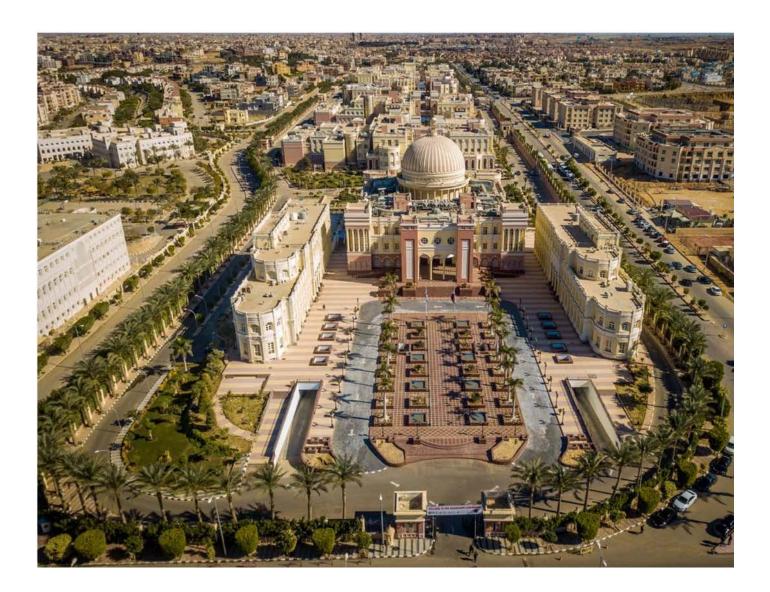


Research Newsletter

Vice President's Office for Research and Enterprise

ISSUE 4, FEBRUARY 2022





Closing the Innovation Cycle



The British University in Egypt aims to close the innovation cycle from discovery to development to

deployment.



Prof. Yehia Bahei-El-Din
 Deputy Vice Chancellor
 VP, Research and Enterprise

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Universities play a leading role in turning their research output into meaningful innovations that can impact individuals and society, and the British University in Egypt's research services continue to focus on closing the innovation cycle. In line with the UN Sustainable Development Goals and Egypt's Vision 2030 toward climate change, zero carbon emission and sustainability, among other goals, the University has so far taken a "Discover, Develop and Deploy" approach, supporting research and discovery, developing output into prototypes and deploying patented innovations into commercial products.

In this issue we highlight the British University in Egypt's success in fostering a research and innovation environment, and celebrate the achievements of our researchers across faculties, centres and our student body, such as our Engineering students who have recently made headlines for their work on a prosthetic arm that can be used by amputees without surgical intervention. The Vice President's Office for Research and Enterprise is glad to announce that it will be funding the development of a prototype that can later be commercialised through one of its Research Centres.

Every year the Research Office recognises staff researchers through its annual Research Awards. In addition to a monetary prize, the 2021 winners will also be recognised at the upcoming Research Forum, scheduled for March 31, 2022. Aiming to encourage early career researchers, the British University in Egypt recently announced the winners of this year's Young Investigator Research Grants and has also just begun to implement the winning research projects submitted for the Mohamed Farid Khamis Research Excellence Award.

The University's research efforts are reflected in our rise in global rankings (most recently the British University in Egypt topped the Webometrics Ranking released earlier this year), but more importantly, our impact is being felt on the ground, changing the lives of people in our communities and across the nation.



Research and Enterprise in the News

Faculty of Engineering Students Develop Prosthetic Limb



A team from the Mechanical Department at the British University in Egypt's Engineering Faculty has won 2nd place at Abu Dhabi's 8th Undergraduate Virtual Research Competition 2021.

Consisting of Nermeen Sobhy, Ahmed Magdy, Mohamed Ahmed Alaidy and under the supervision of Prof. Ayman Salah Abbas, the team developed a soft prosthetic limb that can be used by amputees without surgical intervention.

A total of 315 teams from 87 universities from all over the MENA region took part in the competition; the British University team won in the Biomedical Engineering category.

Arm amputation can result from various infections, high blood sugar or work environment accidents. It affects people's lives and can render them unable to work or integrate into society.

The British University in Egypt is set to become a revered place of learning – one that not only offers sterling academic experiences, but that can also produce the leaders

of tomorrow.



Prof. Mohamed Loutfi
 President and Vice Chancellor
 The British University in Egypt

The students' lightweight prosthetic arm is unique in that it is controlled by electroencephalography signals acquired via an electronic headset (Openbci headband) from the brain.

The British University in Egypt has announced that it will sponsor the winning students to develop and patent the invention through one of the University's Research and Innovation Centres. The prosthetic arm will be made available as a commercial product for amputees suffering from peripheral neuropathy.



The British University Tops Webometrics Ranking

The British University in Egypt continues to climb up the Webometrics Ranking of World Universities, and has maintained its ranking as 1st among private universities in Egypt registered under and accredited by the Supreme Council of Universities for 2022. Since 2020, the University has retained its ranking of 16th place among all universities in Egypt.

This year, the University's World Rank-

Webometrics RANKING WEB OF UNIVERSITIES

ing climbed up 295 spots, from 2,248 to 1,953 in 2020; and overall, it has continued to rise on the Webometrics Ranking. In 2022 the University ranked 5,229 in Impact and 1,562 in Excellence—up from 7,276, and 1,631 respectively in 2020. This year the British University in Egypt achieved a ranking of 2,464 in Openness.

Released in January and ranking a total 30,000 institutions around the world, the 2022 Webometrics Ranking of World Universities assesses universities based on three main indicators: Impact of external networks linking to the institution's website; Excellence, which is measured by the number of papers amongst the top 10% most cited in each of the Webometrics' disciplines in its full database; and Transparency or Openness, determined by the number of citations of its top 200 cited authors.

About the Webometrics Ranking of World Universities

The Webometrics Ranking of World Universities is an initiative by the Cybermetrics Lab, a research group of the Consejo Superior de Investigaciones Científicas (CSIC), recognized as the largest Spanish public research body. Launched in 2004, it intends to offer full coverage of Higher Education Institutions (HEI's) irrespective of the country or discipline. Currently, it ranks over 30,000 HEIs from more than 200 countries. In comparison to other universities in the region, the University currently ranks 19th in North Africa, 45th in Africa, 51st in the Arab World and 125th in the Middle East.

Webometrics is the largest semi-annual academic ranking of Higher Education Institutions offering an independent, objective, free, reliable and multidimensional information about the performance of universities from all over the world.



Postgraduate Programmes

	Political Science (M.Sc)	
BAEPS	MBA in Marketing	
	MBA in Applied Finance and Economics	
	MBA in Business Administration (M.Sc)	NEW
	Digital Media (M.Sc)	
СММ		
Engineering	Renewable Energy Engineering (M.Sc)	
	Renewable Energy Engineering (M.Eng)	
	Advanced Materials Science and Engineering (M.Sc)	
	Advanced Materials Science and Engineering (M.Eng)	
	Sustainable Engineering Design & Construction (M.Sc)	
	Sustainable Engineering Design & Construction (M.Eng)	
	Communication and Information Engineering (M.Sc)	
	Communication and Information Engineering (M.Eng)	
Dentistry	Endodontics (M.Sc)	
	Operative Dentistry (M.Sc)	
	Dental Sciences (Oral Medicine, Periodontology and Oral Diagnosis) (M.Sc)	NEW
	Dental Sciences (Pediatric Dentistry) (M.Sc)	NEW
	Web Science (M.Sc)	
ICS		
	Cybercrime Investigation (Professional Master)	
Law		
Pharmacy	Pharmaceutical Sciences (M.Sc)	



MFK Award for Research Excellence



The British University in Egypt announced the winners of the Mohamed Farid Khamis Award (MFK) for Research Excellence at the Graduation Ceremony in November 2021. A tribute to its founder, the late Mr. Mohammed Farid Khamis, the MFK call was launched in April 2021 and received over 250 applicants.

"Mr. Mohamed Farid Khamis actively supported research activities and excellence during his years as Chairman of the Board of Trustees. Thanks to Mr. Khamis's continuous efforts to fund, encourage and promote academic research, the University has become one of the most recognised research-led higher education institutions in the region," said Prof. Yehia Bahei-El-Din, Deputy Vice Chancellor and Vice President for Research and Enterprise, at the MFK awards ceremony. "It was only befitting, then, to continue Mr. Khamis's legacy of dedication and support of scientific research with an award to honour his name. After his passing in 2020, the British University Board unanimously approved the MFK Award," Prof. Bahei-El-Din added.

Designed to encourage young Egyptian researchers in Basic Science and Engineering, Medical and Health Sciences, and Arts and Humanities, the MFK award is an annu-



al competition open to all Egyptian nationals working to address national challenges in line with Egypt's 2030 vision.

The 2021 MFK award in Basic Science and Engineering went to Dr. Mehrez ElSayed ElNaggar, assistant professor at the National Research Centre and the recipient of the 2018 State Encouragement Award in the field of Advanced Technological Sciences.

Dr. AbdelRahman Salah Mayhoub received the award in the field of Medical and Health Sciences. Dr. Mayhoub is an associate professor at the Faculty of Pharmacy, Al Azhar University, and is the recipient of the 2020 National Excellence Prize in Medical Research. In Arts and Humanities, the award went to Dr. Hossam Mohamed Ahmed Ismael, associate professor of geography at the Faculty of Humanities, New Valley University and the recipient of the 2020 New Valley University Research Excellence Award.

Mr. Mohamed Farid Khamis active-

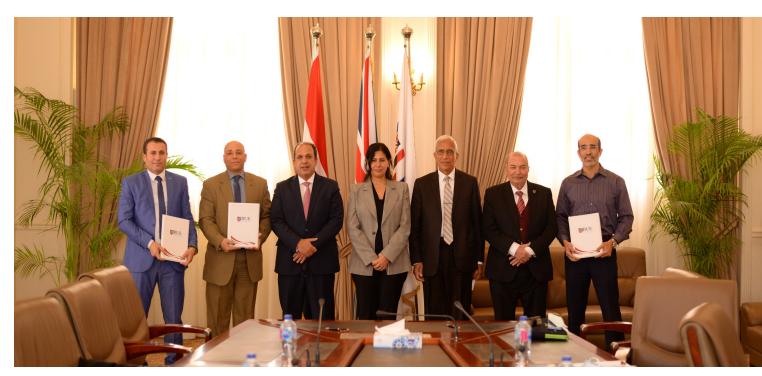
ly supported research activities and excellence during his years as Chairman of the Board of Trustees.



— Prof. Yehia Bahei-El-Din Deputy Vice Chancellor

Each winner received a monetary reward of 100,000EGP in addition to a 250,000EGP seed grant to fund their research proposals.

In attendance at the Graduation Ceremony were Minister of Immigration H.E. Nabila Makram and Prof. Ayman Ashour, Deputy Minister of Higher Education and Scientific Research, who were welcomed by the British University in Egypt President Prof. Mohamed Loutfi.



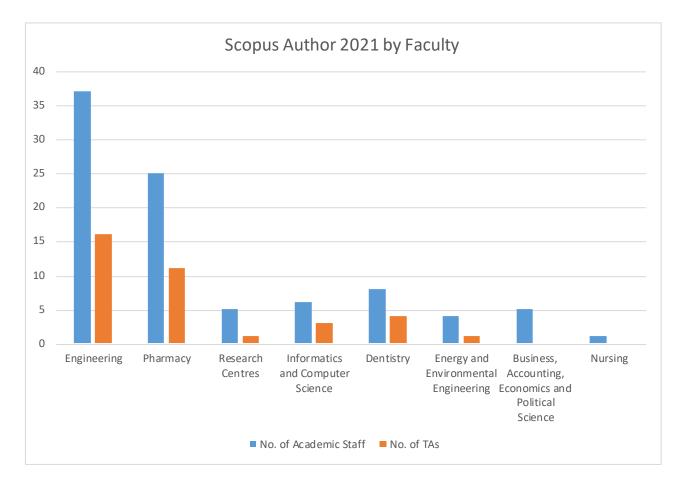


Research Awards 2021

Scopus Author Award

66

A total of EGP 361,127 was awarded to researchers whose publications appeared in Scopus in 2020 and which carried the affiliation of The British University in Egypt. Among those were 91 Academic Staff and 36 Teaching Assistants across seven faculties in addition to the University's research centres.



As a research-led university, the British University in Egypt is strongly committed to creating transformational knowledge and fostering excellence in research.

— Ms. Farida Khamis Chair of the Board of Trustees



Research Awards 2021

High-Impact Researcher Award

Dr. Amr ElZant, Centre for Theoretical Physics
Dr. Mahmoud Mansour, Basic Science, Faculty of Engineering
Prof. Shehabeldin Saber, Endodontics, Faculty of Dentistry
Dr. Hebattullah Wagdy, Pharmaceutical Chemistry, Faculty of Pharmacy

Best Publication Award

Faculty of Engineering

Dr. Deena El-Mahdy and Eng. Dalya Maguid, Architectural Engineering
Dr. Marianne Nabil and Prof. Khaled Dewidar, Architectural Engineering
Dr. Mariam Ehab and Eng. Mohamed ElDesoki, Civil Engineering
Dr. Shady Salem, Civil Engineering

Faculty of Pharmacy

Dr. Bassem Naguib, Dr. Samy Mohamady, Dr. Abdullah Gibriel and Motaz Hendy

(Center for Drug Research and Development)

Dr. Khaled Nemattallah and Dr. Noha Swilam

Faculty of Business, Economics and Political Science

Dr. Eman Elish and Dr. Moustafa Aboelsoud, Economics

Dr. Gamal Selim, Political Science



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Research Awards 2021

Best Postgraduate Thesis Awards

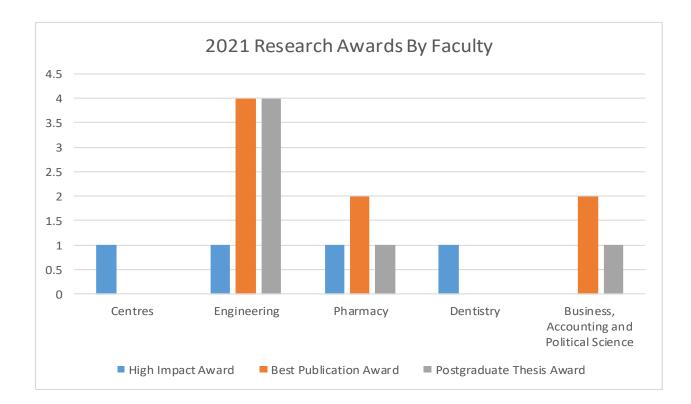
Best PhD Thesis

- Dr. Youmna Amr Lotfi, Architectural Engineering, Faculty of Engineering
- Dr. Ahmed Gouda Ghanem, Civil Engineering, Faculty of Engineering
- Dr. Anwar Magdy Shabel, Mechanical Engineering, Faculty of Engineering
- **Dr. Noha Abdelrahman,** Business Administration, Faculty of Business Administration, Economics and Political Science

Best Master's Thesis

Eng. Mohamed Salah El-Desoqi, Civil Engineering, Faculty of Engineering

Ms. Haidy Saleh, Pharmacology, Faculty of Pharmacy



www.bue.edu.eg



Young Investigator Research Grants 2021

Science and Engineering

Faculty of Energy and Environmental Engineering

- **Dr. Shahira ElKholey,** "Development of Ecofriendly Hybrid System of Microbial Fuel-Cell and Hydrogen Production Using Sea-Sediment With Characterization of Microbial Community and Activated Gene," EGP100,000
- Dr. Sarah Khalil, "Off-grid Hybrid Water Treatment System," EGP97,000

Faculty of Engineering

- **Dr. Anwar Magdy,** "Design and Fabrication of an Intelligent Grass Cutting Robot for Trimming Different Shapes," EGP43,340
- **Dr. Rania Rushdy, "**Integrating Phase Change Materials With Building Envelop and Its Effect on Human Thermal Comfort," EGP100,000
- Dr. Sameh Osama Abdellatif, "Hybrid Fuel Cell Self-Charging Electrical Vehicles with Low Light Intensity/Piezoelectric Harvesters," EGP100,000
- **Dr. Taher Halawa,** "Design and Manufacturing of a Magnetic Levitation Wind Turbine," EGP80,000
- **Dr. Walaa Ismael, "**A Future-Fit Approach for Indoor Air Quality in Industrial Workplaces: A Case Study of Oriental Weavers Building," EGP100,000

Health Sciences

Faculty of Pharmacy

- Dr. Amgad AlBohy, "Novel Pyrazole CDK2 Inhibitors: Design, Synthesis and Biological Evaluation," EGP100,000
- **Dr. Rajiv Harish, "**Effects of Thymoquinone on the Pharmacodynamics and Pharmacokinetics of Metformin in Diabetic Rats," EGP100,000

Faculty of Dentistry

Dr. Mohamed Al Kady, "Effect of Different Dental Pulp Capping Materials on the Human Dental Pulp Stem Cells Cytotoxicity, Proliferation and Odontogenic Differentiation," EGP100,000

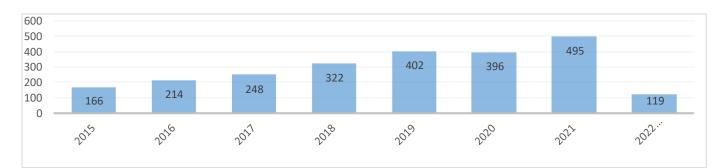
Dr. Nawar Naguib, "Exploring Novel Strategies to Target Endodontic Biofilms," EGP90,000

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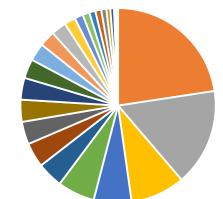


Cited Publications

Publications in Scopus (to February 2022)



Publications by Subject Area (to 2022)



- Papers by Subject Area
- Engineering
- Materials Science
- Mathematics
- Biochemistry, Genetics and Molecular Biology
- Chemical Engineering
- Environmental Science
- Business, Management and Accounting
- Economics, Econometrics and Finance
- Dentistry
- Agricultural and Biological Sciences
- Arts and Humanities
- Health Professions
- Nursing

- Physics and Astronomy
- Computer Science
- Chemistry
- Energy
- Pharmacology, Toxicology and Pharmaceutics
- Social Sciences
- Medicine
- Earth and Planetary Sciences
- Decision Sciences
- Multidisciplinary
- Immunology and Microbiology
- Neuroscience
- Psychology
- Veterinary
- www.bue.edu.eg

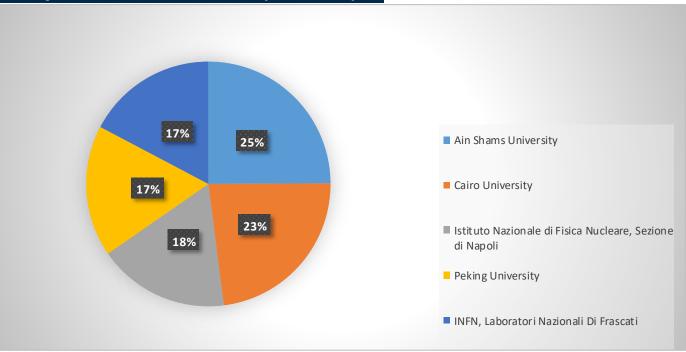


Cited Publications

SciVal Data (to 2022)

Overall views count	214,958
Overall views count per publication	73
Field-weighted views impact	39.4
Total number of citations	49,703
Cited publications	77.6
Citations per publication	16.9
Field-weighted citation impact	1.72
Publications in top 10% most cited worldwide	37.9%
Publications in top 5% most cited worldwide	14.8%
Publications in top 10% journals according to SNIP	15.1%
Publications in top 5% journals according to SNIP	6.9%
Publications co-authored with institutions in other countries	45.40%
Publications with both academic and corporate affiliations	0.80%

Top 5 Collaborations (to 2022)





BUE Scholar Research Repository

The British University in Egypt's academics share their publications through BUE Scholar repository. Interested researchers may download research papers from the following link: <u>https://buescholar.bue.edu.eg</u>



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Interactive Map of Real-time Downloads

The BUE Scholar interactive map shows the title of the research and the country in which the research is being downloaded in real-time.



BUE Scholar Top Papers

Top 10 Downloaded Papers Posted on BUE Scholar (October 2021 to February 2022)

Research Paper Title	Downloads
Bioactive lead compounds and molecular targets for the treatment of heart disease. Phytochemicals as Lead Compounds for New Drug Discoveries. Dr. Maha Salama, Shahira Ezzat & Mohamed Salem	1139
The Impact of Employee Engagement on Job Performance and Organisational Com- mitment in the Egyptian Banking Sector. Dr. Maha Dajani	585
The Effect of Remote Working on Employees Wellbeing and Work-Life Integration dur- ing Pandemic in Egypt. Dr. Bassant Adel Mostafa	487
Kinetic Study of Hydrolysis of Ethyl Acetate Using Caustic Soda. Dr. Hany El Azab	329
The Role of HRIS in Gaining A Competitive Advantage: The Case Study of Telecom- munication Industry, Dr. Tarek Mohamed Ali	254
Flipped Teaching and Learning In English Language Programmes In Higher Education. Prof. Shadia S. Fahim and Dr. Rania M Rafik Khalil	253
The Impact of Motivation on Organisational Citizenship Behaviour (OCB): The Media- tion Effect of Employees' Engagement. Dr. Safaa Shaaban	215
The Effect of Talent Management on Organisational Success: A Comparative Study in the Petroleum Sector in Egypt. Prof. Hadia Fakhreldin	211
Impact of Sustainable Supply Chain Management Practices on Egyptian Companies Performance. Dr. Ola Mamdouh, Khaled Adry & Bassam ElAhmdy	182
The Impact of COVID-19 Pandemic on Egyptian Women Psychological Empowerment and Work-Life Balance. Dr. Maha Dajani & Dr. Bassant Adel Mostafa	178

BUE Scholar is a service of the university Research Office. Research and scholarly output included in the repository has been selected and deposited by the individual university departments and centres on campus.

For more information, visit <u>buescholar.bue.edu.eg</u>



Enterprise Office Activities

BUE Innovate

BUE Innovate is a startup competition that targets students and the community with ideas in early stages. It aims to equip young entrepreneurs with the knowledge and skills needed to validate their business models and start their own business.

BUE Innovate provides financial and non-financial awards to selected teams such as seed funds, mentorship, incubation, office spaces, workshop and capacity building and access to University facilities.

The competition will provide 10 startups with innovative solutions, a bootcamp for 35 startups and capacity building for 70 to 100 potential entrepreneurs.

BUE Startup Weekend

BUE Startup is an intensive capacity building program over three days during the Weekend. It targets students and young entrepreneurs at very early stages who might have an innovative business idea. Over three days, participants will get the chance to learn about entrepreneurship, entrepreneurs' common characters, the difference between startups and SMEs, startup stages, business modelling, value proposition, customer segmentation, revenue streams and cost structure, startups financials, investment for startups and relevant resources, how to pitch business ideas and identify what investors are looking for.

The Startup Weekend will train 40 to 60 students, generate a pipeline of potential startups to apply for other competitions like BUE Innovate, RIndustry and Business incubator.



Enterprise Office Activities

Future Entrepreneur

Future Entrepreneur is a competition organized by TICO and E-Club that targets senior students in the 2021/2022 year at the British University in Egypt and El Sherouk Academy. The competition aims to encourage students to think of innovative solutions to solve challenges in the industry and community and provide them with an opportunity to partially fund their graduation project which can be transferred into successful businesses.

RIndustry Bootcamp

RIndustry is an EU-funded project launched in February 2020 with the aim of changing the culture of resource utilization in Egypt's industry for enhanced economics and competition. The main objective of the competition is to encourage entrepreneurs to establish their own start-ups / businesses with high potential of sustainability and provide them with a set of financial and non-financial services to support their development and growth during their incubation phase.

RIndustry focuses on sectors such as energy efficiency, energy production and saving, and resource management) and provides them with non-equity seed funds and technical coaching and mentoring in all aspects (full incubation) for 12 months.

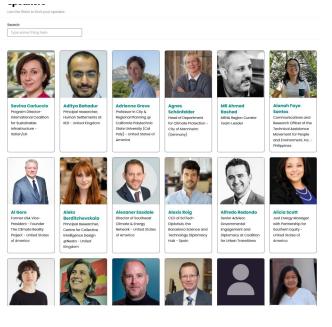
The competition will mentor up to 6 startups in the mentioned fields, fund up to 15,000 Euros for each startup, hold a bootcamp for 30 startups and provide capacity building for 80-100 potential entrepreneurs.



Innovate4Cities Conference

In October 2021, UN-Habitat and the Global Covenant of Mayors for Climate and Energy (GCoM) welcomed attendees to the groundbreaking Innovate4Cities 2021 Conference, a virtual multi-day global/regional event bringing together science and innovation, policy and practice to enable cities to take accelerated and more ambitious climate action.

The British University in Egypt's Farouk El-Baz Centre for Sustainability and Future Studies was chosen as a regional curator in 2021 for Innovate4Cities. The city-focused research and innovation initiative aims to answer the most pressing questions cities and local governments ask when evaluating why and how to tackle climate action. The initiative defines and addresses cities' knowledge and innovation opportunities and creates partnerships between the scientific and academic community, businesses, and governments to overcome the challenges local governments face between their publically reported ambition and full-scale implementation.







Research Centres

Farouk El-Baz Center for Sustainability and Future Studies

Second Annual Symposium of Art and Architecture

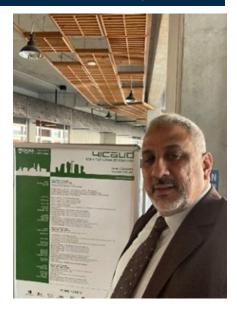
The Farouk El-Baz Center for Sustainability Studies (FECSFS) took part in the Second Annual Symposium of Art and Architecture (IAA 2021). Prof Ahmed Rashed, Director of the FECSFS, was invited to give a keynote speech at the conference which was held on November 24th and December 2021 in Bahrain.

Launch of the Arabic Version of the Green Pyramid at HRC





Prof. Ahmed Rashed, Keynote Speaker, 4 ICAUD 2021 Conference, Albania





Research Centre for Irish Studies

Collaboration with the Irish Embassy



A Memorandum of Understanding was signed between the Embassy of Ireland in Cairo represented by Ambassador Seán O'Regan and the British University in Egypt, represented by Prof Mohamed Loutfi, Vice Chancellor and President. The MOU aims to consolidate the working relationship that has prospered over the past two years and further support the activities and events of the Research Centre for Irish Studies (RCIS).

Moreover, Dr Rania M Rafik Khalil, Acting Director of the RCIS, successfully obtained on behalf of the RCIS the Emigrant Support Programme Grant for 2021-2022 funded by the Department of Foreign Affairs in Dublin under the Global Ireland Initiative.

A series of international research seminars are currently organized by the RCIS to support early and mid-career researchers locally and internationally across the globe on a range of themes related to Irish Studies. The international research seminars are recorded and available on the Research Centre for Irish Studies YouTube channel <u>https://youtube.com/ channel/UCmW4Ge1RF6o8row3bTmdR7A</u>



Centre for Emerging Learning Technologies

CELT App Now On Google Play

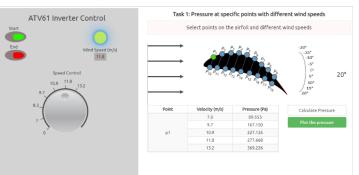
Following different development cycles and corresponding tools, the Centre for Emerging Learning Technologies (CELT) has successfully developed and added its mobile application version to the Google Play Store. The mobile app (<u>https://</u> <u>play.google.com/store/apps/details?</u>

id=com.celt.bue.www.twa) includes two different online activities: online tools and online experimentation facilities. Both are fully compatible with the different scenarios of COVID-19; either with full on-campus attendance, keeping social distancing, or remotely in case of full closure. The online tools are simulationbased interactive activities students can use to understand key concepts in different engineering disciplines. This includes different Hubs where each one groups the fundamental concepts within a specific thread such as; structural analysis Hub, electromagnetic Hub and renewable energy *Hub*.

The online experimentation facilities were developed based on the use of mixed-reality experiments, where the experiment's output data are initially obtained through a real operation of the experiment, then stored on the cloud to be used during the online session. The advantages of this technique, compared to other online ones, are that the online student will get real measurement data typically as if the experiment is performed in normal conditions. Both remote as well as on-campus students will have the same experiment's performance. In addition, videos showing the real operation of the experiment as well as images for the used setup have also been integrated within the online platform to enhance students' experience and engagement. Different mixed reality (online aerodynamic experiments as well as control system design serving undergraduate students have been designed and developed using the available testing resources in the "Wind Tunnel" on campus.



Virtual Wind Tunnel: Experiment#1 (Measurement of Pressure Distribution)





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Centre for Drug Research and Development

FEEE Summer Internships

CDRD members Prof. Maha Salama, Dr. Mona Salem and Dr. Moataz Sobhy along with Dr. Shahira El Kholey, Faculty of Energy and Environmental Engineering, organized the 1st Summer Internship on Bioinformatics and Chromatographic/ UPLC Extraction of Natural products in Summer 2021. The four-day internship was attended by a group of eight students.





Molecular Dynamics Workshop

CDRD organised the "Molecular Dynamics: Basics to publications" workshop delivered by Dr. Amgad ElBohy, Lecturer of Pharmaceutical Chemistry, Faculty of Pharmacy. The hybrid workshop provided molecular modeling theoretical sessions and a hands-on training on advanced computer-aided drug design and molecular dynamics software such as AutoDock vina, PyRx, PyMOL and GROMACS, featured with our powerful molecular modeling computer labs and our efficient pharmacy teaching assistants Dr. Muhammad Ismail and Dr. Mai Shaalan.

CDRD Scientific Seminars

On November 29, 2021 CDRD welcomed Dr. Manar Rashad, Teaching Assistant in Biomedical Informatics, Nile University for a talk entitled "Bioinformatics can't move up without Biology." In December CDRD was pleased to welcome Dr. Duaa Dakhlallah, Assistant Professor, Institute of Global Health and Human Ecology, The American University in Cairo (AUC). Dr. Duaa gave a fascinating lecture under the title of "Pharmacoepigenomics: Epigenetic Variation in Drug Receptors, Transporters and Delivery."



Centre for Innovation, Governance and Green Economy

Innovative Port Management



Alumni Success Stories



CIGGE and the Faculty of BAEPS hosted former Assistant Lecturer Ahella El Saban: MA, Founder, and Managing Director of Lumas, Omar Monem: Founder and Managing Director of Leos' Den Marketing Hub and Abdulrazak Mahmoud Antar: Managing Director of Antarmode and Founder of Antarvie to share their success stories.. Mrs. Iman el Sherif, Secretary General of the Egyptian-British Chamber of Commerce joined the session.

CIGGE invited Mr. Nico Suys, Consultant at the port of Antwerp international/APEC on November 23, 2021 to speak at an online seminar about the innovation in ports management and highlighting the port of Antwerp development. Attendees from Maritime Industry Sector included Admiral Mohamed Abdel Aziz from the Suez Canal Industrial Commercial Zone, Dr. Alaa Morsy, Arab Academy of technology and Maritime Transport, and the Port training institute, Dr. Yasmine Rashed, Assistant Lecturer Arab Academy of technology and Maritime transport, PhD holder from the University of Antwerp, Dr. Mohamed Awad, Mr. Mohamed Amr and Mr. Mohamed Taymour from the National Navigation company and Admiral Yasser Rashed the head of SAFA-GA port authority.

LSE Workshop

Associate Professor Zeinab Younis attended a professional development research workshop at the London School of Economics (LSE) in November, 2021. "Achieving Leadership Excellence" targeted participants from diverse nationalities and background tracks from academics and corporate institutions.





Nanotechnology Research Centre

Nano Club Activities



The Nanotechnology Research Center (NTRC)'s Nano Club provides expertise and consultancy covering the theory and applications of nanoscale science. It is an interdisciplinary club managed entirely by the NTRC to provide training, awareness and events for researchers and students. The Nano Club was launched in August 2021 under the supervision of Prof. Yehia Bahei-El-Din, Deputy Vice Chancellor and VP for Research and Enterprise.

Nano Club launched an activity at Ain Shams University in November 2021 for the environmental application of nanotechnology. Another programme was launched in December for biomedical applications of nanotechnology for Faculty of Pharmacy students at the British University in Egypt.

In the first week of February, the Nano Club hosted the Fourth Spectroscopy Winter School, SWS-4 as a joint collaboration between NTRC and the Nano unit at the National Research Institute of Astronomy and Geophysics, Nano NRIAG, together with the Central Metallurgical Research & Development Institute (CMRDI). NTRC Chairman Prof. Medhat Ibrahim welcomed Prof. Gad El-Qady, President of the National Research Institute of Astronomy and Geophysics, and Prof. Emad Ewais, President of CMRDI.

The overall aims of the winter school were to bring together the theoretical and technical aspects of spectroscopy. This year the school was conducted with 90 participants from different institutions in Egypt.



Catalysis Symposium

In December 2021, the Nanotechnology Research Centre (NTRC) launched the first International Hybrid Symposium on the Future of Catalysis 2021 together with Tokyo Metropolitan University, Japan, under the Auspices of Prof. Mohamed Loutfi, President of the British University in Egypt.





Centre for Theoretical Physics

CTP Visits and Collaborations

In November and December 2021, the Centre for Theoretical Physics (CTP) received researchers from several international universities including Prof. Lauer Jarv (Director, Laboratory for Theoretical Physics, University of Tartu, Estonia), Dr. Daniel Blixt (Theoretical Physics, University of Tartu), Dr. Maria Guzman (Theoretical Physics, Univerof Tartu). Tomi Koivissity Dr. (Theoretical Physics, University of Tarto tu), Dr. Jose Beltran (University of Salamanca, Spain) and Prof. Alexey Toporensky (Moscow State University, Russia).

The visits ranged from one to three weeks, during which the visitors held informal scientific discussions regarding prospects for furthering research collaboration with CTP members, particularly in the fields of gravitational theory and cosmology. This culminated in a semi-formal workshop entitled "Gravitational: Frontiers," held from 4 to 7 December 2021.



The coordinators for this programme were Maria Guzman from Tartu and CTP members Alexey Golovnev, Waleed ElHanafy and Adel Awad.

Martin Gastal, CERN (European Organization for Nuclear Research) Adviser for MENA region, gave two online presentations regarding enhancing the University's longstanding involvement in CERN-related research. The presentations focused on the possibility of extending the collaboration into the Engineering and Artificial Intelligence domains, which could further the University's links to CERN beyond the CTP.



Talk on Light Propagation

Prof. David Valls Gabaud, Director of Research at the National Research Centre, France, and the Paris Observatory, visited the CTP and gave a talk on "Light Propagation in Inhomogeneous Cosmologies".

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Centre for Renewable Energy

Research Activities

The Centre for Renewable Energy (CRE) has published the results of the first stage of studies on "Comparison of dust and high-temperature effects on mono and poly photovoltaic panels" at the Technical Military College Conference ASAT-19 2021. The research presents a case study that is held at the British University to investigate the effect of different parameters such as dust accumulation, water cooling and coating on the performance of both mono- and poly-crystalline panels in Shorouk. The effects of high temperature and dust accumulation, as well as the effect of the tilt angle on the accumulation of dust on the surface of the solar panels were studied. The CRE is continuing the second stage of the research, aiming at developing local self-cleaning coating materials to mitigate the deterioration of the cell's efficiency.

International Collaboration

CRE has won a collaborative Research Environment Links Grant with Wolverhampton University funded by the British Council, on the project "Creating links for investigating technical barriers for the uptake of renewable energy in Egypt." The project aims to ensure inclusive access to affordable, reliable and sustainable energy in Egypt and identify the challenges and opportunities for growth of sustainable renewable energy projects in different geographic locations in Egypt. It will investigate and profile the needs, preferences and usage patterns of end-users, to create a mapping for renewable energy chal-



lenges and opportunities relating to geographical locations (based on existing database and field investigation) The project will propose suitable renewable energies for different geographical locations in Egypt, offering insights for private investors. In addition, it will identify research topics to be included in renewable energy educational programmes. This may be extended to the design of new modules to be integrated in the existing programmes. Finally it will propose potential job opportunities and economic empowerment to be created by specific renewable energy provision.



About the Research Newsletter

The Research Newsletter is produced by the Research Management Office, managed by the Office of the Vice President for Research and Enterprise

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