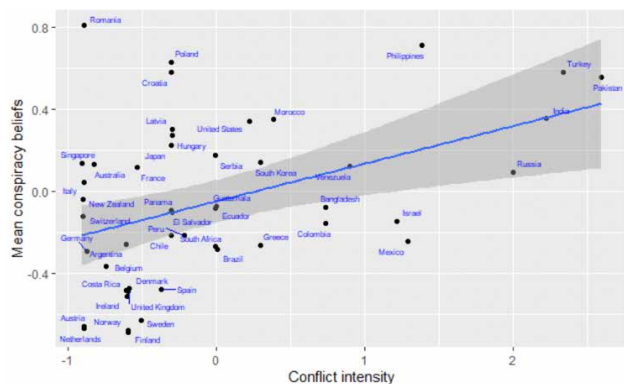
Dr. Boaz Hameiri, BMI Researcher

Dr. Hameiri, together with Nimrod Rosler, Prof. Danny Bar-Tal and other colleagues at TAU, published a paper on the costs of intractable conflicts on the involved societies in *Frontiers in Psychology*. Another paper with these and other collaborators is currently under revision in the *European Journal of Social Psychology* on a new intervention they are developing. This project is being funded by the *Israeli Science Foundation* since October 2020. Relatedly, Dr. Rosler and Dr. Hameiri presented a project on the effects of the coronavirus pandemic on attitudes toward the Israeli-Palestinian conflict in a conference at the HUJI Truman Institute. Another international project worth mentioning is led by Rebecca Littman from University of Illinois Chicago with colleagues from the US, Germany, and Nigeria. In this project, the authors developed an intervention to promote better intergroup relations between Muslims and Christians in Kaduna, Nigeria. The researchers then implemented this intervention in a TV soap opera with more than 30 million weekly viewers. This paper is being written.

Another stream of research that Dr. Hameiri focused on is trait victimhood, a concept he developed together with some colleagues. In his current research he is trying to understand the effects of this personality trait on interpersonal and intergroup relations in various domains. This include, for example, a paper he published in *Frontiers in Psychology* with Yossi Maaravi from the IDC and Tamar Gur from HUJI on the effects of trait victimhood on adherence to COVID-19 health guidelines. Furthermore, together with his PhD student from HUJI (co-advised with Eran Halperin), Shira Hebel, Boaz has been working on a really interesting project that shows that the objective level of country-level conflict intensity is associated with society members' levels of adherence to (COVID-19 related) conspiracy theories which is explained by levels of closed-mindedness. This paper is currently under review.

Recent Publications:

- Dr. Nimrod Rosler and Dr. Boaz Hameiri, researchers at our Conflict Resolution Lab, have just published a new article, titled: "Current and Future Costs of Intractable Conflicts – Can they create attitude change?" <https://www.bmiglobalsolutions.org/single-post/a-new-article-by-bmi-researchers>
- Rosler, N., Hameiri, B., Bar-Tal, D., Christophe, D., & Azaria-Tamir, S. (2021). Current and Future Costs of Intractable Conflicts—Can They Create Attitude Change? *Frontiers in Psychology*, 12. Published. <https://doi.org/10.3389/fpsyg.2021.681883>





Dr. Nadine Knab, BMI Postdoctoral Fellow

Academic Advisor: Dr. Boaz Hameiri, School of Social and Policy Studies

Research project: A wolf in sheep's clothing? The interplay of norms and threat in hierarchy-maintaining actions towards disadvantaged groups

Host-country citizens' reactions towards refugees are often polarized. Some engage in voluntary work to help while others show open discrimination. While seemingly opposite, Nadine proposes that discriminating against refugees and helping them in certain – and critically – dependency-oriented ways, both represent hierarchy-maintaining actions (actions that help host country members maintain their superiority), which may result in people's fear of losing their higher status in society. Building on this, Nadine focuses on social norms and their potential to moderate people's tendency to engage in these types of actions. She assumes that if the social hierarchy is perceived to be threatened by refugees, then strong norms to help refugees will increase the tendency to provide help in a dependency-oriented manner, but decrease overt discrimination. The argument that she makes is that, when threatened, extending dependency-oriented helping provides the individual with a way to preserve his/her superiority while acting consistently with norms that endorse helping refugees. A pilot study shows the first preliminary support for the hypotheses. The research team had two meetings to discuss the next steps for the project. The research is planned to finalize this stage to conduct two correlational studies (one in Israel and one in Germany) later on this year.

Dr. Knab, a Postdoc researcher at the Conflict Resolution lab, was interviewed to the Peace Psychologist magazine: <https://www.bmiglobalsolutions.org/single-post/bmi-postdoc-researcher-dr-nadine-knab>

Recent Publications:

- Knab, N., & Steffens, M. C. (2021). Emotions for solidarity: The relations of moral outrage and sympathy with hierarchy-challenging and prosocial hierarchy-maintaining action intentions in support of refugees. *Peace and Conflict: Journal of Peace Psychology*. Advance online publication. <https://doi.org/10.1037/pac0000548>
- Bareket, O., Shnabel, N., Kende, A., Knab, N., & Bar-Anan, Y. (2021). Need some help, honey? Dependency-oriented helping relations between women and men in the domestic sphere. *Journal of Personality and Social Psychology*, 120(5), 1175–1203. <https://doi.org/10.1037/pspi0000292>



Gal Factor, BMI Fellow

Academic Advisor: Dr. Boaz Hameiri, School of Social and Policy Studies

Research project: Meta-Perceptions in the Israeli context; Tendency for Interpersonal Victimhood

Gal is currently involved in 3 research projects, the first of which is the Tendency for interpersonal victimhood (TIV). This concept, which was developed by Gabay, Hameiri and colleagues (Rahav et al, 2020) implies that people have a general tendency to look at themselves as victims and that this tendency is normally distributed. Initially, Gal predicted that higher-TIV individuals will be less willing to help others who signal themselves as victims. Gal's research this semester, among Americans, gave evidence of an opposite pattern, when results showed that higher-TIV individuals were more willing to help others in comparison to lower-TIV individuals. Gal believes that higher-TIV individuals are more sensitive to others-signaling of victimhood, and that they perceive others as victims even when the latter are not emphasizing their own victim-statues.

The researchers are currently continuing their work examining the influence of TIV on interpersonal relations, specifically how competition over resources or statues might influence the patterns he detailed above. Their current hypothesis is that in a competition context, in which individuals might gain from their victimhood, when their victimhood status is threatened by another person's victim-signaling, it will elicit more competitive victimhood and consequently more negative reactions in the inter-personal relations. They plan to further examine TIV in an Israeli setting, further developing its external validity.

A second project Gal is involved in is the Meta-Perceptions study, alongside Dr. Nechumi Yaffe and Dr. Samantha Moore-Berg. Meta perceptions is a term describing how a group thinks an outgroup is perceiving them. For example, Moore-Berg and colleagues (2020) examined meta-perceptions in the context of inter-partisan relations United States, and found that both Democrats and Republicans hold highly exaggerated meta-perception, such that each group thought that they outgroup held much more negative perceptions than they held in reality. The researchers plan to examine meta-perceptions in the Israeli context, in the contexts of Jewish-Israeli and Arab relations, as well as between Jewish secular and Jewish ultra-orthodox relations. They also believe that the power relations within a specific intergroup relation can influence the accuracy of meta-perceptions.

A third project Gal has begun this semester is joint work with a British foundation called "Solutions not Sides". This organization is bringing an Israeli and Palestinian representative to British schools for a conflict-resolution workshop. In these workshops, the Israelis and Palestinians share their experiences of living in the region in conflict, and their hopes for a peaceful solution. Together with the organization, Gal plans to examine what influence these workshops have on students' empathy, polarization and humanization.



Nora Meissner, BMI Fellow

Academic Advisor: Prof. Adriana Kemp, Head of the School for Social and Policy Studies

Research projects: Refugees in town: assessing the “local turn” of forced migrants’ integration; The first year of the COVID-19 pandemic: Examining civil society’s crisis responses for refugees and asylum seekers in Israel

The central theme for local civil society organizations (henceforth: CSOs) working with refugees and asylum seekers (henceforth: RAS) in Israel is the challenge of dealing with issues resulting from the lack of formal status of their client population – as it is the core of their hyper-vulnerability. This lack of status manifests in the exclusion from access to social rights and social services for this population. The CSOs’ general claim that the state needs to take responsibility for the overall conditions of RAS’ lives in Israel translates into a constant balancing act of their activities. On the one hand, they provide a variety of direct assistance that the RAS population is denied based on their current status and on the other, they engage in advocacy struggles aimed to enlarge the access to governmental and municipal services. In fact, this balancing between alleviating the consequences of the lack of social rights and struggling to facilitate access to new services is what also drives the dynamics of their response to the conditions and needs of RASs under the COVID-19 pandemic in Israel.

The general impact of COVID-19 in Israel – lockdowns, mass unemployment, increased needs for medical testing and care – affected the asylum seeker population especially hard, given their exclusion from the general safety-nets provided by the state for citizens such as unemployment benefits and social security payouts. For this particular status less population, the main safety-net is the collective civil society actors in the migration field, who had to sustain and carry this extremely vulnerable and high-risk population in lieu of the state throughout the pandemic (the research conducted by Nora covers the time frame from March 2020 until June 2021). Despite the general state emergency responses – quarantine facilities, vaccinations and testing centers – becoming widely available, CSOs had to complement these for RASs by finding solutions for reducing food and financial insecurity resulting from loss of income, the challenges of distance learning for children, and the deterioration of mental and emotional states, among others.

Nora’s analysis of the stakeholder interviews points to the existential and substantial choices civil society actors had to make in the last 1.5 years to both be the safety-net for the population and survive as organizations. The study’s conclusion shows that extraordinary short-term efforts of CSOs in Israel have proven to be essential for the survival of the RAS population during COVID-19. At the same time, having to function as an ad-hoc safety net for the status-less population in a global pandemic has heightened inherent tensions in CSO’s work as providing humanitarian and emergency ‘Band-Aids’ without being able to establish long-term solutions, e.g., for a systemic job and food insecurity. Overall, communication between organizations and

other local and national stakeholders increased in order to compensate for the broader shifts organizations are going through, constantly balancing resources between provision and mediation.

Recent Publications:

- Kemp, A. with Meissner, N. (2020). Paradoxes of control: Incorporating precarious migrants in Tel-Aviv in times of restrictive migration policies. In: Feniger et al. *The Routledge Handbook of the Contemporary Israel*, Routledge (*forthcoming*).



Petr Pesov, BMI Fellow

Academic Advisors: Prof. Itai Sened, Dean, Faculty of Social Sciences & Prof. Udi Sommer, Department of Political Science

Research project: Identity-Conflicts and their Roots: An Attempt at a Modern Conflict Typology

Throughout the past year, while focusing on his MA degree, Petr has completed in-depth research on the Nagorno-Karabakh conflict. While analyzing historical, political, economic and social factors contributing to the dispute, Petr has completed a Game-Theoretic model to show why Armenia, as a rational state-level actor, did not predict its loss during the war. It was assumed that Russia would intervene on its behalf, as according to Armenia, the region in conflict is its territory and it has a common defense pact with Russia. However, the Russian position on the issue is that the region is de jure Azerbaijan, thus since the fighting did not occur within Armenia per-se, Russia did not intervene.

Through his work on Nagorno-Karabakh, among other disputes, Petr contests that the field of conflict resolution lacks a systemic classification of conflicts. The first step towards this would be his MA Thesis to be written next year. This will be done by taking existing objective data on the following six elements: clashing nationalism, lack of pre-conflict autonomy, sacred values, clashing collective victimhood, power asymmetry, and pre-existing ethnic-economic cleavages. Each of these will represent one of the axes in two 3D models, and through using three-dimensional clustering, one would be able to determine if any conflicts can be classified in a group. Furthermore, those that do will be analyzed through process tracing using original data gathered through elite qualitative interviews. The hypothesis is that at least one of the conflict groups will cluster, and thus, the existing classification methods can be expanded and contributed towards. In turn, this will enable scholars to understand which conflicts can be compared based upon possible solutions and operate under the assumption that their root is what will be at the center of the peace agreement. Below are the aforementioned game-theoretic models.

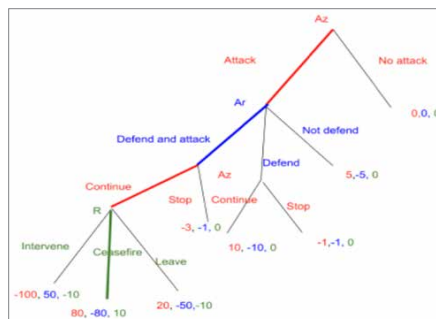


Figure 1: Rational calculation of the war

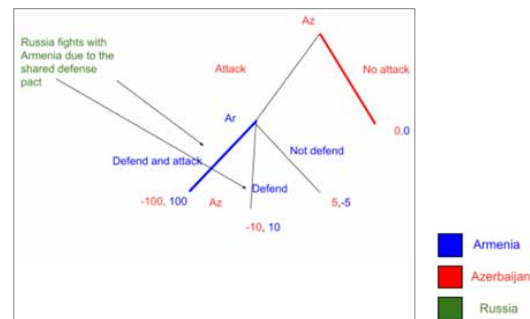


Figure 2: Armenian Calculation of the war



Renewable Energy Lab

In collaboration with the Renewable Energy Center

Lab Heads:



Prof. Yossi Rozenwaks, Dean of the Faculty of Engineering, and



Prof. Abraham Kribus, Faculty of Engineering



Alon Herman, BMI Fellow

Academic Advisor: Dr. Gideon Segev, School of Electrical Engineering

Research project: Water Treatments with Ratchet Based Ionic Pumps (RBIPs)

Following the initial testing showing the basic principle of the ratchet operation, that was described in the last report, we set out to optimize our test setup design, and test additional samples with different parameters and gather data. The membrane is sealed in between two chambers filled with an electrolyte. The dimensions in the drawing (in [mm]) shows that the area of the membrane that is exposed to the solution (i.e. the active area) has a diameter of 4.5 mm. After the initial testing, the structure and volume of the cell were optimized to allow a gradual transition between the bulk solution to the surface of the membrane, to avoid trapped air bubbles.

We have produced and tested 14 different ratchet samples with 20, 40 and 80 nm pore sizes, using square wave signals with a wide range of amplitudes. The main challenge in analyzing the test results is that we find considerably different behavior between different samples with the same properties and test conditions, and within a single sample overtime. To illustrate this with an example, we show on Figure 1(a)&(b) a set of results of the output voltage for a duty-cycle and frequency matrix. We can see that the sample in Figure 2(a) is anti-symmetric with respect to duty-cycle and has a higher optimal frequency, while the sample in Figure 2(b) is closer to being symmetric, with an optimal duty-cycle around 65%, and a lower optimal frequency. Figure 2(c) shows a single sample, at the beginning and end of a test sequence, that shows a different symmetry with respect to duty-cycle, and an overall decrease in output voltage.

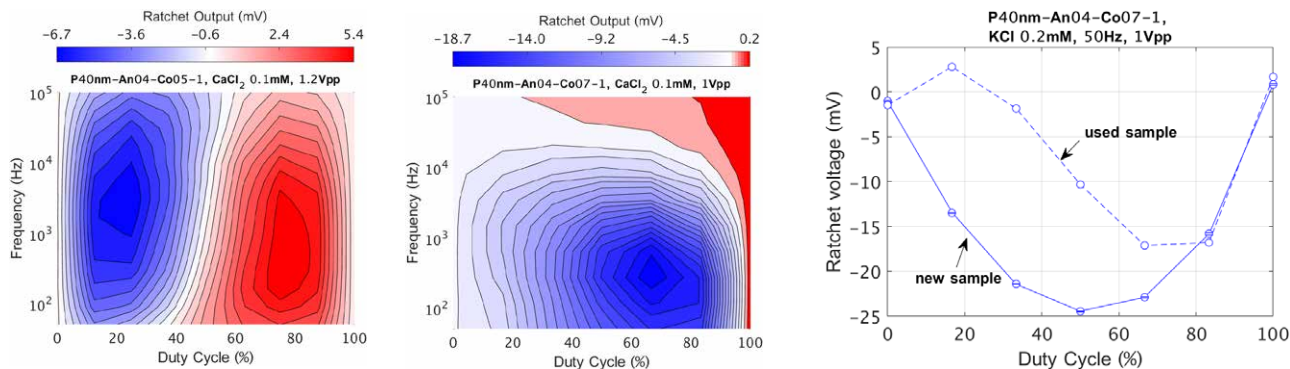


Figure 1. Ratchet output voltage measurement for different samples with 40 nm pore size

There are a few possible reasons for the lack of repeatability. One is that the ratchet performance is highly dependent on the potential distribution close to the contacts, which is not directly controlled in this type of experiment. Instead, it might be affected by many properties of the system, such as: ions concentration and PH near the contacts, zero-point potential of the contact metal, adsorption of different species, contaminations in the solution, surface charge inside the nano-channels, and possible differences in the metal nanostructure between samples. Another possible explanation is that we are oscillating the potential on both contacts, and therefore simultaneously operating two ratchets with opposite polarity. This additional degree of freedom creates a complex system that can add variation and produce unexpected performance.



Tamir Yeshurun, BMI Fellow

Academic Advisor: Dr. Gideon Segev, School of Electrical Engineering

Research project: Development of a method for extracting spatial photon external luminescence efficiency of solar energy conversion devices

An increasing effort is being put towards developing new materials for high-efficiency solar energy conversion systems. The performance of a solar energy conversion device is greatly affected by various loss mechanisms and different charge transport properties. Further and in-depth understanding of loss and charge transport mechanisms could be vital in establishing potential new materials for use in future solar energy conversion devices. This research aims to develop a nondestructive technique, quantifying efficiency loss mechanisms, and provide insights on devices' performance under relevant operating conditions. The transport of photo-generated charge carriers and their recombination processes define the efficiency of photovoltaic cells. These recombination processes release energy in the form of heat or through light emission in a process termed photoluminescence (PL). The probability for a charge carrier, generated at a specific point in the device to contribute to the photoluminescence is defined as the spatial external luminescence efficiency (SELE). Obtaining SELE in different materials and solar cells, could shed light on different loss mechanisms throughout the cell, and lead to development of higher performance solar cells. Moreover, the SELE is related to the photoluminescence quantum yield (PLQY), defined as the fraction of emitted photons from the absorbed photons. During his research, Tamir measured the PLQY over a wide range of incident wavelengths. Tamir extracts and computes the SELE profiles from the analysis of the wavelength dependent PLQY, together with optical modeling. In order to investigate the photoluminescence properties of the sample over a range of excitation wavelengths, he positions his sample in an integrating sphere – an internally diffusive and reflective sphere, that allows light emitted inside

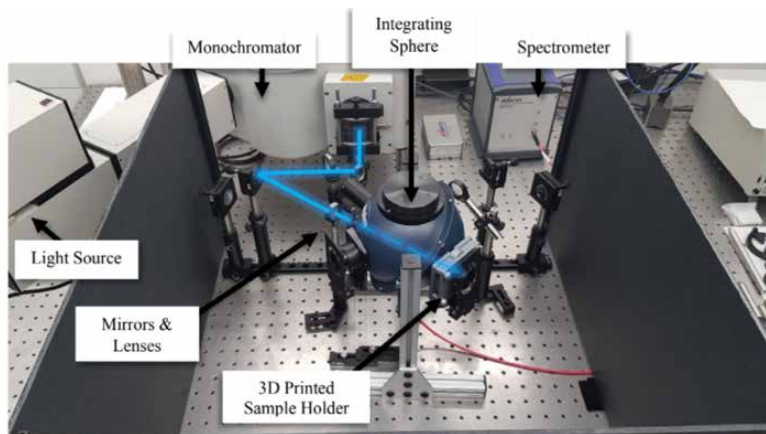


Figure 1 – PLQY Experiment layout. The image depicts the light (blue line) from the monochromator output to the sample inside the integrating sphere. The light is focused on the sample via a set of lenses and mirrors. The PL signal is collected with an optical fiber at the bottom of the integrating sphere to a spectrometer.

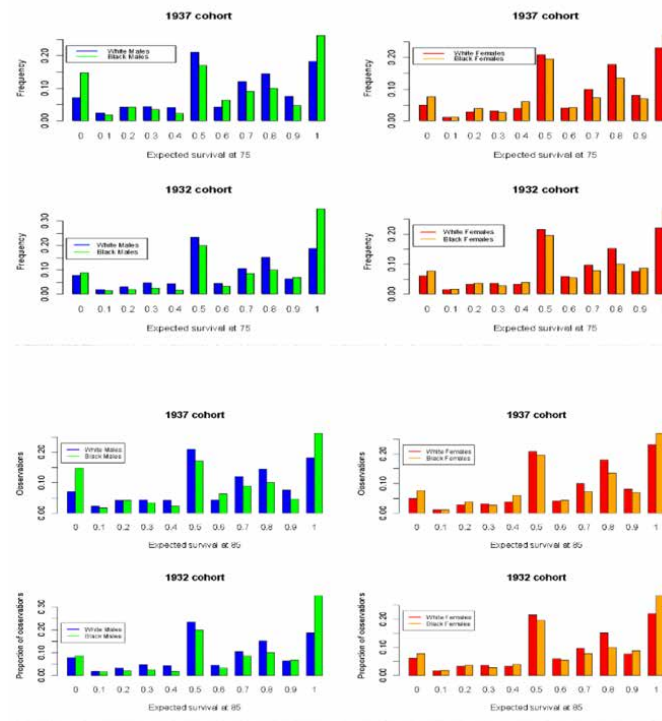
the sphere, to be collected by an output port using an optical fiber. By using an integrating sphere, Tamir is able to read the faint photo-luminescent signal emitted by the sample in all directions.

This year, Tamir has successfully performed measurements of the photoluminescence signal of the GaAs sample. In the upcoming year, he will perform PLQY measurements, model and simulate the spatial external luminescence efficiency of different materials and solar cells. For future development of the technique, Tamir intends to place the sample on a 2D translation stage and obtain a depth profile of the photon recycling efficiency at multiple points in the sample. This would allow him to create detailed 3D maps of different loss mechanisms throughout the material or device. His results would contribute to further understanding of loss mechanisms and to promote the development of better performance solar energy conversion devices.

Research project: The Role of Institutions in Renewable Energy Growth

This study examined the effect of the quality of institutional structures on renewable electricity markets' growth or stagnation. Specifically, it focuses on five fundamental formal and informal market-supporting institutions: property rights; government integrity; the regulatory environment; investment infrastructures and capital investments flow; and sophistication of the financial systems. The results indicate that business freedom and investment freedom have a much more significant positive effect on renewable energy markets' growth or lack thereof. These estimates suggest that regulatory barriers to business operation and constraints on capital flows hinder the penetration of renewables and the relevant markets from reaching their full growth potential. Additionally, the empirical findings of this study suggest that modern societies seem to have successfully established institutional structures of property rights. The effect of the remaining variance across countries in the structures of property rights was found to have an insignificant effect on the growth or stagnation of emerging renewable energy markets.

Another research project Eyal is involved in deals with small-scale energy storage (in collaboration with the Arava Institute for Environmental Studies and KKL). In this research, Eyal has finished the introduction of the literature review of storage technologies, focusing on the role of energy storage in the transition to a zero-carbon electricity market and the small-scale technologies available today. Specifically, Eyal focuses on the worldwide small-scale technologies and the technologies that can easily be implemented in the Arava. Eyal has also participated in the 49th annual conference for Science and Environment.



Demography Lab

Lab Head:



Dr. Isaac Sasson, Department of Anthropology and Sociology



Dr. Shayna Bernstein, Postdoctoral BMI Fellow

Academic Advisor: Dr. Isaac Sasson, Department of Anthropology and Sociology

Research project: Social Inequalities in Mortality

Dr. Bernstein examines Subjective survival probabilities and black-white racial differences by creating separate subjective survival curves for individuals in each group based on data from the U.S. Health and Retirement Study (HRS), in which individuals are asked to predict their survival chances to two distinct ages. This allows the researchers to estimate subjective survival curves until death for each individual, based on parametric survivor functions. Dr. Bernstein found that discrepancies between subjective survival and published cohort life tables actually predicted future revisions to the life tables (Perozek, 2008). Using her novel methods, Dr. Bernstein adds the black-white racial component to examine racial inequality in subjective survival rates. She also utilizes the updated mortality of the respondents using the latest HRS release to compare the subjective survival with the actual survival of respondents of each racial group till the year 2018 (Bugliari et al., 2021).

Disparities in black-white expected longevity is seemingly an additional reflection of inequality that can in itself perpetuate disparities of disadvantaged groups. The findings of this study suggest that black people tended to be overly optimistic about their mortality prospects. For black and white men, the inequality in perceived survival is even opposite in direction to inequality in objective survival. Although it is tempting to assume that disadvantaged groups are not experiencing or internalizing the lifespan inequalities they have historically been subject to, this interpretation may be incorrect. Dr. Bernstein cannot assume that more answers of 100% survival chances equate to optimism of longevity. The phenomena of probability questions concentrating at focal points (0, 50%, 100%) has been noted before (Hunyh and Jung, 2011; Kleinjans and Soest, 2014; Wise, Gan and Hurd, 2013) and Dr. Bernstein found the same clustering in the data. Possible reasons for the phenomenon include not understanding probabilities, and very strong rounding. However, black individuals are specifically more likely to choose 100% chance as opposed to the other focal points, a finding Dr. Bernstein shares in common with previous research (Lee & Smith, 2016). Dr. Bernstein extends the past research by presenting birth cohort changes in subjective survival estimations for black and white men and women, and by extending SSP over the life course to analyze the age patterning dynamics.



Atalia Regev, BMI Fellow

Academic Advisor: Dr. Isaac Sasson, Department of Anthropology and Sociology

Research project: The different trajectories in which childhood socioeconomic status (cSES) shapes older adults' expected lifespan

During the last half-century, the gaps in health and life expectancy by income and education achievements have been widening, specifically in developed countries such as the U.S (Chetty et al., 2016; Mackenbach, 2012; Marmot, 2003; Phelan et al., 2010; Sasson & Hayward, 2019). However, the current study aims to go beyond death rates towards living individuals' survival expectations regarding their own life course experiences. Doing so may provide the researchers with a deeper understanding of both the objective mortality trends and the subjective longevity perceptions of the least advantaged ones in the current era. Likewise, it may shed some light on fundamental questions concerning the complex and reciprocal relationships between cumulative life chances, the biological body, expectations, and practices. In Particular, this research project aims to examine *whether and how childhood socioeconomic status (cSES) shapes subjective survival expectations (SSE) in midlife*. The study will pay particular attention to the pathways through which childhood SES might be related to subjective survival expectations later in life, variation in this relationship throughout the aging process, and how childhood SES is operationalized.

After laying its essential theoretical foundations in the fall semester, Atalia developed the methodological frame of the research project during the spring semester. Thus, she focused mainly on learning and examining the Health and Retirement Study (HRS) data files which she intends to use for the research project. She decided, inter alia, that because life history data were elicited from many Early Baby Boomer cohort (born 1948-1953) respondents, in addition to the standard HRS panel data, the research sample will be based on this distinct group of observations. For example, alongside parents' years of education, these respondents were asked about the number of books at home or how well in math/reading/writing they were at the age of 10, and if one or both parents died before they were 16. If so, the present study will move beyond previous studies in which childhood socioeconomic status was often limited to few indicators. Additionally, she kept learning and examining possible statistical models to study the research question. The current research will examine the different pathways in which cSES shapes the subjective survival expectations over time, and those pathways will be assessed by running four nested hierarchical linear regression models in order to distinguish between the possible direct and indirect effects of childhood SES on survival expectations throughout the life course. At the present time, Atalia is preparing the data for future statistical analysis by merging and reconstructing the chosen variables and observations. During the coming months, she will be working on the childhood SES index, examining patterns and different options for imputations of missing data, and testing some basic versions of the statistical model.

Sustainable Development Lab

Lab Head:



Dr. Ram Fishman, Department of Public Policy

Following the prolific work and activity of the Sustainable Development lab – TAU has opened a **new Master's of Arts program in Developing Countries**. The program is led by Prof. Tami Ronen-Rosenbaum, the outgoing dean of the Faculty of Social Sciences. For more information visit: <https://en-social-sciences.tau.ac.il/devcoun>

Dr. Fishman is continuing his research and makes substantial impact:

<https://www.bmiglobalsolutions.org/single-post/two-articles-about-dr-ram-fishman-s-research>

<https://www.nitsan.sites.tau.ac.il/>

RESEARCH UPDATES AND GRADUATING FELLOWS

We are happy and Proud to have supported the following fellows who have received their PhDs:



Amit Loewenthal, Conflict Resolution Lab

Research project: The Political Economy of the Israeli-Palestinian Conflict

This research provides insight into the role which economic inequality and other economic conditions play in political conflicts. Many political conflicts, violent and non-violent, are attributed to economic grievance, a global phenomenon of political radicalization in an environment of rising intra-country inequality and economic resentment by people feeling left behind. Existing studies focus on cross-country analysis, and do not study the effect of economic inequality on political radicalization. To the best of our knowledge, this is the first research to address these issues. The research analyzes the conflict-inequality nexus within the scope of a single political entity, using the Israeli-Palestinian conflict (IPC), one of the longest lasting political conflicts, as a case study of great significance. Using a unique combination of datasets on Palestinian socioeconomic condition and public opinion, the research explores the relationship between economic conditions and political preferences of Palestinians regarding the IPC.

Amit had been accepted to the prestigious Postdoctoral program at Potadam University, Germany.



Patricia Akao, Water Lab

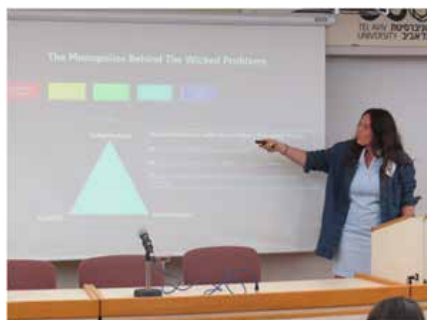
Research project: Microalgae Utilization for Removal of Organic compounds from Wastewater: Circular Economy Concept

This research aimed at creating a circular economy concept, based on the biorefinery concept, with suggested modifications, enabling an ecofriendly alternative by efficiently producing biofuels, separating the lipids and the residual microalgae biomass processed into bioplastics and uptake of plasticizers and from wastewater. This concept allows improving the utilization of microalgae products and decreasing the production costs. Microalgae have the potential for treatment of wastewater and biofuel production, but also they are a promising alternative source to bioplastic.

- **Prof. Itai Sened and Dr. Karen Umansky** (a former BMI Fellow) presented their research, titled “While the German shepherds were sleeping: How mainstream parties facilitated the rise of the AFD in the 2017 elections” at the prestigious MPSA conference in April 2021: <https://www.bmiglobalsolutions.org/single-post/the-rise-of-the-new-right-presentation-at-the-prestigious-mps-a-conference>



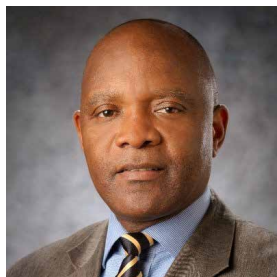
- Our research students – **Amit Loewenthal, Eve Guterman and Eyal Sasson**, presented their research at the research students’ conference of the School for Social and Policy Studies, which took place on June 6th, 2021 – the first physical conference to be held after the Covid-19 era: <https://www.bmiglobalsolutions.org/single-post/bmi-fellows-at-a-research-student-conference>



» THE 2021 BMI PRIZE

The Boris Mints Institute was founded with the intention to encourage research, planning and innovative thinking to promote significant positive change in the world. BMI is focusing on finding strategic feasible solutions to provide strategic plans and innovative projects to enhance the welfare of communities around the globe. Starting 2017, BMI awards a \$100,000 prize to an exceptional individual who has devoted his/her research and academic life to the solution of a strategic global challenge, and whose research public action and ideas had transformative impacts on global policy formation and a proven contribution to the welfare of a significant number of communities worldwide.

The 2021 BMI Prize will be awarded to an outstanding academic figure, that stood out in fighting the Covid-19 virus. The prize evaluation committee will focus on the way in which the crisis was (and is) managed, in order to award the prize to a person who combines solid academic background with proven management skills and a far-reaching vision, that helped save lives in the management of the COVID-19.



The 2021 BMI Prize laureate is **Dr. John N. Nkengasong, Director of CDC Africa**. The prize is awarded to Dr. Nkengasong for his substantial efforts in the management of the pandemic, his public action focused on practical and applicable solutions, and his impact on global policy. For further information re Dr. Nkengasong and his work: <https://africacdc.org/people/dr-john-nkengasong/>

Dr. Nkengasong was recently elected as one of the 100 most influential people of 2021: <https://time.com/collection/100-most-influential-people-2021/6095972/john-nkengasong/>

The prize will be awarded to Dr. Nkengasong in a virtual ceremony on October 17th, 2021. The recording of the event will be available on the BMI website.



Prof. Milette Shamir, Vice President of TAU

BMI Research webinar | September 2020

The Boris Mints Institute opened its 6th year of Activity with a research webinar, featuring an opening statement from Prof. Itai Sened, head of BMI and presentations by Prof. Milette Shamir, TAU Vice President, Prof. Liat Kishon-Rabin, Dean for Innovation in Teaching on the topic of New Horizons in Research for TAU International and Innovation in Teaching, and BMI Researchers and Graduating fellows, on a variety of other topics featuring: conflict resolution, inequality and demographics.

To read more or view the recording: <https://www.bmiglobalsolutions.org/single-post/the-boris-mints-institute-2020-research-webinar-opening-our-6th-year-of-activity>



Prof. Itamar Rabinovich, TAU, BMI Board member

U.S. Elections webinar | December 2020

In the aftermath of the 2020 US presidential elections, there are many changes which are expected to come across multiple fields: foreign and domestic policy, cybersecurity and strategic directions. The implications of these elections lay amid a complicated year in terms of the Covid-19 pandemic, as well as its effects – such as concerns for the lack of global cooperation, and rising economic and social inequality. The United States, which for years served as an example of an advanced society, has gravely suffered from the pandemic, and had also experienced civil unrest caused by police brutality and extensive clashes between republican and democratic voters – all of these factors have impacted the result of the election. This webinar was made possible by the collaboration of the Boris Mints Institute, The Blavatnik Interdisciplinary Cyber Research Center, Check Point Institute for Information Security and The Center for the Study of the United States in Partnership with Fulbright Program at Tel-Aviv University, combining a variety of outstanding speakers to present their view upon the implications to follow

the election, as well as opening remarks from Prof. Itai Sened, Dean of Social Sciences Faculty, TAU and Head of BMI; Prof. Mark Shtaif, TAU Rector, and was moderated by Dr. Udi Sommer, TAU Department of Political Science.

To read more or view the recording: <https://www.bmiglobalsolutions.org/single-post/the-aftermath-of-the-2020-u-s-presidential-elections-politics-cyber-and-strategy-zoom-webinar>



Dr. Segenet Kelemu, Director General and CEO, ICIPE

Food Planet Prize webinar | March 2021



Continuing BMI's series of webinars, this webinar presented the winners of the Food Planet Prize, among which is *icipe*, Kenya – our long time research partner. This webinar focused on various scientific projects that combine science and its practical applications, in the fields of sustainable development, water and food security, ecosystem preservation and agriculture. Due to climate change, a growing global population and a globalized economy all compromise the capacity to preserve the basic human right to food and water is compromised. Land and water degradation due to global warming attribute to a very unsustainable direction that the world is going in. The result is that combatting this challenge requires substantial knowledge and massive projects, as this is truly a matter of survival.

To read more or view the recording: <https://www.bmiglobalsolutions.org/single-post/bmi-webinar-celebrating-the-food-planet-prize>



Prof. Manuel Trajtenberg, head of INSS

Globalization webinar | May 2021

This webinar, hosted by BMI, focused on the challenges imposed by Globalization in political and economic institutions, as well as solutions to such. Many esteemed members of academia and practitioners in the field participated in it: Prof. Manuel Trajtenberg, head of Institute for National Security Studies; Dr. Nadine Baudot-Trajtenberg, Former Deputy Governor of the Bank of Israel; Prof. Anat Admati of Stanford University's Business School; Prof. Itai Sened, Dean of the Social Sciences Faculty at TAU and head of BMI; Prof. Simon Hix, Pro-Director at the London School of Economics and Prof. John Carey of Dartmouth College. The speakers shared their recent research and views on policies that could be applied in a strategic manner to combat the challenges of globalization.

The webinar also included a series of opening remarks by Dr. Boris Mints, founder and president of BMI and Prof. Ariel Porat, president of Tel-Aviv University.

To read more or view the recording: <https://www.bmiglobalsolutions.org/single-post/bmi-webinar-globalization-s-challenges-where-do-we-go-from-here>



Hon. Isaac Herzog, President of Israel

Between legitimate critique and anti-Semitism: Mediating Israel in European countries webinar | July 2021

This webinar was a first step in the collaboration between BMI and the Chaim Herzog Institute for Communication, Society and Politics, and carried out thanks to the generous donation of

Ms. Andrea Wine, member of TAU Board of Governors.

The question before the participants was: how to distinguish acceptable criticism of Israel from Anti-Semitic speech?

There is a need to disconnect anti-Semitism from legitimate critique of Israel, and we need to enable dialogue that is true, based on facts and looks at the elements of the debate that matters.

The president of Israel, Hon. Isaac Herzog, who joined the webinar for opening remarks, has a remarkable skill to walk the fine line and has very much articulated it and performed it throughout his life. The webinar presented different views on the subject in a panel of speakers – researchers, journalists and activists: Prof. Dina Porat, Former Head of the Kantor

Center, Tel-Aviv University; Alan Johnson, British political theorist and activist, Research fellow at the Britain and Israel Communications and Research Center; Viviane Teitelbaum, Member of the Belgium Parliament; and Marc Neugröschel, Journalist and researcher. The webinar was mediated by the Head of the Hrezog Institute, Dr. Sandrine Boudana of the TAU Department of Communication. To read more or view the recording: <https://www.youtube.com/watch?v=0ZraSxLrzGo&t=292s>

OTHER BMI ACTIVITIES

Energy Efficiency and ClenTech mission | February 2021

Prof. Itai Sened gave a talk at ACCIO – Catalonia Trade and Investment Office on the topics of clean technology and efficient use of energy.

Arava courses on Sustainable Development | October 2020 and February 2021

Dr. Ram Fishman and Prof. Itai Sened gave two seminars over Zoom this year. Next year BMI hopes to return to an in-person format in the Arava Desert.

Blockchain Workshop | April 2021

BMI organized a research workshop on Blockchain and its many applications, which included participants from our partner-institutions – University of Donja Gorica, Montenegro, University of Malta, and HTW Berlin. The workshop entertained esteemed members of faculty, such as Prof. Eviatar Matania, TAU, Prof. Dr. Katarina Adam, HTW, Prof. Gordon Pace, University of Malta, as well as students, who are currently working on various possible collaborative projects in this exciting topic.

The world is moving beyond the concept of resource scarcity, which was the cornerstone of global economics, and a new economic approach is needed to cope with the current economic environment as the rapid growth of human capital and the transition to AI-based systems worldwide make it unlikely that scarcity will persist for long. According to the New Wealth of Nations study, which indicates that wealthy nations will become even wealthier, the disappearance of scarcity acts as a constraint on a global scale that must be addressed. In order to extend its work on the exciting topic – BMI organized a research workshop on Blockchain and its many applications, which included participants from our partner-institutions – University of Donja Gorica, Montenegro, University of Malta, Malta and HTW Berlin. The workshop entertained esteemed members of faculty, such as Prof. Eviatar Matania, TAU, Prof. Dr. Katarina Adam, HTW, Prof. Gordon Pace, University of Malta, as well as students, who are currently working on various possible collaborative projects in this field.

For a summary see: <https://www.bmiglobalsolutions.org/single-post/blockchain-research-workshop>

RISE Discussions #1 | June 2021

BMI hosted and supported a 3-session discussion on various issues of Urban Sustainability. This event was planned and organized by two of our Ph.D. students from the water lab: Eitan Benson and Roi Pertz. The discussion focused on [Recycling Municipal Textile Waste](#), Urban Renewable Energy Production and Onsite Greywater Treatment.

For the recording of the discussions: <https://www.bmiglobalsolutions.org/single-post/the-rise-discussions-1>



FUTURE ACTIVITIES

The next BMI event – **the inauguration of the Matanel Garden and the awarding of the 2021 BMI Prize** – will be held in October 17th, 2021, as a virtual event.

The following **conference** will be held in November 2021 in Vienna, Austria in collaboration with the University of Vienna, focusing on The Future of Democratic, Economic and Political Institutions.



SUSTAINABLE
DEVELOPMENT



RENEWABLE
ENERGY



INEQUALITY



WATER



CONFLICT
RESOLUTION



➤ **The Boris Mints Institute for Strategic Policy
Solutions to Global Challenges**
Tel Aviv University
POB 39040, Ramat Aviv, 6997801, Tel Aviv, Israel

➤ **Email** bminstitute@tauex.tau.ac.il
Tel +972-3-6408836
Fax +972-3-6407382
<http://www.bmiglobalsolutions.org>