

# NEWS FOR A BETTER WORLD

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**SCE**  
SHAMOAN COLLEGE OF ENGINEERING

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**GREETINGS FROM THE PRESIDENT**



Over the past few years, the College has continued its impressive growth momentum in infrastructures, research, and novel academic study programs. Today, SCE is perceived as being a leading institution among the Israeli academic institutions.

This year we reached a record number of graduates with 1,152 engineers, men and women, leaving in a timely manner to enter the labor market. This is an outstanding achievement—one that places us at the hub of the training of engineers in Israel. In fact, fifteen percent of all the engineers in Israel are SCE graduates.

Each and every one of them is an ambassador for excellence, creativity and innovation, who will have a positive impact on Israeli industries and on our economy - they will be able to boost the Israeli economy, moving it forward. Each graduate, each project and each technological solution that you develop—they will shape the future of the State of Israel and of the whole world.

I wish to thank you, our students, for your trust and hard work, commitment, investment and aspiration for excellence. You are the beating heart of the college, and we are proud to witness your growth and development, as you complete your studies here and transform into our ambassadors for the future.

I wish you all great success!

Sincerely,

**Prof. Semyon Levitsky**  
SCE President

Good tidings for the Israeli medical System: A B.Sc. study program in Medical Imaging will open this coming October on the Be'er-Sheva campus of SCE. SCE's founder, Prof. Jehuda Haddad: "This program provides a solution to the existing distress in the provision of medical services in the southern region."

Against the background of a serious lack of medical services and trained professionals in X-ray and medical imaging, the Council for Higher Education (CHE) authorized SCE to quickly open a new study program in October 2026, granting a Bachelor's degree (B. Sc.) in Medical Imaging. These academic studies will be held on SCE's Be'er-Sheva campus, while the practical training will be done at the Soroka/University Medical Center (Be'er-Sheva) and at the Barzilai Medical Center (Ashkelon).

The medical system in Israel is coping with a serious, ongoing lack of X-ray technicians and medical imaging specialists (MRI, CT and ultrasound)—a situation causing high personnel burnout (overbooking) and scheduling problems (long waits) that delay diagnoses. According to the data from the Israel Ministry of Health, it is clear that there is an urgent need to increase the number of trained professionals in this field, especially in the southern region.

This B.Sc. study track in Medical Imaging is meant for young people with foresight, who are interested in joining the health system, in hospitals and imaging institutions—to become a part of



**FOR THE FIRST TIME IN THE NEGEV: A BACHELOR'S DEGREE IN MEDICAL IMAGING**

this significant and challenging field that has an impact on the quality of life of all Israel's residents.

The students will acquire basic concepts in Life Sciences, Physics and advanced technologies. They will learn the physical principles of a variety of imaging techniques, become familiar with various pathologies that must be diagnosed by means of medical imaging, and they will acquire practical and theoretical tools for their work in the field of imaging in this age of advanced technology.

The granting of this degree is

conditional, requiring authorization by the CHE, as is the case for all new programs in the process of authorization.

Prof. Jehuda Haddad, SCE's founder: "This unique study program is the first of its kind in the Negev and is meant to meet the growing need for professional personnel in the field of imaging. It offers a real solution for the distress existing today in the southern medical services by training and recruiting experienced, high-quality manpower, able to contribute and improve the medical services provided to the Israeli public."

**GREETINGS FROM THE FOUNDER**



I am happy to give you an update—the College is launching a new Bachelor's degree study program in Medical Imaging Sciences. This program is the first of its kind in the southern region and will train leading professionals in the field of medical imaging to serve in Israel's health system.

The program consists of academic studies in Life Sciences, Physics, and Imaging Technologies, alongside intensive practical training at leading medical centers, including Soroka and Barzilai. The opening of this track reflects SCE's development momentum, and our commitment to continue to grow, innovate, and lead Academia.

Another significant achievement is receiving authorization for the Faculty of Architecture from the Council for Higher Education, enabling SCE to grant a degree in Architecture.

I am proud of SCE's growth and development, as well as the ongoing aspiration for excellence. The opening of the program for Medical Imaging and the authorization of the Faculty of Architecture bring with them new and inspiring opportunities that strengthen our status as a leading institution, full of potential for significant growth - for the good of the coming generations of students, researchers, and lecturers.

I wish every one of our students success in the examinations and our dear graduates—may you succeed on your professional paths in industry, research and development.

Warm wishes,

**Professor Jehuda Haddad**  
SCE Founder

# A GRANT IN MEMORY OF ITAI BERDICHEVSKY WAS BESTOWED UPON AN OUTSTANDING STUDENT



**Itai and his wife, Hadar, had been murdered on October 7, 2023. “Continuity, action and hope:” the grant was bestowed upon the student by Itai’s mother at the conference entitled: “Renewable energies, storage and AI” held at SCE’s Be’er-Sheva campus, which dealt with the design of tomorrow’s energy economy.**

There were some emotional moments at the annual conference: “Renewable energies, storage and AI” held at SCE’s Be’er-Sheva campus. A grant named in memory of Itai Berdichevsky, a graduate of the SCE Department of Electrical Engineering and Electronics, who was murdered along with his wife on October 7, 2023 in Kibbutz Kfar Aza was awarded to Bar Arieli, a third-year student in the department.

This 12,000 NIS grant, donated by the Workers’ Committee of the Israel Electric Company, was bestowed

upon Bar by Ravit Berdichevsky, Itai’s mother, who said: “For me, this moment symbolizes a mixture of pain and pride. Bar had been a fighter and a commander in the “Golani Patrol” and, parallel to his studies, was on a path like Itai’s—having served over 400 days in the war. This grant expresses the continuity, action and hope for the future.”

This conference, held in cooperation with the Society of Electrical, Electronics and Energy Engineers in Israel (SEEEEI), serves as a link between the electrical

and air-conditioning industries in Israel and Academia. During the lecture sessions, top-notch experts and industrialists from the Israeli Electrical Industry participated.

The Conference Chair and Head of the Department of Electrical Engineering and Electronics, Prof. Dmitry Baimel said, when opening the event: “Be’er-Sheva is a place full of opportunities and I hope that this conference, convening here for the fifth time, will establish an ongoing tradition for the coming years.”



Others who greeted the participants were the Chair of the local Israel Electric Corporation (IEC), Shalom Buhbut, and the Chair of the Heating, Ventilation and Air-Conditioning (HVAC) and Energy Society, Avi Menashe.

SCE’s Rector and Founder, Prof. Jehuda Haddad, addressed the challenges in the electrical industry and the critical roles of their engineers, saying: “This conference is dealing with one of the greatest challenges in our generation—designing. This is not a vision of the future, rather a timely necessity.” Prof. Haddad called for closer cooperation between Academia and Industry, to better raise the next generation of engineers.

The President of the SEEEEI, Emil Koifman, spoke about the “Electrical revolution” and the need for creative, high-quality, entrepreneurial engineers to lead the transition to a modern and more efficient energy economy. He presented a pilot for the training of

electrical engineers in industry, like the training of doctors in hospitals. “Today, there is already a dearth of electrical and energy engineers,” he said, “the graduating students just have theoretical knowledge, therefore, only about 200 engineers join the economy each year. As such, we have initiated an internship program, complementary to the academic studies, in which we have accepted five outstanding students from each of those educational institutions for a one-year practical preparatory course (internship) during their fourth (senior) year, after which there will be two more years of specialization. The goal is to expand this model in the future.”

The Mayor of Be’er-Sheva, Ruvik Danilovich, spoke about the regional potential of the Negev regarding solar energy and the increase of engineers and entrepreneurs.

Shalom Buhbut, Chair of the local IEC, emphasized the importance of

holding this conference in the Negev, “a region in which significant events are happening in the fields of electricity and energy,” adding that “it is important that we already talk about the future today...The Electric Company is absorbing students and training them, and most of them continue to work in the company. Good tidings about energy and electricity will emanate from the Negev; the challenges are found here, the knowledge is found here, and so is the sunshine.”

Avi Menashe, Chair of the HVAC and Energy Society, added: “The Negev and its environs are almost unlimited land reserves for technological development. Just as “Netafim” developed their sustainable, drip-irrigation system here, other solutions may be developed here for energy absorption and storage. Electrical engineers are the motivating force in data centers and, in the coming years, we will see a growing demand preferring them to programmers.

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Yotam Bar-Natan concocted twelve types of beers in the context of his final project, during his studies in SCE's Department of Chemical Engineering on the Be'er-Sheva campus, to develop a scientific method for cracking the secrets of bitterness.

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# BEER-SHEVA: A FINAL PROJECT FOR TASTY BEERS

What happens when the head of the department suggests that you do a final project, associated with your day-to-day dealings - in an entirely unusual field? The answer to this was provided to us by Yotam Bar-Natan, a fourth-year student in the Department of Chemical Engineering on the Be'er-Sheva campus who for the past five years has been managing "The Beer House" ("Beyt ha-Birah") - a local Be'er-Sheva establishment in the Old City. Yotam not only manages the business but has also delved into the field and has been brewing beers. In accordance with Prof. Ariela Burg's suggestion that he examine different types of beer, Yotam decided to develop a precise method for determining the distinct

degree of bitterness of each his beers. After consulting with his previous mentor, Dr. Yoram Shotland, Yotam brewed five liters of 12 different beers. His experiment was based on two independent variables - the three species of hops gotten from different locations across the world and the temperature of the fermenting hops during the phase following the boiling of the grains (at 60 or 100 degrees Celsius). Each combination of hops' species and fermentation temperature was evaluated for 5-10 minutes. Note that the hops is one of the four basic components of beer, responsible, among other things, for the degree of bitterness caused by the alpha acids



released during the boiling process. Later, with the assistance of his final project mentor, Prof. Dorit Tavor, a blind taste survey was done by 30 tasters of various ages and from varied backgrounds—with the goal of discovering if they could distinguish between the 12 tastes, aromas and degrees of bitterness resulting from the different production conditions. In the cases of most of the samples, no unequivocal opinions were given; only in one case, a large majority of the tasters agreed that there was no bitterness at all. Regarding the other 11

samples, there was a certain degree of consistency of their opinions, but less than for that "not bitter" one. Then, laboratory experiments were conducted to measure the precise degrees of bitterness in each type of beer. Unlike the results of the blind test, the lab results found unmistakable differences between the 12 brews that enabled the precise measurement of the effects of the production conditions on the tastes of those beers.

**Cheers to beer lovers! And best of luck to Yotam and his final project!**





# A SYSTEM THAT BRINGS THE REHABILITATION TO YOUR HOME

A novel system developed by SCE students in the Department of Software Engineering enables independent rehabilitative exercise at home, reducing the need to go to medical centers and transforming exercise into an interactive experience that is accessible and motivating.

Shir Ben Dror and Yana Zlatin, women students in SCE's Department of Software Engineering on the Be'er-Sheva campus, under the guidance of Dr. Irina Rabaev, have developed a rehabilitation system called "MOVA," based on virtual reality technology. This system is meant for people who have lost limbs and are also coping with other physical disabilities; it enables them to execute rehabilitative exercises independently, in an accessible and continuous manner - at home or any other suitable environment - thus reducing their dependence on frequent visits to medical institutions and physiotherapy centers.

The necessity for such a system stems from the many challenges that accompany the traditional rehabilitation process, among which are lengthy waiting times, the physical and emotional difficulty of getting to frequent treatment sessions and high dependence on professionals.

This novel system was developed using a Unity motor and integrates a movement-based, interactive environment, designed for exercise and rehabilitation of the upper and lower limbs. It is supported by physiotherapeutic mirroring principles—a method of treatment based on the creation of visual simulations of the limbs' movements, encouraging functional, neural responses, for the improvement of motor abilities and strengthening the patients' sense of control during the rehabilitation process. By means of virtual reality technology, these principles are given novel implementations, attractive and interactive, expanding treatment options beyond the framework of the traditional clinic.

The system does not suffice merely with guiding the exercises, rather it creates an enveloping, supportive treatment environment. The combination of medical rehabilitation

and interactive experience, resembling a game, enhances the users involvement, encourages persistence while exercising and transforms the rehabilitation experience into a positive one, accessible, interesting, and motivating.

Moreover, the system gathers the patient's performance data and stores them, so the professional physiotherapist and other members of the medical staff can continually keep track of and assess the patient's progress. Thus, they can identify difficulties or irregular movement patterns and better tailor each rehabilitation program to suit the specific needs of each user.

As such, MOVA provides one technological solution that is both user-friendly and therapeutic at once—contributing to improved accessibility, continuity, and greater effectivity of the rehabilitation process.



# Sabotage by sports fans: A self-defeating strategy

“Fueling the opposition: An analysis of ‘contest theory’ regarding a ‘backlash effect’ led by sports fans”

(Abstract of an article by Prof. Yizhaq Minchuk, Dept. of Industrial Engineering and Management)

This article examines the phenomenon of “indirect sabotage” in professional sports, as executed by external agents—the sports fans.

While traditional economic literature, in the past, had focused on internal sabotage (e.g., intentional fouls, the throwing of games, or drugging), there is now a growing phenomenon of sports fans who see themselves as being the “12th player”—whose proactive goal is to disrupt the physical/technical ability of the rival team. Blatant examples include Iranian fans who used vuvuzelas and drums to prevent the Portuguese team from sleeping the night before a critical game during the 2018 Mondial, and other cases of shooting or firecrackers fired at night by sports fans of Paris Saint-Germain (2021), with a similar goal. Such deeds are considered calculated external sabotage, in which the sports fans invested their resources to damage the likelihood of their rival’s winning.

## “Backlash effect”

The surprising, primary finding of this study is the identification of a “backlash effect”—in which the sabotage instigated by the sports fans acts like a boomerang, contrary to the accepted assumption (that sabotage directly

reduces the rival’s output). The present, sports-related model shows that a sabotaged team is, indeed, likely to respond with greater, more productive efforts than they would have invested, had they not been disrupted.

When sports fans disrupt the sporting environment (e.g., preventing the rival team’s sleep), the attacked team may consider it ‘unfair’ competition. Studies on behavioral economics have found that threats to the sense of fairness may lead to an escalation of invested effort by the attacked team in their attempt to overcome obstacles (rather than leading to the team’s collapse). Historic attestations support this finding; for example, after the attempts to disrupt his sleep in 2018, Ronaldo scored the winning goal, and in 2025, Liverpool’s coach noted that, despite all the noise from the firecrackers the previous night, the team had remained completely focused during their maneuvers on the field.

## The theoretical model: “Contest theory”

From a mathematical perspective, this article analyzes the situation using “contest theory” (a subset of “game theory”). In such a model, a team enjoys the sabotage conducted by its sports fans, who create a ‘downward shift’ in the rival team’s probability distribution. However, such sabotage also

comes at a cost for the first team (usually the payment of a fine), but since these fines tend to be small—that team may, seemingly, earn from it.

Nevertheless, this model proves mathematically that, due to the asymmetry created by the sabotage, certain types of ‘weak’ players (who were sabotaged) will act more aggressively than the ‘strong’ players on their team. The more serious the impact of the sabotage, the greater the effort gap will become, in favor of the sabotaged team. That is to say, the disruption enhances the marginal expediency of the attacked player in every additional unit of effort made.

## Summary and conclusions

Sabotage led by sports fans is, more often than not, a self-defeating strategy. Rather than ensuring the failure of the rival team, such actions sharpen the focus and determination of the opponent, creating performances that excel above the level achieved in a quiet environment.

From the vantage point of sports organizations, these findings stress the importance of management and monitoring of the ‘dark side’ of fandom culture, since such disruptions do not merely harm the spirit of good sportsmanship but may even, ironically, empower the performance of the opposing team.

## Writing the knowledge: SCE researchers attended an academic writing workshop in Crete



Women faculty members participated in an academic writing workshop held on the island of Crete, that combined learning, inspiration and the strengthening of professional ties in a unique environment

Prof. Ariela Burg heads SCE’s Department of Chemical Engineering and is also in charge of gender justice and the prevention of sexual harassment at the college.

Although it’s probably a known fact, it’s still worthy of a reminder—besides their teaching tasks, the members of SCE’s faculty are leaders in academic research, who publish articles in international journals and contribute to the advancement of knowledge and innovation in their fields. As partial encouragement of their research and writing, 23 women faculty members set out for Crete to attend an academic writing workshop at the Hellenic Mediterranean University (HMU).

This workshop was given by Prof. Constantinus Patrdis, an expert in academic writing, in cooperation with members of HMU’s faculty, who are expected to visit SCE at a later date. This workshop had two primary

goals—to provide advanced tools for scientific writing, while creating a designated space away from daily routines, thus making it possible to concentrate on the writing of articles and research proposals. The participants were hosted at a nearby hotel adjacent to the Mediterranean coastline, providing the best conditions for work and creative thinking. During the morning hours, the women attended lectures and received professional mentoring; then, midday and the later afternoon hours were dedicated to personal work. The initiative for this workshop was led by SCE’s International Unit, headed by Prof. Adi Wolfson in cooperation with Prof. Burg.

“Prof. Patrdis hosted us wholeheartedly and introduced us to Crete regarding its cultural and academic aspects. One day, we took a trip across the island, during which we met local residents, witnessed their lifestyle and saw

their focus on agriculture especially the traditional olive crops, so ingrained in their economy. The combination of learning, unique surroundings and encounters with local culture greatly contributed to our experience, serving as inspiration for our writing processes. Moreover, it was an opportunity to become more acquainted with our fellow faculty members, to create new bonds for future cooperation and mutual inspiration.

I am proud of the research achievements of SCE’s faculty and wish them continued, fruitful activity, significant writing and expanded international cooperation. My thanks to the college’s administration for the support and the creation of opportunities for taking a time-out from daily routines—time devoted to deep thought and the advancement of academic research”.

# Twice as good: Two research grants for Dr. Galia Limor-Sagiv



From Makhtesh Ramon to Be'er-Sheva—a researcher from SCE's Department of Architecture was awarded two research grants within two months. She shared the second grant with her students.

At the end of 2025, Dr. Galia Limor-Sagiv from SCE's Department of Architecture was awarded a two-year research grant at the amount of 290,000 NIS, sponsored by the Fund for the Preservation of Open Spaces. In cooperation with Dr. Ariel Meroz, from the Dead Sea-Arava Science Center, they are researching: "The services of the ecological landscaping system in Makhtesh Ramon: Cultural, educational, and recreational benefit for Humanity." Their study deals with the mapping and evaluation of the cultural services offered by Makhtesh Ramon—among the unique and breathtaking natural sites in Israel - regarding tourism, education, research, arts and spiritual experience, as well as examining their contributions to Israeli society and to the Negev region.

"The research focuses on the spatial demarcation of the crater and the identification of the highly valuable ecological, scenic and cultural sites within it," Dr. Limor-Sagiv explains. "It combines interdisciplinary approaches: analyses of outline and restoration plans, interviews with professionals and managerial bodies, and the use of advanced means for monitoring and data collection about visitors and movement. The

results of this survey are expected to provide the basis for our decision making regarding the management of Makhtesh Ramon and the development of future enterprises for self-sustaining preservation and tourism in Ramon, in additional craters in the Negev and in other open spaces in Israel."

Recently, Dr. Limor-Sagiv was awarded an additional grant, sponsored by the Be'er-Sheva Municipality, in response to a call for proposals regarding self-sustaining activities and waste management. The topic of the research proposal she submitted is: "Short films and podcasts on the subjects of sustainability and waste management in Be'er-Sheva: 'What do we do with it?'—A community video campaign for waste management in Be'er-Sheva."

Dr. Limor-Sagiv tasked her first-year students: "Welcome to the Anthropocene" - a mid-year project requiring the preparation of a short film or podcast about waste treatment in Be'er-Sheva. The outstanding projects received monetary prizes, dispensed from her municipal grant: in first place, awarded a 4,000 NIS prize - Ofek Rofman and Nimrod Gilad, for a short film on "Shambala," a social, second-hand boutique; in second



place, also awarded 4,000 NIS—Einat Avni, Rotem Bitan and Batya Frankel, for their short film, entitled: "Stars and a quiz," in third place, awarded 2,500 NIS—Ayat Mar'i, Mayis Torah, Nusayba Hamudah, Ritaj Garav and Muhammad Abi-Ashiba, for their

work: "Why recycle? A conversation with residents," and in fourth place, awarded 1,500 NIS—No'a Kalbo, Raz Simtov, and Amit Pinhas, for their podcast about construction waste.



## Not just the facts: How does artificial intelligence (AI) assess catastrophic situations?

New research, conducted by Dr. Aviad Elyashar at SCE, has found that AI is also affected by the manner in which data is presented, by emotional expressions, when assessing the severity of an emergency

**Dr. Aviad Elyashar, Department of Computer Sciences**

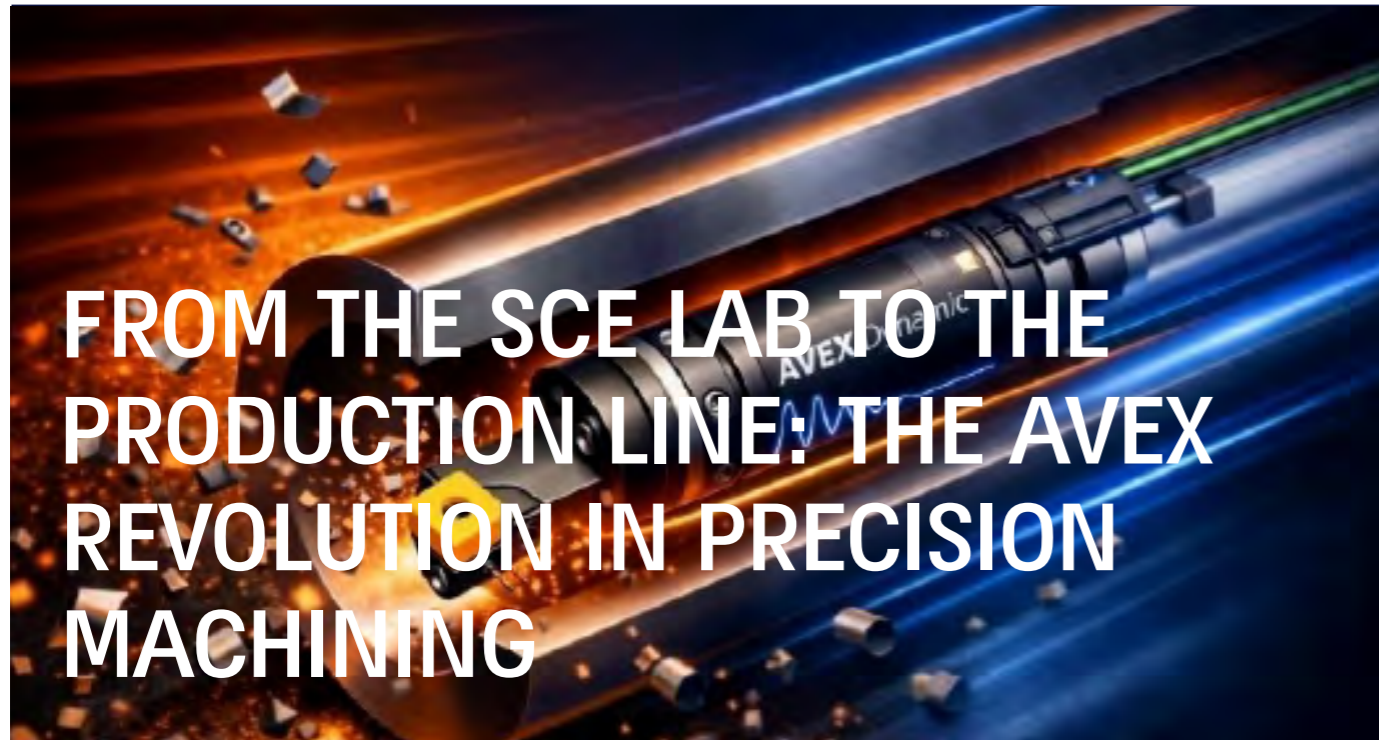
A new article, by Dr. Aviad Elyashar in SCE's Department of Computer Sciences and other researchers from the Ben-Gurion University of the Negev (BGU), was accepted for publication by the international journal "Progress in Disaster Science."

This research deals with very significant and highly applicable questions: How does AI assess catastrophic situations? How much of the AI's assessment is affected not only by the objective facts but by the way in which they are presented? Within the framework of this research, certain synthetic scenarios were examined of earthquakes, fires and chemical accidents—to check for uncertainty in the data, lest the emotional content impacted the assessment of the severity of these incidents and the determination of their response prioritization.

The importance of this research is especially blatant in emergency situations, in which decisions must be made in accordance with the severity of the active situation—and not according to the intensity of the description. Like a professional responder in the field, who is required to distinguish between emotional expressions and actual dangers, so the AI system must be able to assess the data in a relevant, practical manner, without deviating in response to dramatic phrasing or high levels of uncertainty. This research found that, without careful examination of such sensitivities, the use of AI in decision-support systems may lead to evaluations that are not the best ones.

The findings of this research stress the need for a deeper understanding of the limitations and sensitivities of AI systems, especially when they are under consideration for application to sensitive fields, like emergencies, health and disaster management.

To read the full article: <https://doi.org/10.1016/j.pdisas.2026.100571>.



A research project initiated at SCE became applied technology with global potential: The AVEX company, which grew out of a research laboratory, offers control methods that combine real-time data while reducing vibrations during engraving processes.

The AVEX story is a quintessential example of how groundbreaking academic research can become a technological solution that changes industry.

AVEX was born at SCE's Control Research Center (CRC), headed by Dr. Ziv Berend, in the Department of Mechanical Engineering on the Be'er-Sheva campus. What had begun as research in the field of dynamic control of mechanical systems developed into an applied technology with great potential for advanced industries.

In the world of precision machining, internal engraving is considered one of the most complex challenges. The longer and thinner the engraving tool is, the more it tends to vibrate, which reduces its precision, particularly diminishing the quality of the product's surface. The patented AVEX solution presents a novel approach. The

system uses advanced, adaptive monitoring methods that combine data gathered directly from the processing process, enabling the user to choose the optimal parameters in real-time. Unlike conventional methods, this system injects controlled energy into the engraving tool as it operates, thus suppressing vibrations in real-time and improving process stability.

This technology, tested in the CRC labs, presented especially impressive results. During the experiments with challenging materials, such as hard steels (AISI 4340), a significant improvement was seen in the rate of material removal, compared to unmonitored work, while maintaining a high finishing level. Additionally, the system's ability to adapt to changing work conditions reduces the dependence on expert machinists and enables a significant reduction in production times.

Today, this technology is in a transitional phase, from an experimental product to a broader-ranged industrial application with first sales and cooperation with leading companies in the security and civilian industries.

The main challenge at this point is not merely technological, rather also industrial: adjustment to serial production; integration into the supply chain and suitability for existing work processes. As part of this stage, AVEX provides the client with engraving tools with outstanding length (15.5D), made of standard tool steel, which is an important step towards the full commercialization of this technology.

At AVEX, they say: "Our vision is to take part in the technological revolutions of Industry 4.0 and 5.0." The AVEX team invites manufacturers and industrialists to present their complex processing challenges towards the goal of leading the



essential improvement in production efficiency and expanding the scope of the usage of the existing tools. (To contact us/join us: Ziv Berend – zivbr@sce.ac.il)

The success of AVEX is a certificate of merit for the CRC lab and SCE's Dept. of Mechanical Engineering, attesting to the fact that significant, innovative technology can grow from Academia and reach the production line.

Besides leading Academia, this development is supported by close cooperation with three main partners: Nissim Levi, a partner in technology development; Nikolai Rezyonov, an engineering partner; and Liran Falik-Tevet, who accompanied the business transactions from the start.

This development received support and backing from the college's administration, led by the founder and Rector, Prof. Jehuda Haddad, who invested many resources for the establishment of the research center and the promotion of advanced knowledge infrastructures.

Thanks also go to SCE's CEO, Ms. Zohar Wohlfarth Cohen, for her support of the establishment of the research center for precision machining processing and to Dr. Gedalya Mazor, who believed in this project and supported it with the founding of the CRC.

This innovation also received significant financial funding for research and development from the Israel Innovation Authority, which had identified the potential in transforming academic knowledge into advanced industrial solutions.

## Local pride in Saudi Arabia

Students from SCE presented their design project at a conference held in Riyadh: An application that manages crowding in public places



Leah Shapira and Aleksandra (Sasha) Friedland, students in the Visual Communication Department on the Be'er-Sheva campus, succeeded in turning an academic dream into a reality more quickly than anticipated—and at a surprising venue. These two were chosen to present their design project at the International IEOM (Industrial Engineering and Operations Management) Conference held this year in Saudi Arabia. The conference was convened in a hybrid manner, which enabled them to display their work before a professional audience from across the globe.

Their project, entitled "Flow," was developed within the framework of the course: "The user's experience and cognition," given by Dr. Adi Katz. It is a smart application for crowd management in public places that helps users make wise decisions regarding going to crowded locations, such as restaurants, stores and events. The system is based on real-time data about crowding, enabling people to choose either to avoid crowds or to join a lively, effervescent throng.

"These women students accepted the

challenge, submitted their candidacy and, in excellent English, confidently presented a usable interface, aesthetic and sensitive," Dr. Katz proudly recounted. "When students face a professional audience like that, they understand that their voice is important and that the knowledge they are developing is relevant in the global arena. This strengthens their sense of capability and belonging to the international community."

The project created by these two young women designers fit right into a session designated for design projects at the conference, those associated with the world of industrial engineering and management. They received accolades for their ability to make the complex data on crowding conditions accessible by means of an advanced user experience (UX).

In the Visual Communication Department, great pride was expressed regarding their achievement and for representing the next generation of Israeli designers—one that knows how to integrate technology, human understanding and international standards.



Dr. Efi Zemach, married to No'a and father of five, lives in Rehovot. He began his academic studies in the Department of Mechanical Engineering at the Technion, where he completed his Bachelor's degree. For his Masters' degree, he studied at Tel Aviv University, and then he went on to get his Doctorate at the Ben-Gurion University of the Negev. He joined the SCE faculty of the Department of Mechanical Engineering while simultaneously serving in various senior management positions at the Soreq Nuclear Research Center in Yavneh.

"I joined the college out of love for teaching, wanting to share the practical knowledge I had amassed with students in the peripheries - thus, preparing them for key positions in industry. I arrived here [in Be'er-Sheva] in parallel to my other positions in industry, despite the workload, out of a sense of personal mission," he explained. "Over the years, I assisted in the absorption of many students, college graduates, into R&D jobs in industry."

His primary areas of research are in the field of Energy and they focus on the development of innovative methods for the cooling of high thermal flooding in various applications, such as in the worlds of electronics, nuclear power-plants and particle accelerators. Over the past few years, this subject has become acute, among other things, due to the accelerating developments produced by artificial intelligence and supercomputers.

Efi mentors many students towards their advanced degrees at SCE and at other universities. His articles have been published in leading scientific journals and he has presented research papers

at international conferences.

His contributions to the community are heartfelt. In recent years, he has spearheaded a few large enterprises in cooperation with SCE and Israeli hospitals. One of these projects, "Eglot Hessed" ["kindness wagons" - volunteers go from department to department and distribute baskets of food and drink to patients and their visitors] function at a few medical centers: Shaare Zedek, Tel Hashomer and Soroka. Another interesting project, developed by students in SCE's Dept. of Mechanical Engineering, is an MRI simulator that prepares children for MRI examinations, often replacing the need for general anesthesia. Similarly, a new project has recently been completed that will prepare children for X-ray treatments—already in use at Hadassah.

"This connection, between engineering knowledge and the good will of the college's students, enabled us to complete groundbreaking projects that impact the daily life of many patients. On an action scale, my connection to the community has always been in first place."



Ira Green, who joined SCE this year, is a leading expert on the development and recruitment of resources for large-scale academic projects, infrastructures and

philanthropy, with over two decades of experience in the international arena.

"Throughout my career, I have led the recruitment of capital on scales of hundreds of millions of dollars," he noted, "while building strategic cooperation with donors, foundations, associations and public institutions in Israel."

Ira served as Executive Director and Manager of Resource Development of the World Zionist Village in Be'er-Sheva, where he led the general strategy for the recruitment of resources for this large-scale national project, developed ties with leading Jewish federations, investors and private donors. In his prior positions, in which he had served as Deputy-General Manager of Finance and Deputy-General Manager at Arava Power Company and as a founding partner in GGEnergy, he

had amassed significant experience in leading complex financial processes, regulation and innovation for energy and infrastructures.

Ira has the proven ability to forge long-term relationships based on trust, alongside excellent skills in strategic writing, contents development and the recruitment of international grants. He acts with a deep sense of commitment to the values of public service and education, while combining entrepreneurial thinking with broad systemic understanding.

"In addition to my professional activity," he stated, "for years, I've been involved in public and philanthropic activity, including leading grant programs and resource recruitment for leading educational institutions in Israel."



## New in Civil Engineering: A unique track for employed workers

A new academic track offered by SCE's Department of Civil Engineering on the Ashdod campus will enable construction workers to combine work and study towards an academic degree—to progress professionally without having to stop working

The Civil Engineering Department on the Ashdod campus hopes to launch a unique academic study track suited to employed workers at the start of the new academic year 5787 (October 2026). This track will only open if a sufficient number of candidates register. It offers a viable work/study schedule, so that the working student will be able to enjoy career, family and academic development.

This new track is being initiated in deep recognition of the needs of Israel's construction industry and is meant for people with experience in construction: work managers, contractors, supervisors and engineers who wish to advance by acquiring an academic degree in engineering.

According to the head of the department, Prof. Wafa Elias, "This track is designed for excellent workers in the field of construction—builders, managers, and project leaders—who require a study framework that

respects their experience and will allow them to advance without putting their lives on hold. As such, this track is designed with a deep understanding of the reality in this industry," she emphasizes, "so it integrates high-level academic studies with maximal flexibility, personal mentoring, always connected to the practical world. Our students do not merely learn theory; they bring the field with them to class and leave with applicable tools that give them a professional advantage throughout their studies. This is an excellent track for those who want to continue working, while developing and becoming a part of the next generation of leaders in Israeli Civil Engineering.

### Suited to employed workers

This track is spread across four years and consists of 12 semesters (three per year) starting in October 2026. These studies will be held one full day per week, an additional day with afternoon studies, and studies

on Friday mornings, so the working student can retain a full or part-time position.

Candidates may be accepted with valid (up to 6 years from receipt of the diploma) practical construction or engineering technician certification, as well as certified high-school graduates with 5 credits in mathematics and 5 credits in physics, or graduates of the recently opened, designated SCE academic preparatory course. In addition, a score of at least 560 is required on a Psychotechnical or Psychometric Exam.

This new track reflects the current perception of engineering training that connects Academia with the field, practical experience with academic excellence, and career development with advanced studies. This is an opportunity for people in the field of construction to broaden their knowledge, expand their horizons and advance to key positions - without giving up their occupational and personal stability.

# How to stay relevant in a changing world

Netanel Levi, a graduate of SCE's Department of Civil Engineering, talks about his career path, stressing that long-term success in the age of AI will require the essential integration of ongoing learning, flexible thinking and human skills - alongside the knowledge of engineering.

Netanel Levi, who graduated from SCE with a Bachelor's degree (B.Sc.) in Civil Engineering, is currently serving as the Staff Manager of project managers who handle infrastructures in the "Poran Shrem" company, which specializes in the management of construction and infrastructure engineering projects.

Levi says that his studies at SCE gave him a significant professional foundation and the tools for coping with challenges in his current position. In his words, the most important experience for him was the opportunity to do academic research under the close guidance of the lecturers. "Thanks to the college's support, he said, "I was privileged to present my research at a professional conference in Paris. For me, that experience opened a portal to the international, professional world, strengthening my confidence in my ability to lead complex processes."

## What's your tip for students to succeed in their degree studies?

"Take advantage of the lecturers' accessibility and of the opportunities offered by the college beyond the regular syllabus. Research, special projects and practical experiences will grant you relative advantages and the ability to translate theories into solutions in the field."

Levi adds that one of his most significant experiences during his SCE studies was the direct and unmediated contact with the lecturers: "I felt that I had someone to talk to. The SCE lecturers weren't distant figures; they pushed us to succeed, and their doors were always open to our questions and for their

suggestions." He especially mentions the close accompaniment that he and his friends received while conducting their research - later presented at an important conference in Paris. "It's not to be taken for granted when students get this type of support!"

Furthermore, Levi emphasizes the social experience: "While engineering studies are demanding, the social experience made it much easier. Bonds were formed well beyond just being study buddies."

When we asked to hear more about his professional journey leading up to the present day, Levi recounted: "My first steps in industry were as a construction planner in an office specializing in engineering structures, where I delved into planning bridges, tunnels and more complex structures. After my internship ended and my process of certification as a constructor was completed, I felt that the next stage is to connect my engineering knowledge with my leadership ability, so I joined the "Poran Shrem" company as their Project Manager."

"The experience I gleaned by planning now gives me significant added value as I manage complex, large-scale infrastructure projects, and it enables me to lead them with holistic vision—from the engineering details to the overall systemic management. Our uniqueness at "Poran Shrem" lies in the combination of deep engineering knowledge and professional interface management. Having systemic vision enables us to control all the project components based on solid engineering knowhow and to lead complex processes in a way



that creates real value and solutions in the field."

## What "toolbox" is needed to succeed in industry? Will SCE graduates be able to easily join such companies as yours?

"In the world of project management today, the most important characteristic required from a new engineering graduate is the ongoing will and ability to do independent learning. We're on the lookout for people who think outside the box, capable of managing complex interfaces and blessed with a problem-solving approach - all out of a deep understanding of the project and all its engineering components. These are critical traits for success in the management of complex projects."

"SCE's graduates integrate well into industry, since they arrive in the field aptly prepared. Obviously, no fresh graduate transforms into a project manager on the first day, but the combination of professional knowledge and the will to learn help fit into the staff, to acquire the necessary tools while on the go, and to develop and reach management positions."

"It is important to know that engineering knowledge and problem-solving ability form the necessary foundation for all engineers. Nevertheless, in this everchanging world, certainly since the entrance of AI—even that is not enough. The ability to communicate well with people, to quickly adapt yourself to technological changes, alongside the desire to deepen your knowledge, to ask questions, have a vision of the future, and the will to progress—these keep you relevant and successful in industry over time."

We are very proud to offer warmest congratulations to this year's one thousand, one hundred and fifty-two (1,152) latest men and women graduates, who are joining the community of SCE graduates, now coming to almost 16,000 active engineers, entrepreneurs and leaders in industry.

You are becoming part of a significant, high-quality generation of graduates, who contribute every day to a better future.

We are certain that you will continue to forge ahead, making a positive impact and leading in your fields.



# Assaf Granit to SCE's graduates: "Follow your gut instincts"

At a gathering of SCE graduates, the chef and businessman shared his management secrets: professionalism, humanity and creativity - while following his business instincts

"While managing our chain of restaurants, in Israel and abroad, we depend on three leading values: professionalism, humanity and creativity. Without these three values and employees who abide by them - they are the DNA, the heart and soul of our restaurants - we would not be able to succeed," chef Assaf Granit told us during his lecture at a gathering of SCE graduates held on the SCE campus.

Granit revealed for the first time that his Parisian restaurant "Shabour" has maintained its Michelin star for the sixth time. "Even the war hasn't stopped us; it only strengthens our will to carry on. The restaurant's name is from the Hebrew (shavur), the staff is Israeli, the music's Israeli—it's our declaration," he stated.

The graduates enjoyed meeting, talking and gaining tools for the achievement of success in business - and hearing Granit's success story. "Holding a gathering of the graduates is an

excellent idea," one of the participants, Vladi Fuksman, said: "because we can meet, exchange information, make connections and plan collaborations." Another graduate, Gal Benizri, said that SCE had given him the tools and the abilities to understand, analyze, observe processes and to cope with problems in an independent manner. "For a young student, one debating what and where to study - SCE's the place!" he added.

SCE's President, Prof. Semyon Levitsky, emphasized that this gathering is important both for the graduates and for the college: "It's important for us to maintain a connection with the graduates and to know how they're getting along in life. It's also an opportunity to transmit the message that learning does not end when certification is granted - learning is a lifelong process."

At the end of this get-together, when Chef Granit was asked what he'd like the

graduates to take away with them from his lecture, he replied with a smile: "It's important to stay connected to your gut business instincts. If you feel that you're right, that you're chasing the correct thing - it's likely that you're on the right path. Never abandon your instincts, because we're usually not wrong."



# SCE

המכללה האקדמית להנדסה ע"ש סמי שמעון

