



# FACULTY OF ENGINEERING ACHIEVEMENTS YEAR BOOK

2021\2022  
MSA UNIVERSITY



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**2021\2022**

**MSA UNIVERSITY**

**ACHIEVEMENTS YEAR BOOK**

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The Faculty of Engineering at MSA University aims at promoting each student's capacity, ability, creativity and imagination when approaching future engineering problems. It also aims at increasing the students understanding, awareness and appreciation of the social impact of technology.

This will help orient future engineers to lead successful and professional careers worldwide. The Engineering Program seeks providing all students with the skills and tools that would facilitate faster advancement into management positions.



### DEAN'S WELCOME

Welcome to the Faculty of Engineering at October University for Modern Sciences and Arts. Throughout its rich 20-years history, the Faculty of Engineering established an outstanding regional and national reputation for excellence in graduation projects.

This is due to its talented faculty and staff, its research initiatives, as well as its excellent curricula, its modern facilities and most important, the quality of its graduates. The Faculty of Engineering at October University for Modern Sciences and Arts is in an admirable position having been able to tremendously foster strong relationships with industry partners, alumni and government.

The benefit of these strong relationships can be easily seen in the high quality of our graduation projects.

We believe in our students, and we value their success. We are proud of our outstanding faculty and staff, whose cutting edge research is relevant to the needs of the society. Our goal is to give students the opportunity to experience research and hands-on learning starting from the first day they step through our door. Through our program, undergraduate students gain practical experience working with industry, a win-win situation for both partners and students.

Looking forward, the Faculty of Engineering will make every effort to continue to be known for its high-quality programs, innovation and relevance to industry and society.

Dean Faculty of Engineering  
Head of Industrial Systems Department  
Prof. Nahed Sobhy

# **01 Faculty of Engineering**





## كلية الهندسة تحصل على إعتماد الهيئة القومية لضمان جودة التعليم و الاعتماد NAQAAE



The Faculty of Engineering obtained the accreditation certificate of NAQAAE  
28 April 2021

The Faculty of Engineering obtained the accreditation certificate of the Federation of Arab Engineers.  
June 2022

ACCREDITATION



Hala AbdelRahman  
Executive Assistant,  
Architecture Systems  
Engineering Department



Nahed Sarhan  
Senior Executive Assistant,  
Dean's Office



Nehal Talaat Mahmoud Exec-  
utive Assistant  
Secretary Dean's office





Heba Othman  
Executive Assistant,  
Electrical Engineering Systems Department



Rania Mohamed  
Executive Assistant,  
Quality Assurance Unit

# Administrative Staff Members

# ENGINEERING SCIENTIFIC JOURNAL

## 1st Issue & 2nd Issue



The Faculty of Engineering at October for Modern Sciences and Arts (MSA University) established its first scientific journal specialized in publishing research and scientific projects in all fields of engineering.

The magazine is supervised by an international editorial, arbitration board, and promotion committees specialized in engineering. In addition, the magazine has been listed in the Egyptian Knowledge Bank and all its cooperative institutions.

The Faculty of Engineering welcomes fellow researchers to publish their scientific contributions for free in the first year as a support from the university for researchers and urge them to participate.

ENGINEERING SCIENTIFIC JOURNAL – SECOND ISSUE , 12 April 2022 & THIRD ISSUE, JULY 2022

The Faculty of Engineering at October University for Modern Sciences and Arts (MSA University) has gladly announced the publication of the second and third Issues of Engineering Scientific Journal on the website.

The Engineering Scientific Journal covers all specialized engineering branches. It's also indexed in EKB and many international scientific databases.

To read the Engineering Scientific Journal, Please visit:

<https://msaeng.journals.ekb.eg/>

MSA University and the Faculty of Engineering proudly and happily celebrate the enormous achievement of “MSA Engineering Journal” which got the highest rank (7/7) in the evaluation of the Supreme Council of Egyptian Universities among other university journals which were evaluated.







## BIOTECHNOLOGY JOURNAL CLUB IN COLLABORATION WITH FACULTY OF ENGINEERING, 24 May 2022

The Biotechnology Journal club support the development of sustainable , green and clean synthesis of important chemicals. The club demonstrated a successful journey in publishing a recent paper under the title of " Selective synthesis of alpha monoglycerides by a clean method: Techno-economic and environmental assessment“.



The paper published in Sustainable Chemistry and Pharmacy , with impact factor 4.4 , Q2 Journal, SJR 0.72



# Microsoft Azure 900 AI Certification



MSA University's Faculty of Engineering staff members & students. Congratulations on earning your Microsoft Azure 900 AI Certification. MSA University congratulates and extends its vast appreciation to the amazing Faculty of Engineering Staff Members and students for completing and passing Microsoft Artificial Intelligence. The University thanked them for your keenness in following the framework of continuous advancement related to the latest technology and developments related to Artificial Intelligence and other fields of study.

Thanks to to Assoc. Prof. Nihal Amer, LA Mona Mostafa Amin, LA. Nora Ibrahim Shaheen, TA. Daaa Hafez Ibrahim Mohamed, TA. Mariam Hassan Abdulhameed, and students Hoda Anwar, Ehab Tharwat Mohamed Abdelaziz, Emad Heikal, Ahmad Atef Muawwad, Ahmed Khalid Ismail Mohamed, Aya Mostafa and Elham Mostafa

HONORING





The British Ambassador honored the MSA University team that won first place and the COP26 Cup in the "Sport for Climate" competition in reference to the United Nations Climate Change Conference COP26, which the United Kingdom hosted in Glasgow in November. The competition aim to raise awareness about the effects of climate change on people's health, productivity, and the economy in general.



Nour Abdel Wahed El-Sayed, a student at the Faculty of Engineering at MSA University and a captain for the women's soccer teams at the university, and one of the players participating in the Egyptian Special Olympics team for the unified women's soccer, won the bronze medal in the World Cup for the Special Olympics for women's unified soccer in Detroit 2022.





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وزارة الاتصالات وتكنولوجيا المعلومات  
مكتب نائب الوزير للتطوير المؤسسي  
رقم الصادر: ٢٥١٦٦٨  
التاريخ: ٢٠١٦/١٠/٢٠  
عدد المرفقات: ١



جمهورية مصر العربية  
وزارة الاتصالات وتكنولوجيا المعلومات  
نائب الوزير للتطوير المؤسسي

السيدة الدكتورة / نوال الدجوى

رئيس مجلس أمناء جامعة أكتوبر للعلوم الحديثة والآداب "MSA"

تحية طيبة وبعد ،

يطيب لى بداية أن أبعث لسيادتكم خالص تحياتى وعظيم تقديرى، فى إطار التعاون المثمر بين وزارة الاتصالات وتكنولوجيا المعلومات وجامعتكم الموقرة خلال مؤتمر "الخبراء" بالتعاون مع شركة "Valgo Egypt"، ومبادرة "دعم التحول الرقمى" لطلاب الجامعات المصرية بالتعاون مع شركة "IBM" لتأهيل عدد (١٠٠٠) طالب وطالبة من مختلف الجامعات المصرية مرشحين من قبل وزارة الاتصالات وتكنولوجيا المعلومات بهدف صقل المهارات الرقمية لطلاب التعليم العالى ودعم التحول الرقمى بالجامعات والمؤسسات التعليمية لنشر الوعى المعرفى بأحدث اتجاهات التكنولوجيات الرقمية الحديثة وتوفير فرص متميزة للتدريب المهنى والتأهيل للالتحاق بسوق العمل بالإضافة إلى الربط بين الدراسة الأكاديمية والحياة العملية والتكنولوجيا الحديثة للوصول إلى مجتمع رقمى تفاعلى. أنتهز هذه الفرصة لتقديم أسمى آيات الشكر لسيادتكم على الجهد المبذول فى سبيل نجاح المؤتمر والمساهمة فى نشر الوعى بأهمية التكنولوجيا الحديثة، ولا يفوتنى الإشادة بالجهود المتميزة لكل من:

- الأستاذ الدكتور/ خيرى عبد الحميد- رئيس الجامعة
- الأستاذة الدكتورة/ ناهد صبحى - عميد كلية الهندسة
- السيد الدكتور/ أحمد فوزى ضو - رئيس لجنة التدريب والتطوير بالجامعة
- بالإضافة إلى مساهمة كلية الهندسة فى نجاح الندوات التقنية بمؤتمر "الخبراء" خلال الثلاثة أشهر الماضية، فضلاً عن مشاركة السادة أعضاء هيئة التدريس المعتمدين بمبادرة "دعم التحول الرقمى"
- وإذ نأمل مزيد من التعاون مع جامعتكم الموقرة فى سبيل نشر الوعى وتعزيز الثقافة الرقمية لطلاب الجامعات المصرية.

وتفضلوا بقبول فائق التقدير والاحترام،

نائب وزير

الاتصالات وتكنولوجيا المعلومات

لشئون التطوير المؤسسى

م/ غادة مصطفى لبيب

وزارة الاتصالات وتكنولوجيا المعلومات

العنوان: القرية الذكية- الكيلو ٢٨ - طريق القاهرة / الإسكندرية الصحراوي، الجزيرة، جمهورية مصر العربية. تليفون: ٣٥٢٤٥٩١٧ (٢٠٢) - فاكس: ٣٥٢٧٠٠٤٤ (٢٠٢)

HONORING



# GREENWICH (Summer Program)

## GREENWICH SUMMER SCHOOL PROGRAM

THE FACULTY OF ENGINEERING AT MSA ALONG WITH MSA QUALITY ASSURANCE AND INTERNATIONAL PARTNERSHIP UNIT ARE GLAD TO RESUME THE UK SUMMER SCHOOL PROGRAM WHICH WAS COMMENCED BACK IN 2004. THE FACULTY OF ENGINEERING STUDENTS OF THE UNIVERSITY OF GREENWICH ARE HERE FOR A DURATION OF TWO WEEKS AND WERE HEARTFELTY WELCOMED AS THEY ARRIVED AT THEIR SECOND HOME MSA CAMPUS GROUNDS.





# JOINT COOPERATION PROTOCOLS

## CAIRO ENGINEERING CONSULTANCY

COOPERATION AGREEMENT  
BETWEEN THE FACULTY OF  
ENGINEERING & CAIRO ENGINEERING  
CONSULTANCY 10 FEBRUARY 2022

## DOHLER

COOPERATION AGREEMENT  
BETWEEN THE FACULTY OF  
ENGINEERING & GERMAN  
COMPANY DOHLER-EGYPT 10  
FEBRUARY 2022

## SABBOUR

AGREEMENT BETWEEN  
THE FACULTY OF  
ENGINEERING & SABBOUR  
GROUP 13 APRIL 2022

Signing  
Protocol

## ELEVATOR HUB

COOPERATION AGREEMENT  
BETWEEN THE FACULTY OF  
ENGINEERING & ELEVATOR  
HUB 10 FEBRUARY 2022

## ISH

INTELLIGENT &  
SMART HOME  
COOPERATION  
AGREEMENT BETWEEN  
FACULTY OF  
ENGINEERING AND ISH  
01 JUNE 2022

## \$MC GROUP

COOPERATION AGREEMENT  
BETWEEN FACULTY OF  
ENGINEERING & SMC  
GROUP 30 MARCH 2022

PROTOCOLS





# JOINT COOPERATION PROTOCOLS

## EL KHALIFA

### GROUP

COOPERATION AGREEMENT  
BETWEEN FACULTY OF ENGINEERING  
& AL-KHALIFA REAL ESTATE  
DEVELOPMENT GROUP 29/12/2021



## AL MARAKBY

### STEEL

NEW COOPERATION BETWEEN MSA  
UNIVERSITY AND EL-MARAKBY  
9/9/2021 STEEL HAS BEEN SIGNED



## OLEO & NUTRIVET

COOPERATION AGREEMENT  
BETWEEN THE FACULTY OF  
ENGINEERING & OLEO AND NUTRIVET  
MISR 24/1/2022



## GHAOUR

COOPERATION AGREEMENT  
BETWEEN THE FACULTY OF  
ENGINEERING & GHABOUR  
25/1/2022



## CONTACT CARS

COOPERATION AGREEMENT  
BETWEEN THE FACULTY OF  
ENGINEERING & CONTACT CARS 10  
FEBRUARY 2022



# New Cooperation Between MSA University and THE FOLLOWING INSTITUTIONS :.



El-Marakby Steel, 09 Sep. 2021



Ministry of Irrigation and Water Resources ,24 October 2021.



AL-KHALIFA REAL ESTATE DEVELOPMENT GROUP ,28 December 2021



Giza power company, 10 January 2022.



GHABOUR, 11 January 2022.



The National Center for Housing and Building Research - Architecture and Housing Research Institute (HBRC),13 January 2022.



HUAWEI, 15 January 2022.



OLEO AND NUTRIVET MISR,17 January



PROTOCOLS





Eagle owl, 31 January 2022.



GERMAN COMPANY DOHLER-EGYPT, 5 February 2022.



CAIRO ENGINEERING CONSULTANCY, 7 February 2022



CONTACT CARS, 8 February 2022.



ELEVATOR HUB, 10 February 2022.



AL-MANARA URBAN DEVELOPMENT COMPANY, 14 February 2022 .



SYSTEL MOTOROLA, 14 February 2022



SMC GROUP, 23 March 2022.



SABBOUR GROUP, 12 April 2022.



IWTE , 16 May 2022 .



rowad Modern Engineering (RME) , 21 May 2022.



ISH , 29 May 2022.





# Exhibition









# Exhibition









# Exhibition



# ANNUAL EXHIBITION

## AUGUST 2022



Prof. Nahed Sobhi, Dean of the Faculty of Engineering, honored Prof. Dr Maysa Omar Head of the exhibition committee/ Dr Rana Adel/ Arch. Mona Sakr/ Arch. Norhan Yehia/ Arch. Norhan ElNagar

In appreciation of their efforts and their creativity ideas in organizing of engineering exhibition 2021-2022.

The theme of exhibition was sustainable development which has a major impact on society in various fields in green buildings, green spaces, clean energy and models of graduation projects funded by the Academy of Scientific Research and Technology (ASRT) as well as the university's TICO office.



With the active participation of 27 national and international companies, 1792 MSA students and 419 graduates were able to participate in MSA Career day , June 2022



MSA Career Gates







MSA university is launching Huawei ICT international competition , 11 November 2021.



Within the framework of the fruitful cooperation between MSA university and Huawei. Huawei ICT competition was launched under the supervision of MSA Academic Staff. The event was attended by the Dean of the Faculty of Engineering Prof. Dr. Nahed Sobhy, the Vice dean, and the Head of Communication and Electronic Department Assoc. Prof. Ahmed Diaa, in addition to the honorable guests from Huawei Acadamey, Eng. Sameh Hamdy Vice director of Huawei ICT Academy, Academy Development Executive Mr. Mohamed Mustafa Elshafiee, and Senior Recruitment department executive Mr. Ahmed Hesham.

The event also included a distinguished session to elaborate the competition goals, rules and registration steps.

The competition aimed at hunting the talented students in the communication and electronic field around the world to develop their skills and career. It contained three stages, and in the last stage, the students would travel to China to represent their country and university.

October for Modern Sciences and Arts (MSA University) participates in the second edition of the Global Forum for Higher Education and Scientific Research 2021 GFHS, in the presence of President Abdel Fattah El-Sisi , 09 December 2021.



The forum witnessed the presence of a group of heads of public and private Egyptian universities including Dr. Nawal El-Degwi, Chairman of the Board of Trustees of MSA University, and Prof. Dr. Khairy Abdel Hamid, President of the University.

MSA University's pavilion contributed to the forum by displaying many projects that match Egypt's development plans that fall under the United Nations Development Goals (UNSDGs), shared by the Faculties of Engineering, Arts, Biotechnology, and Pharmacy. At the top projects "Wells Monitoring and Measurement System" which was contracted with the Ministry of Water Resources. In addition to the presentation of the "Radio Sound" device which is the first of its kind in Egypt as it measures the weather in the upper atmosphere, and which was handed over to the Ministry of Civil Aviation. The pavilion also displayed a model of an agricultural station aimed at controlling irrigation and serving the country's most important development plans, "Rationalizing Water Consumption," in addition to a variety of feeds that are used for poultry, fish, and livestock, which in turn increases immunity and helps increase meat production.



## The Ministry of Civil Aviation two Day Workshop



MSA University held a two-day workshop with the leaders of the Ministry of Civil Aviation. The workshop discussed ways of cooperation in the implementation of many projects in various fields, including communication systems and the use of robots in sterilization, information technology and artificial intelligence applications, waste management and aircraft biofuels, Visual identity and packaging.

## COM155 Workshop, October 2021.



This workshop was organized by Assoc. Prof. Ghada Abdelhady - The coordinator of the COM155 course and the representative of the outstanding students in the Outstanding Hub and Creative Students Committee, Faculty of Engineering.

WORKSHOPS

## Solar Energy Workshop, 2 January 2022



This Workshop was organized by Assoc. Prof. Ghada Abdelhady, and the Outstanding Hub team, which invited the SMC team. The SMC team introduced MSA University students to the field of PV solar energy and the latest developments that this field has reached in the Egyptian market, starting with the concept of solar energy in general and passing through the types of stations or as we like to call them the applications in which solar energy is used and the size of projects available in the market.

## Engineering Technologies Workshop, 6 March 2022



The Outstanding Hub Committee and the Department of Communications and Electronics Engineering at the Faculty of Engineering organized a workshop titled, “Engineering Technologies workshop” which hosted a group of engineering companies in various fields including solar energy, optical fibers, networks and cybersecurity and smart home technology over 6 days of training inside the university campus.

This workshop resulted in a program to train the students of the Faculty of Engineering in the methods of scientific research and how to write research, through a specialized program provided by Elsevier specifically for the Faculty of Engineering, and to train the students attending the program.



## Engineering Technologies Workshop, 6 March 2022



In the light of providing the students with practical experiences, the Summer Training Committee MSA-STC, in cooperation with “Outstanding Hub” and the Department of Electrical Communication & Electronics Systems Engineering, has organized a theoretical and practical workshop through Telecom Egypt, where 20 students from the Communications and Electronics Department were trained on various optical fiber technologies and how to use them in communications. As well as different measuring methods and welding.

WORKSHOPS



Honoring the students of the Faculty of Engineering who got second place on all public and private universities in the Universities Moon Project at the Egyptian Space Agency for the year 2021.



October University for Modern Sciences and Arts, Faculty of Engineering, Department of Mechatronics, honored the distinguished students because they won second place over all public and private universities in the design and implementation of the Space Exploration Rover System through their participation in the Universities Moon project at the Egyptian Space Agency. Ground control through a special protocol and control of the robot through the station to perform various tasks remotely. In addition to that, the possibility of collecting data that shows the actual state in which it is located, from the internal state or the general capacity. The honoring was attended by Prof. Dr. Muhammad Al-Qousi and Prof. Dr. Muhammad Ibrahim Iraqi, CEO and Vice President of the Egyptian Space Agency .

## A Shadowing Day for Wadi Group Company

MSA Students Training Committee has organized a shadowing day for Wadi Group Company, 6 March 2022

Job shadowing is when a student follows and observes a professional for a short period of time, such as a day or a week. After you've shadowed, you should have a better idea of what professionals do each day and whether or not you can see yourself following that career path.

The students from faculty of Engineering, Management Sciences, Languages and CS were able to shadow the following job positions:

Human Resources, Management – commercial , finance , economics, Quality Assurance, Engineering- architecture, Procurement, Marketing, Internal audit, IT .

OSAMA

ARCHITECTURE GRADUATE

OSAMA RIFAAT DESIGNED AND IMPLEMENTED ARMOUR CLOTHES FOR A NUMBER OF GREAT ARTISTS UNDER THE SUPERVISION OF THE FAMOUS FASHION DESIGNER / NEVIN RAAFAT IN THE PLAY "YAMA IN THE GARB YA HAWI" STARRING THE GREAT ARTIST YAHYA AL-FAKHARANI AND DIRECTED BY MR. MAGDY EL-HAWARY IT IS WORTH MENTIONING THAT OSAMA HOLDS THE FIRST PLACES IN A LARGE NUMBER OF INTERNATIONAL COMPETITIONS IN THE FIELD OF COSPLAY DESIGN AND IMPLEMENTATION DURING THE PAST FOUR YEARS



AMR

MOUS

ARCHITECTURE GRADUATE



MECHATRONICS  
DEPARTMENT  
HONORING CEREMONY



YOUNG DESIGNER  
PIONEER AWARD 22

IT IS WORTH NOTING THAT THIS AWARD IS GIVEN TO THE WINNER ONLY ONCE IN A LIFETIME, AND ONE WINNER RECEIVES IT EACH YEAR FOR HIS ACHIEVEMENTS AND CONTRIBUTIONS IN THE FIELD OF DESIGN AND FOR HIS ABILITY TO COMBINE MORE THAN ONE SCIENTIFIC AND ARTISTIC FIELD

COMPETITIONS



# GRADUATES & STUDENTS ACHIEVEMENTS



**YARA MOHAMED EWID**

TEACHING ASSISTANT IN ARCHITECTURE DEPARTMENT

SHE WAS SELECTED TO BE ONE OUT OF 9 WINNERS WORLDWIDE IN THE SWAROVSKI FOUNDATION: CREATIVE FOR OUR FUTURE PROGRAM 2021 IN COOPERATION WITH THE UNITED NATIONS THAT AIMS TO IDENTIFY AND SUPPORT THE NEXT GENERATION OF CREATIVE LEADERS IN THE AREA OF SUSTAINABLE DEVELOPMENT IN ARCHITECTURE, ART AND FASHION



**MARIAM**

ARCHITECTURE STUDENT  
FACULTY OF ENGINEERING



MARIAM EL-BIALY IS IN THE SHOOTING CLUB AND THE EGYPTIAN TRAMPOLINE GYMNASTICS TEAM GOT SECOND PLACE IN THE 2021 AFRICAN CHAMPIONSHIP

## THE THIRD BEST GRADUATION PROJECT IN PARTNERSHIP WITH VALEO EGYPT



AHMED ABDEL RAZZAQ AND YASSIN MEDHAT, STUDENTS OF THE DEPARTMENT OF COMMUNICATIONS AND ELECTRONICS WIN THE THIRD BEST GRADUATION PROJECT AT THE LEVEL OF EGYPTIAN UNIVERSITIES IN 2022 IN PARTNERSHIP WITH VALEO EGYPT THE IDEA OF THE PROJECT IS BASED ON THE USE OF ARTIFICIAL INTELLIGENCE THAT SELF-DRIVING VEHICLES ARE ABLE TO CORRECTLY RECOGNIZE TRAFFIC OBSTACLES IN REAL TIME IN ORDER TO BE USEFUL IN PREVENTING ACCIDENTS

## Smart Cities Hackathon , 27 March 2022



Two teams from MSA University faculties of Engineering, Management Sciences and Art and Design, Omega Hydroponic Team and RE-DATA-SWM Team won the “Smart Cities Hackathon” awards at Benha University and got the second place in the Smart Utilities track and in the Smart Waste track, the value of each is 3000 pounds.

Additionally, they won the Economist Prize which is an additional prize for the best project in the use of financial resources in smart cities for the Smart Utilities track, the value of the prize is 5000 pounds.

## The Semi - Finalists in the Innovation Catalyst 2022, 16 May 2022 .



The “X-Bionics” team from October University of Modern Sciences and Arts (MSA University) succeeded in being qualified for the semi-final stage of the Innovation Catalyst 2022 competition, which was held under the auspices of the Ministry of Higher Education and Scientific Research. The competition aimed to support student projects and innovative ideas and help them implement them to reach the local and international markets.

Proud to say, the team was able to reach and qualify for the first stage that was consisted of 20 teams. Finally, their project was under the supervision of Dr. Ahmed Badawy, a lecturer at the Faculty of Engineering (Mechatronics Department).



## Egypt Air



Students training committee MSA-STC were back again with a new trip to EgyptAir for Engineering students Field trips are one of the common teaching methods that helps the students to connect between the scientific studies and the actual work.

The purpose of the trip is usually observation for education, non-experimental research, and to involve MSA students with experiences outside their everyday activities and make them aware of the new technologies in labor market nowadays.

6 December 2021, 9 January 2022, 2 March 2022

## Systel Telecom



MSA-STC (Students training committee) has organized two field trips to Systel Telecom “Motorola”.

In the framework of the cooperation between MSA University and Systel Motorola, the Students Training Committee has organized two field trips for 45 students. The trip aimed to make the students see how their academic studies could be applied to the actual work.

By the end of the trip, the students were aware of the transmission systems, wireless public and private communications systems like point to point and multipoint, antennas and microwave systems, modulation and its techniques, security alert system, practical setup of a hardware system for wireless systems, broadband devices, and how to create a wireless application Development.

4 January 2022

## Egyptian Broadcasting TV and Radio station



Training committee MSA-STC at MSA University in cooperation with Maspero has organized a field trip for 20 students; the trip aims to make the students see how their academic studies could be applied to the actual work. During the trip the students visited the Communication transmission networks room which built awareness of the whole operation stages of broadcasting the radio waves, microwaves, optical fibers, and satellite functions.

The students got on-site sessions by Eng. Salah Elgendy that will make them able to connect between the theoretical studies and the actual work.

Thank you Maspero for having MSA students, and we are looking for more and more cooperation for the benefit of the students.

5 January 2022

## Juhayna Factory



Student training committee MSA-STC has organized a Field trip to field visit to Juhayna Factory for students of engineering. The purpose of the trip is usually observation for education, non-experimental research, and to involve MSA students with the market field.

As part of the university's endeavor to provide students with practical experiences, 15 of level -1 students of the Faculty of Engineering students were able to learn about the production and manufacturing steps of the juice factory for Juhayna Company.

Thank you Juhayna for having MSA students, and we are looking for more cooperations for the benefit of our students

22 February 2022



## Wadi Group



Students training committee ( MSA-STC) organized a shadowing day in cooperation with Wadi Group For faculties of Engineering, Computer Science, Mass Communication, Management Sciences. Arts & Design and Languages.

MSA-STC provides the senior students with Job shadowing which is a type of on-the-job training that allows an interested students to follow and closely observe another employee performing the role, which make them ready to adopt the labor market

2 February 2022

## MSA-STC Training committee holds the third visit to Egypt Air



Within the framework of the Faculty of Engineering's endeavor, October University for Modern Sciences and Arts, to enhance the practical skills of the students, the training committee held a field visit for the students of the Departments of Communications, Electronics and Mechatronics Engineering, in order to learn about the various aviation systems, ground and air control of aircraft, as well as the means of wireless communication with aircraft.

15 students participated in the visit and a student

27 February 2022

## The Policy and Business Development Training Course

05 December 2021



October for Modern Sciences and Arts (MSA University) would like to congratulate 7 of its astounding students who got interviewed and tested among 200 students and got selected among 30 students from various Egyptian public and private universities to attend and participate in the training course at the Policy and Business Development Unit that took place at the Ministry of Youth and Sports.

Let's give a round of applause to:

Fayrouz Ibrahim Behairy Badr, Faculty of Engineering

Ahmed Hossam Abdel Fattah Ali, Faculty of Engineering

Clara Fadi Joseph, Faculty of Mass Communication

Maria Maged Fayek, Faculty of Mass Communication

Sandra Emad Samir Nashed, Faculty of Management Sciences

Salma Tamer Mohamed Abbas, Faculty of Computer Science

Rana Osama Wafaei El Bialy, Faculty of Arts and Design

MSA University students presented their skills, initiatives and vision to develop business, sports and youth activities for approval in the upcoming plan of the Ministry of Youth and Sports in the presence of His Excellency the Minister of Youth and Sports at the Olympic Center in Maadi.

TRAINING



# CREATIVITY & ACTIVITY CLUB



## Creativity & Activity Club





Bazar



## CREATIVE THINKING

Dr Mohamed saied Faculty of management

10 march 2022

Outstanding & Creative Students Committee  
**ISA**  
**CREATIVITY**  
CLUB  
التفكير الإبداعي  
و إعادة اكتشاف  
  
Mohamed Saied  
Faculty of Languages  
  
Building - Meeting Room (First Floor)  
  
Friday 10 March  
  
4:00 pm  
  
Organized by  
Faculty of Engineering  
creativity-activityclub@msa.edu.eg



Creative Thinking Workshop



## ACCESSORY MAKING

Salma Salem student in faculty of Pharmacy

30 march 2022

Outstanding & Creative Students Committee  
**MSA**  
**CREATIVITY**  
CLUB  
WORKSHOP  
**ACCESSORY MAKING**  
BY: SALMA SALEM  
  
📍 MB Central, Second Floor, S4B  
📅 Wednesday 30 March  
🕒 10:00 am to 12:30 pm  
  
Organized by  
Faculty of Engineering  
creativity-activityclub@msa.edu.eg



## PORTRAIT

Mostafa El Saied student in faculty of dentistry

22 march 2022



WORKSHOP





## 2. Workshops & Events

### Round #1 (2019-2020)

IT Course Workshop



See The Previous Posters Or  
Scan The Qr Code

### Round #2 (2020-2021)

Innovative Thinking Session



The Hows Of Academics Symposium



ما تبقى من الحب بين العلم و الأدب



### Round #3 (2021-2022)

IT Course Workshop



Solar Energy Workshop



Engineering Technologies Workshop



Dentistry Scientific Day



OUTSTANDING HUB





# Outstanding Hub Achievements

## 1. Scientific Research

Round #1

**Egyptian I-Cities Planning Based on Deep Learning, Future Egyptian I-Cities**

Authors: A. I. Ahmed; A. Zaki; G. A. Abdelhady; Y. H. Elhabashy

Published in: The Path to City Resilience Conference

Round #2

**Deep-Learning and IoT Emphasis in I-Cities**

Authors: A. I. Ahmed; G. A. Abdelhady; Y. H. Elhabashy

Published in: Institution of Engineering and Technology Conference, IEEE eXplore

Round #1

**Survey on IoT based education system, Case study: MSA University**

Authors: G. A. Abdelhady; et al.,

Published in: Institution of Engineering and Technology Conference

Round #2

**Dark Comets: The Cosmic Catastrophic Threat to Earth**

Authors: M. Khalil; M. Said; A. I. Ahmed; et al.,

Published in: International Journal of Advanced Astronomy

Round #1

**Open Set Topology: An Algebraic Metric of Unbounded Integration**

Authors: A. I. Ahmed

Published in: Journal of Topology and Analysis

To View More "Publications"  
Scan The Qr Code



See The Next Posters Or

# 02 Architecture Program



# Staff Members

## Professors/ Program leader



Vice Dean and Acting Head of  
Architecture Department  
Prof. Hesham Aref



Head of Quality Assurance  
Unit  
Prof. Maysa Omar



Programme Leader  
Dr. Omar Fawzy

## Associate Professors



Assoc. Prof.  
Tarek Abd-El Salam



Assoc. Prof.  
Nermine Abdel-Galil



Assoc. Prof.  
Nihal Amer



Assoc. Prof.  
Rania El Meseidy



Assoc. Prof.  
Shady Shawky



## PhD /Lecturers



Dr. Hasnaa  
Alshrbiny



Dr. Hesham El-  
maamoun



Dr. Tarek Galal



Dr. Emad Helal



Dipl.Eng. Adel  
Fahmy



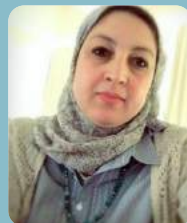
Dr. Rana Adel



Dr. Karim M.  
Ayyad



Dr. Elmahdy Mo-  
hamed



Dr. Salwa El Gindi



Dr. Ahmed Awad



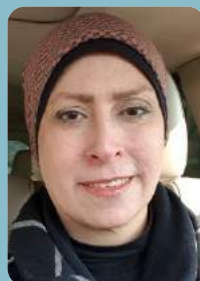
Dr. Ghada Ghazala



Dr. Mai Mohamed



Dr. Eman Saleh



Dr. Kanzy Mo-  
hamed



Dr. Aya Magdi



Dr. Ahmed  
Abdelsalam



Dr. Doaa Esmat



Dr. Mohamed  
Rafik

2021\2022



## Assistant Lecturers



L.A. Shereen  
Abodagher



L.A. Nermine  
Nofal



L.A. Yosra Mo-  
hamed



L.A. Abdel Ha-  
meed Jalal



L.A. Mona Mo-  
stafa



L.A. Lobna Galal



L.A. Ahmed Bayomei



L.A. Arwa Hus-  
sien



L.A. Olvy Bakry



L.A. Taher AbdelGhani



L.A. Hend Mo-  
stafa



L.A. Alshaimaa  
Galal



L.A. Ali Mosleh



L.A. Alaa El Sayed

## Teaching Assistant



T.A. Mirna Mohamed



T.A. Jessy Tarek



TA. Shereen  
Husieen



T.A. Nada Hatem



T.A. Elhassan  
Mohamed



T.A. Mostafa  
Osama



T.A. Nariman  
Nashaat



T.A. Ahmed Moussa



T.A. Amr Gamal



T.A. Amr Nagi



T.A. Omar Salama

2021\2022





T.A. Abeer Mohamed



T.A. Nourhan Yehia



T.A. Abdelrahman  
Zahran



T.A. Nour El-Kousy



T.A. Nour Bahgat



T.A. Rana Hany



T.A. Ashraqt Khaled



T.A. Mona Sakr



T.A. Nourhan  
El-Naggar



Hala Abdelrahman  
Executive Assistant,  
Architectural Engineering  
Department



**Rana Adel - PHD Degree - Cairo University**  
**26/8/2022**



PROMOTIONS



**Ali Mosleh - Master Degree - Cairo University**  
**9/3/2022**



**Alaa Sayed –Master Degree- Ain Shams University-**  
**12/6/2022**



## RESEARCH & PUBLICATIONS

### **Prof.Dr. Hisham Aref**

Aref, H., Magdy, S., & Gomaa, N. S. "Towards applying the mechanism of multiple land use in Egypt" (2021). Fayoum University Journal of Engineering, 4(1), 124-153.

Aref, H., Magdy, S., & Gomaa, N. S. "A mechanism to localize public services in Egypt based on their compatibility" (2021).. Fayoum University Journal of Engineering, 4(1), 96-123.

### **Assoc.Prof. Tarek Abdelsalam**

Tarek Abdelsalam, "New Architectural Intervention in Historically Sensitive Contexts: Humanistic Approach in Historic Cairo", Volume 17, Issue 1, The International Journal of HBRC, Cairo, February 2021. <https://www.tandfonline.com/doi/full/10.1080/16874048.2020.1863745>.

### **Assoc.Prof. Nehal Amer**

Amer, N. (2021). "Meaning Behind Inspiration from Nature in Mosque Design: Old and New". The 5th Annual Memaryat International Conference held virtually under the theme Masjid Architecture: Form and Meaning, 23rd– 24th.

### **Assoc.Prof.Rania El Maissedy**

Abou Dagher, S., Refaat, M., El Messeidy, R. (2022). Landscape Design as A Tool to Meet Children's Needs in Residual Urban Spaces. Civil Engineering and Architecture, Vol: 10, No: 5A. 271 - - 287. DOI: 10.13189/cea.2022.101413. Horizon Research Publishing Corporation. USA. Co-paper in Q2 / Scopus indexed journal.

### **Dr. Tarek Galal**

Tarek Galal , The Islamic Center and Event House, A New Type of Islamic Religious Building, October High Institute for Engineering and Technology, 2nd International Conference SUSTAINABLE CONSERVATION OF HERITAGE AREAS (Urban, Heritage, Branding, and Tourism), 3:4 October 2022.

### **Dr. Eman Ahmed Saleh**

Eman A. Saleh,, Students' Feedback & Architectural Engineering Education Development in Covid-19 Era. Volume 16, Issue 61, Journal of Al-Azhar University Engineering sector (JAUES) October 2021. [https://jaes.journals.ekb.eg/article\\_207686\\_588ba4064f22ba2d84b52e5adc61af4a.pdf](https://jaes.journals.ekb.eg/article_207686_588ba4064f22ba2d84b52e5adc61af4a.pdf).

Eman A. Saleh, Heba M. Gomaa, "Community development within slums' elimination: A post-occupancy evaluation study of Al-Asmarat project inhabitants", Journal of Al-Azhar University Engineering (JAUES), April, 2022.

### **Dr. Kanzy Mohamed El Halwagy**

Kanzy M. El Halwagy, The Exploration of Creativity through the Architectural Design Educational Process, Journal Architecture, Arts and Sciences.volume7, Issue5 Serial 5 May 2022. 10.21608/MJAF.2022.111940.2593.

Kanzy M. El Halwagy, A Methodology of Building Heritage Resilience Within Disaster Risk Management and Reduction, Faculty of Regional and Urban Planning –Cairo University -Journal of Research, November 2022/ DOI: 10.21608/JUR.2022.42699.1023.



**Dr. Salwa El Gidi**

Salwa El Gidi," The Effect of Shading Devices with Integrated Photovoltaics on Energy Efficiency of Buildings". Book chapter in Advanced Studies in Efficient Environmental Design and City Planning, Springer, Cham, 2021, 105-120. 25, Published September 2021 [https://link.springer.com/chapter/10.1007/978-3-030-65181-7\\_9](https://link.springer.com/chapter/10.1007/978-3-030-65181-7_9).

**Dr. Rasha ElSayed**

A. S. Eldin Shiba, M. N. Ali, Z. A. Abd El Fattah, R. S. Mahmoud, A. T. El kashef. "Wastewater Treatment Using Biomaterials to Irrigate the Agricultural Space of Eco-Cities". In proceeding of Journal of Design Engineering. ISSN: 0011-9342. March 2022.

Sayed R., Shiba A., Abdelmoez H. "Promoting local community integration in world heritage site planning: George Town – Penang, Malaysia" In proceeding of Journal of Design Engineering. ISSN: 0011-9342. September 2021.

**Dr. Rana Adel Zaki**

Rana Adel, Basel Kamel, Ahmed Amin, Sameh El Feki, Rania Nasreldin Middle-income residential compounds towards resilience through risk management: Experts' point of view, Ain Shams Engineering Journal Volume 13. Issue 6, Published 6 November 2022, <https://doi.org/10.1016/j.asej.2022.101797>.

**Dr. Karim M. Ayyad**

Ayyad, Karim, "Effect of Environmental Factors on the spread of Covid-19 in indoor and outdoor spaces" In: J. Montgomery (ed.), AMPS proceeding series, cities a changing world, virtual. 16-18 June (2021).

**Arch. Alaa Sayed Mahmoud**

Alaa Sayed Impact of applying the sustainability elements on operational risk management of the Egyptian sports clubs, Journal of Al-Azhar University Engineering sector (JAUES) October, 2021 [https://jaes.journals.ekb.eg/article\\_207690\\_b45a217dc4835af40f9f10307d8ad80b.pdf](https://jaes.journals.ekb.eg/article_207690_b45a217dc4835af40f9f10307d8ad80b.pdf).

**Arch. LA Taher Mahmoud Alaa El-Din Abdel-Hamid**

Taher M. Abdel-Hamid, Zeinab Taha "Binary Opposites: What do you know about Palestine" , 27th World Congress of Architects, (2021): 540-546, 1. <https://www.acsa-arch.org/chapter/binary-opposites-what-do-you-know-about-palestine/>

Taher M. Abdel-Hamid, Hana Zaki, "Post-COVID Rooftop Activation: An Educational Paradigm for Urban Design Schools in Egypt" International Congress of Contemporary Affairs on Architecture and Urbanism, (2021): 669-675. [https://iccaua.com/PDFs/2021Conference%20full%20book%20proceedings/5\\_Pandemic%20Studies/ICCAUA2021112%20Taher%20Abdel-Ghani.pdf](https://iccaua.com/PDFs/2021Conference%20full%20book%20proceedings/5_Pandemic%20Studies/ICCAUA2021112%20Taher%20Abdel-Ghani.pdf) 3.

## **Arch. LA Aya Magdi Younis Mohamed Awad**

Awad, A., Bartlett, D., Conaldi, G., 2021. Evaluation of Development Strategies and Community Needs in Developing Countries: A Comparative Case Study of Informal Settlements in Asia and Africa, in: Trapani, F., Mohareb, N., Rosso, F., Kolokotsa, D., Maruthaveeran, S., Ghoneem, M. (Eds.), *Advanced Studies in Efficient Environmental Design and City Planning, Advances in Science, Technology & Innovation*. Springer International Publishing, Cham, pp. 197–208. Published 25 September 2021 [https://doi.org/10.1007/978-3-030-65181-7\\_17](https://doi.org/10.1007/978-3-030-65181-7_17).

## **Arch.LA Merna Mohamed Reda**

Merna M. Kotby, Marwa Khalifa, Abeer ElshaterMerna, M. Reda, *Lightening Other Faces of The Livability Parameters in The Egyptian Urban Communities*, Book chapter-The 4th International Conference of Contemporary Affairs in Architecture and Urbanism,Turkey.June 2021 [https://www.academia.edu/53242766/Lightening\\_Other\\_Faces\\_of\\_the\\_Livability\\_Parameters\\_in\\_the\\_Egyptian\\_Urban\\_Communities](https://www.academia.edu/53242766/Lightening_Other_Faces_of_the_Livability_Parameters_in_the_Egyptian_Urban_Communities).

## **Master supervision**

### **1. Prof.Dr. Maysa Mahmoud Fathy Omar**

Master supervision:-

Master Thesis submitted to the Faculty of Engineering- Cairo University-Architecture Department “A Pedagogical framework in Architectural Digital Design curricula: Upgrading Conventional Education in Egypt” Islam Ali Ibrahim 2019 till now..

Master Thesis submitted to the Faculty of Engineering- Cairo University-Architecture Department “Lighting and heat control inside architectural spaces applied studies for lecture halls.” Mohamed Ahmed Mohamed Hassan 2021 till now.

External Examiner:-

Master Thesis submitted to the Faculty of Engineering- Cairo University-Architecture Department “Tourism Urbanization Trends in the Egyptian Coasts betwwen Cost, Purchasing Power and Urban Value” Ahmed Abdel Hady Mahmoud Shaaban, 2022.

### **2. Assoss.Prof Rania Ahmed Hamdi El Meseidy**

PhD supervision:

Cairo University Faculty of Urban and Regional Planning “Landscape Design of Residual Spaces as Child-friendly Spaces” Shereen Abou Dagher

Cairo University Faculty of Engineering “Impact of Digital Platform on the Vibrancy of Urban Space to Enhance the Quality of Urban Life” Basma Medhat Ibrahim

### **3. Prof.Dr. Hisham Aref**

External Examiner:-

Master Thesis submitted to the Faculty of Engineering- Cairo University-Architecture Department “Using artificial intelligence technology to create temporary relief units for refugees “Miral Essam Abo ElFottoh Ali Amer, January 2022.

Master Thesis submitted to the Faculty of Engineering- Cairo University-Architecture Department “Occupancy of quality buildings as an entrance to improve performance” Doha AbdelAziz Fahmy AbdelAziz, April 2022

Master Thesis submitted to the Faculty of Engineering- Cairo University-Architecture Department “The impact of digital architecture on facades and furniture (particularly for cultural buildings)” Arig Badr Eldin Fathy Mohamed, October 2021

Master Thesis submitted to the Faculty of Engineering- Fayoum University-Architecture Department “The impact of digital architecture on facades and furniture (particularly for cultural buildings)” Dalia Mohamed Mazoad Ibrahim, October 2021



## Extracurricular activities

### Prof. Dr. Hisham Aref



## Prof. Dr. Maysa Omar

Prof. Dr. Maysa Omar has successfully completed :

The (Training of Organizing Conferences), which was held by MSA Learning and Development Committee- August 2022.

The (Training of Performance Evaluation and Feedback), which was held by MSA Learning and Development Committee- August

The (Training of Meeting Management), which was held by MSA Learning and Development Committee- 2022.

The (Training of Forming High Performing Teams), which was held by MSA Learning and Development Committee- 2022.

The (Training of Forming High Performing Teams), which was held by MSA Learning and Development Committee- 2022.

The (Training of Intermediate Leadership Program), which was held by MSA Learning and Development Committee- 2022.

The (Training of Employee Performance Development), which was held by MSA Learning and Development Committee- 2022.

The (Training of Meeting in Education), which was held by MSA Learning and Development Committee- 2022.

The (Training of Crisis Management), which was held by MSA Learning and Development Committee- 2022.

The (Training of Writing Reports and Proposals), which was held by MSA Learning and Development Committee- 2022.

The (Training of Leading Research Teams), which was held by MSA Learning and Development Committee- 2022.

The (Training of Assessment Strategies), which was held by MSA Learning and Development Committee- 2022.

## Assoc.Prof. Nermine Abdel Gelil Mohamed

Assoc.Prof. Nermine Abdel Gilil Mohamed has successfully completed :

The (Training of The comments to editors and decision recommendations), which was held by Researcher Academy –El Sevier- on 21 February 2022.

The (Training of How to write a helpful peer review report), which was held by Researcher Academy –El Sevier- on 21 February 2022.

The (Training of How to peer review article), which was held by Algorithm on 21 February 2022.

The (Reviewing of Urban Climate), which was held by Researcher Academy –El Sevier- on March 2022.

The (Training of Parametric Architecture Design), which was held by Algorithm on 18-27 November 2021.

The (Training of Design Builder v7-hole building simulation FEB zozz), which was held by MSA university Architecture Department- 10-13 february 2022.

## Assoc.Prof. Rania El Messeidy



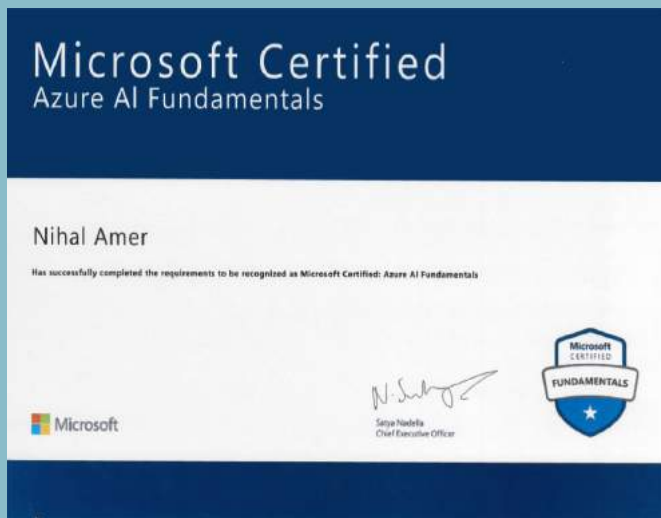
“Post-Pandemic Cities: Challenges & Opportunities” Building Back Better” Organized by HBRC & METROPOLIS International Training Institute held at Housing and Building National Research Center (HBRC). 8 Feb 2022

Speaker at Arab Architecture Week, 10-14 October 2021 organized ARCHINET platform, KSA, lecture title “Tactical Urbanism and Community Development”.

Reviewer at Common Ground Research Networks <https://cgnetworks.org> University of Illinois, USA. (Since 2018)

Reviewer at APJ Architecture & Planning Journal, Beirut Arab University, Lebanon <https://digitalcommons.bau.edu.lb/apj/> (Since 2020)

## Assoc.Prof. Nihal Amer





## Extracurricular activities

### Dr. Hesham El Maamoun

Dr Hesham El Maamoun has successfully completed :

The Training of Getting Started with the Learning Center, which was held by Learning and Development- Rotary date 2-24-2022.

The Training of Rotary Fellowship Basics Learning Plan, which was held by Learning and Development- Rotary date 2-24-2022.

The Training of Protecting Personal Data, which was held by Learning and Development- Rotary date 2-24-2022.

The Training of Leading Change, which was held by Learning and Development- Rotary date 2-24-2022.

### Dr. Kanzy Mohamed El Halwagy



Dr Kanzy Mohamed El Halwagy is a member of the world inspire LI family.

# **Extracurricular activities**

## **Dr. Ahmed Awad Mosad Taha**

**Dr Ahmed Awad Mosad Taha has successfully completed :**

**The (Training of Performance Evaluation and Feedback ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Writing Reports and Proposals ), which was held by MSA Learning and Development Committee- 2022**

**The (Training of Graduation Project Supervision), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Summative Assessment), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Forming High Performing Teams), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Cultivating Entrepreneurial Mindset), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Advanced Instructional Design), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Assessment Strategies ), which was held by MSA Learning and Development Committee- 2022.**

## **LA. Alaa Adel Mahmoud El Sherif**

**LA Alaa Adel Mahmoud El Sherif has successfully completed :**

**The (Training of Writing Reports and Proposals ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Instructional Design Foundations), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Goal Setting ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Writing Reports and Proposals ), which was held by MSA Learning and Development Committee- 2022**

**The (Training of Instructional Design Foundations), which was held by MSA Learning and Development Committee- 2022**

**The (Training of Student Motivation and Engagement), which was held by MSA Learning and Development Committee- 2022**

## **LA. Ali Mosleh Saad Hammad**

**LA Alaa Sayed Mahmoud has successfully completed :**

**The (Training of Goal Setting ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Design Thinking), which was held by MSA Learning and Development Committee- 2022**

**The (Training of Instructional Design Foundations), which was held by MSA Learning and Development Committee- 2022**

**The (Training of Student Motivation and Engagement), which was held by MSA Learning and Development Committee- 2022**

**The (Training of Developments in Research Writing ), which was held by MSA Learning and Development Committee- 2022**



## **LA. Arwa Hussein Abdillatif**

**LA Arwa Husein Abdillatif has successfully completed :**

**The (Training of Writing Reports and Proposals ), which was held by MSA Learning and Development Committee- 2022**

**The (Training of Instructional Design Foundations), which was held by MSA Learning and Development Committee- 2022**

## **LA. Abdel Hamid Jalal**

**LA Abdel Hamid Jalal has successfully completed :**

**The (Training of Instructional Design Foundations), which was held by MSA Learning and Development Committee- 2022**

## **LA AI Shaimaa Galal AI Din**

**LA AI Sjaimaa Galal AI Din has successfully completed :**

**The (Training of Instructional Design Foundations), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Student Motivation and Engagement ), which was held by MSA Learning and Development Committee- 2022.**

## **TA. Alhassan Abd Elrazzak Mohamed**

**LA AI Hassan Abd Elrazzak Mohamed has successfully completed :**

**The (Training of Writing Reports and Proposals ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Dress Code), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Formative Assessment ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of High Impact Presentations), which was held by MSA Learning and Development Committee- 2022**

**The (Training of Classroom management ), which was held by MSA Learning and Development Committee- 2022**

## **Extracurricular activities**

### **TA. Ashraqat Khaled khalaf**

**TA Asraqat Khaled Khalaf has successfully completed :**

**The (Training of Writing Reports and Proposals ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Mind Mapping ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Formative Assessment ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of High Impact Presentations), which was held by MSA Learning and Development Committee- 2022**

**The (Training of Classroom management ), which was held by MSA Learning and Development Committee- 2022**

**The (Training of Dress Code), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Developments in Research Writing ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Applying Tech to Classroom for Gen Z ), which was held by MSA Learning and Development Committee- 2022.**

### **TA. Abeer Ahmed Ramadan Mohamed**

**TA Abeer Ahmed Ramadan Mohamed has successfully completed :**

**The (Training of Writing Reports and Proposals ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Mind Mapping ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Formative Assessment ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of High Impact Presentations), which was held by MSA Learning and Development Committee- 2022**

**The (Training of Classroom management ), which was held by MSA Learning and Development Committee- 2022**

**The (Training of Dress Code), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Developments in Research Writing ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Applying Tech to Classroom for Gen Z ), which was held by MSA Learning and Development Committee- 2022.**



## **TA. Amr Gamal Saied Abd El-Khalek**

**TA Amr gamal Said Abd El-Khalek has successfully completed :**

**The (Training of Writing Reports and Proposals ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Mind Mapping ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Formative Assessment ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of High Impact Presentations), which was held by MSA Learning and Development Committee- 2022**

**The (Training of Classroom management ), which was held by MSA Learning and Development Committee- 2022**

**The (Training of Dress Code), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Developments in Research Writing ), which was held by MSA Learning and Development Committee- 2022.**

**The (Training of Applying Tech to Classroom for Gen Z ), which was held by MSA Learning and Development Committee- 2022.**

## **Membership in international or local organizations**

**1. DR. Tarek Abdelsalam,**

**- Society for Research on Identity Formation (SRIF) - Architectural Humanities Research Association (AHRA) - Architects for Peace - Research Center for Islamic History, Architecture and Culture**

**2. DR. Rania Ahmed Hamdi El Meseidy**

**Living Future Member (International Living Future Institute) <https://living-future.org/>**

**DR. Kanzy Mohamed El Halwagy**

**"Inspireli Awards" jury member**

**DR. Karim M. Ayyad**

**IBPSA Egypt**

Amr Mousa, one of our outstanding graduates of Faculty of Engineering, won Three awards in DNA Paris Design Awards November 2021



Eng. Amr Ibrahim Moussa, Graduated from the Department of Architecture, Faculty of Engineering - MSA University, receives the “Young Designer Pioneer Award” 2022 from the largest design organization in the world, “a Design Award and Competition” It is worth noting that this award is given to the winner only once in a lifetime, and one winner receives it every year for his achievements and contributions in the field of design and for his ability to integrate more than one scientific and artistic field.

Honoring- Competitions



## Sphinx Avenue inauguration ceremony activities in Luxor 2021, 07 December 2022

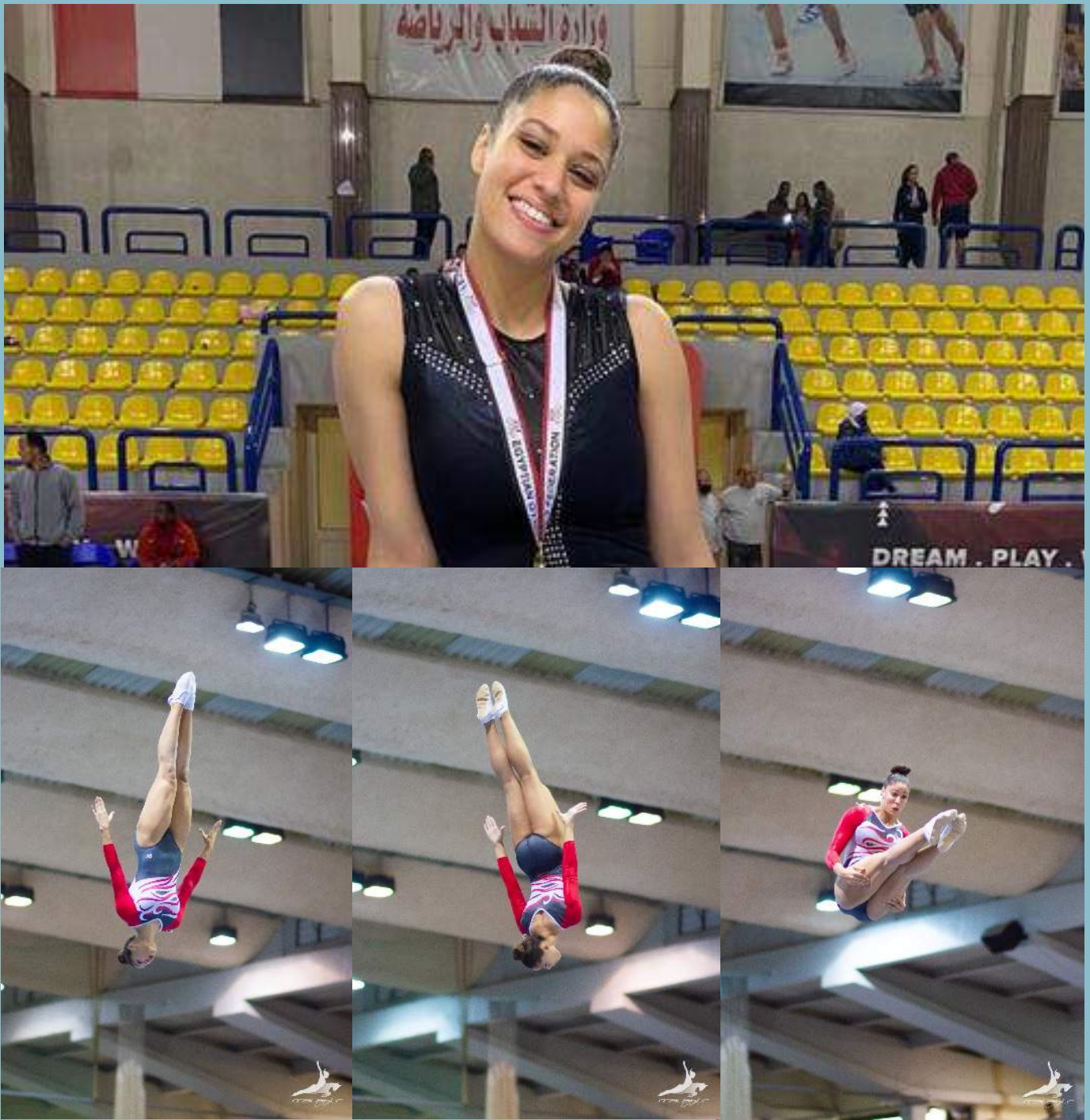


Creativity and excellence of our students in the Sphinx Avenue inauguration ceremony activities in Luxor 2021.

October for Modern Sciences and Arts (MSA University) would love to give a round of applause to Osama Mohamed Refaat, a graduate of the Faculty of Engineering- Architecture Department as he and his team consisted of an artistic group of university students from various faculties designed and implemented a set of accessories and horse costumes that were used in the opening of the historic Sphinx Avenue (Kebash Road) in Luxor, under the supervision of Media Hub - Saadi Gohar. Students enrolled in the Faculty of Engineering

Radwa Salah, Youssef Ali, Shehab Fahmy, Muhammad Nabil and Abdulrahman Atef.





Mariam El Bialy A Player in the Shooting Club and The Egyptian Trampoline Gymnastics team got Second place in the 2021 African Chamionship



## ARCHAEOLOGY IS OURS



Dealt with how to design inside Historic Cairo Lecture 18 November 2021

The Faculty of Engineering (Architecture Department) at MSA University was honored by the presence of Dr. Mai Al Ibrashy, founder of the Urban Thought Association Megawra and “Al-Athar Lina” Initiative, which are two Egyptian non-governmental organizations specialized in the field of architecture, urbanism, heritage and society.

The lecture was attended by 150 students in Architectural Design 7, which deals with designing a project in one of the historical heritage areas in Cairo so that the students can link with the practical framework on the grounds of Historic Cairo.

## ALUMNI



Engineer / Mohamed Abdel Hamid Kamel Rizk, a graduate from the Faculty of Engineering, Department of Architectural Engineering - MSA University for the year 2013, a faculty member in a public university, a member of the Training Committee of the Engineers Syndicate, and the ambassador of sustainable development in the Syndicate, was officially assigned to chair the Sustainable Development Committee of the General Syndicate Engineers at the state level.





# REVIVAL OF MUSA MIZAR VILLAGE FAYOUM GOVERNORATE

مع المكان



تنمية الإنسان

As a part of the MSA University's Social responsibility, Dr. Nawal El-Degwi Initiated this project to help the villages most in need. Mousa Mizar is the Pilot village of the project, where Prof. Adel Fahmy and his team started to implement the vision "Green Architecture for a Green Future". The project includes rebuilding and mentanance of deteriorated houses and public buildings. Which is done only by utilizing appropriate building technologies and the development of vernacular architecture techniques; Such as, Natural Stone Foundations, CEB Walls, Catalan Vault Roofing and Earth Plastering and rendering. Natural building materials were used to reduce environmental impact of the project and to ensure more healthy and humanitarian living enviroement. So far, 5 Houses were renovated, including the complete rebuilding of Sitt Sukina's House, along with the revival of the Community development center.



## COMPRESSED EARTH BLOCKS (CEB) DEVELOPMENT OF TRADITIONAL ADOBE



MIXING



COMPRESSING



CURING

## CATALAN VAULT DEVELOPMENT OF TRADITIONAL VAULTS



## SITT SUKINA'S HOUSE Local Clay and Natural Stones were used to creat this house.



For the first time in the village of Musa Mizar, locally produced Compressed Earth Blocks were used, and local masons were trained. The stones from demolished houses were reused to build the foundations of the building. Which was achieved with the help of one of the builders from the village and his relatives. A trench around the house was also made to drain the leaching water away from the house.

During the construction, we always dreamed of when we would see this house completed, and the moment came when the house received the whole family.

We built the house from the local soil and stones, and we built it with the help of labors from neighbours and friends. The villagers were astonished, because for the first time this beautiful house was not built from cement and concrete construction but from local clay. Sitt Sukina's house has become a point of interest to all those skeptical of earth-building methods.

Sitt Sukina became very happy with the transformation of her home and that after many years of suffering she was able to sit and sleep in a dry and clean place without the disturbance of the leaching water, and to climb a comfortable stair to hang the laundry on the roof. She is now also able to receive visitors in a decent place so that she sits proudly in front of the house all the time.

## COMMUNITY DEVELOPMENT CENTER

It was so Important to revive the Community Development Center to reinforce the relation between our project, Village Inhabitants and the decision makers. The revived building will be a hub for future trainings and social meetings and activities.



## RENNOVATION WORKS



AM GAMAL



SITT GAMALAT



SITT NA'EMA

## GREEN ARCHITECTURE FOR A GREEN FUTURE

TEAM:  
Ahmed Ane  
Oylan Faray  
Alan Slim Abdulatif  
Ahmed Alex  
Basant Abu El-Wafa

Adel Fahmy  
Yara Okasha  
Mona Nabil  
Mostafa Ahmed  
Mohamed Emre  
Ramon Refaat

Islam Abo Elmaras  
Ahmed Hussen  
Ahmed Hamsary  
Badrina  
Walea Maher  
Mayer Tariq

Amr Ahmed  
Karim Shasha  
Dina Mohamed  
Ayel Ibrahim  
Ethar  
Amr Youfiq

Taher Abdulghani  
Ahmed El-Amanry  
Andra  
Mohamed Mohsen  
Asem El-Haz  
Hesham El-Garfy

Nada Heman  
Dalia Wagdy  
Shady Asem  
Youssef Khalil  
Tarek El-sharfy  
Ahmed Raghib

Dina El-Bialy  
Mostafa Hussen  
Mohamed Sayed  
Hana Ali  
Alan El-Helw  
Mona Nabil

no cement  
no cry  
لا إسمنت  
لا بكاء

COMMUNITY PARTICIPATION AND COMMUNITY DEVELOPMENT

## PHOTOSHOP (POSTER MAKING)

25, DECEMBER 2022

In this post-production workshop, the main focus is using the photoshop program to finalize the project's visualization. Poster Design color and texture theory and overall aesthetic are the obtained skills for 50 students throw out these extensive sessions



## ARCHITECTURE COLLAGE WORKSHOP

15/16, FEBRUARY 2022

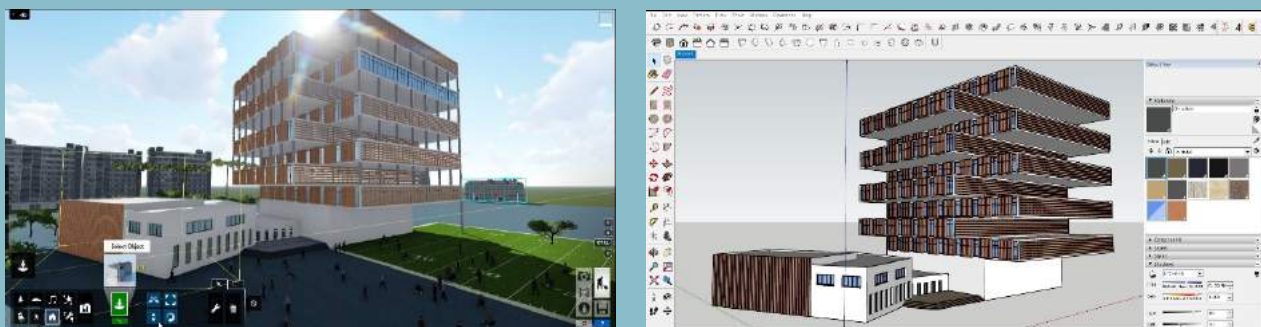
By: Mirna Abdrabbuh

In this Faculty making workshop, photo-editing and visual presentation are merged together to help the attending 25 students gain a sense of artistic themes during the 2 sessions



## SKETCHUP AND LUMION WORKSHOP

24, FEBRUARY 2022 By: Eng. Abdelhamid Galal





## Design Builder

10-13 February 2022



“Design Builder Software Tool” 4 days accredited training

Guest Speakers: Dalia Wagdi, Ph.D. Candidate, Sustainability & Healthy Buildings, MSA University. Micheal A. William, Ph.D., Mechanical Engineering at Coventry University.

This training is conducted to help and encourage researchers in Egypt and abroad to reduce the impact of climate change and the governance of the built environment and control the sustainable design of buildings and calculate all energy uses.

## CAPACITY BUILDING Workshop, FEBRUARY 2022

In this capacity building program Dr. Hisham Aref gave 5 diverse workshops in a completely innovative perspective

Concept Implementation: how can architects incorporate new technologically autonomous concepts with the constantly evolving world of design.

Program Selection: how to produce an in-depth building program based on the volumetric area of a number of core functional spaces.

Site Analysis: how to analyze a site to be of service to the project and transform all of its disadvantages to become assets to the users.

Grid Geometry: How to start from a small unit of furnishing and allow it to effortlessly create its own mobile grid for the space.

Elevation Techniques: How to manipulate the basic grid to adhere to more than one; therefore, creating a completely new dynamic one

## Architectural Manual Presentation Workshop 28, MAY 2022



Eng. Nourhan Yehia taught the students the basics of manual rendering and the different types of tools used to produce a variety of artistic outcomes

### LECTURE

Approach to research work, how to write and publish a research paper , FEBRUARY 2022

Lecturer Prof. Dr. Hisham Aref

### LECTURE

Guidelines to choose your master's thesis ability and capacity to post grad studies, FEBRUARY 2022

Lecturer Prof. Dr. Hisham Aref

## INTRODUCTION TO PARAMETRIC DESIGN 13-17 August 2022



MSA University The Faculty of Engineering Architecture Department made a 5 days workshop titled "Introduction to Parametric Design", given by Engineer Omar Salama. Design outputs: It is becoming increasingly more important and many architectural designers are beginning to see the benefits of using associated tools and processes.

Workshops



# Design Builder

21 August, 2022



“Design Builder Software Tool” 4 days accredited training

Our speaker guests: Dalia Wagdi, Ph.D. Candidate, Sustainability & Healthy Buildings, M-SA Univerisity

- Micheal A. William, Ph.D., Mechanical Engineering at Coventry University. This training is conducted to help and encourage researchers in Egypt and abroad to reduce the impact of climate change and the governance of the built environment and control the sustainable design of buildings and calculate all energy uses.



## **THE LOST PYRAMID OF DJEDEFRE IN EGYPT**

### **ASE 261 DESIGN II – VISITOR CENTER**



## **SITE LOCATION – 6TH OCTOBER CITY**

### **ASE 361 Integrated primary school**



## **OLD FUSTAT/ COPTIC MUSEUM**

### **ASE 262 History and Theories of Architect II –**

Separate Field trips to Old Fustat and Coptic Museum as part of mandatory assignment.



## NEW ADMINISTRATIVE CAPITAL



## PORT SAID



## Fatimid Cairo/ Pyramids Fatimid Cairo, Baron Palace ASE 4534 Architectural Photographic Techniques

### 1- Photography Course:

- a) One field trip to Fatimid Cairo
- b) Guest Lecturer and Juror was invited to critique the works of the students, Mr. Tamer Shaqra, Professional Photographer with over 30 years experience.
- c) Several field trips by individual student groups to different locations to photograph interesting subjects. This included : Pyramids, Fatimid Cairo, Baron Palace, Muhammad Ali Palace, The Citadel, Several Museums and other locations.



## **MOKATAM, ST.SIMOAN MONASTERY ASE 461 DESIGN VIPAVILLIOM OF EGYPT**



## **Citadel and Saliba Street ASE 362 History and Theories of Architecture IV**



FIELD TRIPS



**El Moaez Street**  
**ASE 362 History and Theories of Architect IV**



**EL REFAEE MOSQUE**  
**ASE 362 History and Theories of Architect IV –**  
**DEC.2021**



**Cairo Citadel , Moasques of Alrifa'i and Sultan Hassan ,**  
**25\3\2022 ASE 362**





## **CVL355 R.C STRUCTURE & FOUNDATION I**



### **Brief report on construction site**

**At the beginning of the site visit, the foundation excavation works were explained and briefed and it was explained how the project's operations are implemented throughout the process. Then students observed RC works of Isolated footings, beams, solid slabs, flat slabs & columns.**

## **BOSLA POLARIS PARKS CVL455 STEEL STRUCTURE**



### **Brief report on construction site**

**At the beginning of the site visit the whole process of construction was demonstrated and the construction methods were discussed in brief. Then students observed the works of a steel frame covering a large area intended for industrial works. The statical system components were explained such as: foundations, base plates, columns, beams, bolted connections, welded connections, purlins, bracing, and roof cover.**



UN  
CV



## BOSLA POLARIS PARKS CVL455 STEEL STRUCTURE



# 03 Electrical Program



# Electrical Communication and Electronic System Engineering Program

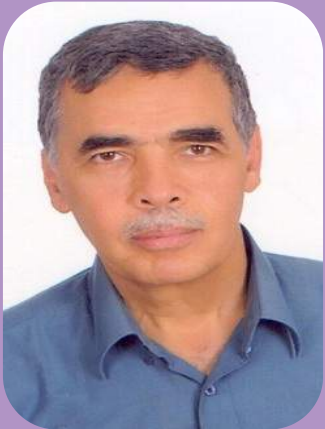
## Staff Members



Acting Head of Electrical Communication and electronic System Engineering

Associate Prof. Ahmed Diaa Eldin

## Professors



Prof.  
ESsam AbdelFattah Sorour

## Associate Professors



Assoc. Prof.  
Hossam Abdel Aziz Ibrahim Selmy

# Staff Members

## PhD / Lecturers



Dr. Said Mabrouk



Dr. Ahmed Fawzy Azet Aly



Dr. Hatem Zakaria Radwan



Dr. Amira El-Tokhy Ali



Dr. Mohamed S Zaky Al-Atrach



Dr. Mostafa Gamal



Dr. Walid Mohamed Nabil



Dr. Maher Mohammed el  
Tayeb



## Assistant Lecturers



L.A. Ahmed Hatem



L.A. Farah Raad Karim



L.A. Shahrenaz Mohamed  
Shokry



L.A. Mostafa Ali  
Abdelmoneim



L.A. Mariam Ahmed Hamza



T.A. Alaa Emad Sayed Ibrahim



L.A. Mohamed Osama  
Mohamed Elfawal



L.A. Nayera  
Hassan Ali



L.A. Nouran Magdy



L.A. Shrouk Tarek Mohamed

## Teaching Assistant



Mohamed Ahmed Hosny



Ahmed Gamal Ahmed



Mahmoud Mohsen Ebrahim



Mahmoud Youssef Elazzab



Heba Othman  
Administrative Assistant  
Electrical Engineering Systems Department

## Research Assistant



Ahmed Aboelfadl Tawfeek



Mahmoud Magdy Gaafar



# Computer Systems Engineering Program

## Staff Members



Acting Head of Computer Systems Engineering  
Department

Associate Prof. Samer Ibrahim

## PhD / Lecturers



Dr. Ahmed Ayoub



Dr. Manal Moustafa

## Teaching Assistant



TA Dina Magdy



T.A . Yomna Sameer Abd Rab-  
bo Elkholy



T.A . Mina Essam 13452

## RESEARCH & PUBLICATIONS

Dr. Mohamed El Atrash

F. Kareem, Mohamed El Atrash, A. Ibrahim, and Mahmoud A. Abdalla, "All-textile inspired-folded dipole antennas for on/off-body communications medical applications", Alexandria Engineering Journal, vol. 61, no. 11, pp. 8751-8761, 2022.

Mohamed El Atrash, Mahmoud A. Abdalla, and Hadia M. El Hennawy, "A Compact Highly Efficient  $\Pi$ -Section CRLH Antenna loaded with Textile AMC for Wireless Body Area Network Applications", IEEE Transactions Antennas Propag., vol. 69, no.2, pp. 648-657, 2021.

A. Y. I. Ashyap, S. H. B. Dahlan, Z. Z. Abidin, S. K. A. Rahim, H. A. Majid, A. S. M. Alqadami, and Mohamed El Atrash, "Fully fabric high impedance surface-enabled antenna for wearable medical applications", IEEE Access, pp. 1-13, 2021.

Mahmoud A. Abdalla, Mohamed El Atrash, Ahmed A. Abdel Aziz, and Mohamed I. Abdelnaser, "A compact dual-band D-CRLH-based antenna with self-isolation functionality", International Journal of Micro-

## Training activities

**Assocc. Prof. Samer Ibrahim**

Assocc. Prof. Samer Ibrahim has successfully completed The Training of Performance Evaluation and Feedback, by Msa Learning Development Section- August 2022 .

## Extracurricular activities

**Research Assistant Ahmed Aboelfadl Tawfeek**

Researcher Ahmed Aboelfadl Tawfek has successfully completed :  
The (Training of Writing Reports and Proposals ), which was held by MSA Learning and Development Committee- 2022

The (Training of Customer Experience Management ), which was held by MSA Learning and Development Committee- 2022.

The (Training of Creative problem Solving and Decision making), which was held by MSA Learning and Development Committee- 2022.

The (Training of Planning and Time Optimization), which was held by MSA Learning and Development Committee- 2022.



## **“Personalized Medicine: Future Healthcare via Modern Communication Technologies ” Webinar, 19 May 2022 by Prof. Raed Shubair .**

First MSA New Technologies Forum organized its first webinar under first title “Personalized Medicine: Future Healthcare via Modern Communication Technologies” by Prof. Raed Shubair.



## **“Water Informatics: Introduction and Case Studies” Webinar, 23 May 2022 by Prof Amlan Chakrabarti.**

First MSA New Technologies Forum organized second webinar under title “Water Informatics: Introduction and Case Studies” by Prof Amlan Chakrabarti. He is presently Professor and Director of A. K. Choudhury School of Information Technology (AKCSIT), University of Calcutta, India and he is also Heading the IT and Technology Innovation Cell, Dept. of Higher Education Govt. of West Bengal, India



## **“Home automation and BMS system AT ISH KUWAIT” Webinar, 26 May 2022 by Eng. Shadi Hijab.**

First MSA New Technologies Forum organized third webinar under the title “Home automation and BMS system AT ISH KUWAIT” by Eng. Shadi Hijab. Eng. Shadi Hijab is CEO and founder of ISH CO, Kuwait



## **“Communicating Fresh Information for Real-Time Internet of Things Systems” Webinar, 28 May 2022 by Dr.Basel Barakat**

First MSA New Technologies Forum organized forth webinar under the title “Communicating Fresh Information for Real-Time Internet of Things Systems” “ by an MSA Graduate Dr. Basel Barakat . He is a lecturer at the University of Sunderland, teaching both undergraduate & postgraduate programs. Dr. Basel worked at the School of Engineering and Built Environment at Edinburgh Napier University as a lecturer. He received his MSc and PhD from the University of Greenwich, UK in 2014 and 2019.

## **“Reasons Behind the Success of NASA and Apollo Project” Webinar 2nd June 2022 by Prof. Farouk El-Baz**

First MSA New Technologies Forum organized third webinar under the title “Reasons Behind the Success of NASA and Apollo Project” and will be given by our iconic guest Prof. Farouk El-Baz, Director, CRS at Boston University, US.

## **“Remote technical support on Communication products and networks to a global customer base” Webinar 2nd June 2022 by Joulia Garbaya.**

First MSA New Technologies Forum organized third webinar under the title “Remote technical support on Communication products and networks to a global customer base” and will be given by Joulia Garbaya, Optical Transmission Engineer at GSC Huawei Romania.





# ENGINEERING TECHNOLOGIES WORKSHOP

## 23 February 2022

As MSA University and the Faculty of Engineering are keen to set the roadmap to your training required to master the graduation projects, in partnership with EKB, Elsevier, STC committee, SMC, Eduvate, Telecom Egypt Company, and IT Gate Academy, The Outstanding Hub and ECE department a invited the attendees the 6-days workshop titled “Engineering Technologies” (36 Hours training) that will include a variety of practical training sessions beside scientific research program to reach out the full image of your thesis at the end of your journey.

Three certificates will be delivered for those who will attend the sessions, one for your participation in the training sessions (minimum 15 Hrs), the 2nd one for completing Elsevier’s program, and Eduvate will issue a certificate for your attendance.

In addition, there will be a special offer for the attendees to get programming and web hacking free courses for 55 hrs: 30- Hours for Python programming and 25- Hours for web hacking, offered by the IT Gate Academy



26 February, 2022

The working group were from the Faculties of Engineering, Art and Design and Computer Science and they visited the Ministry of Civil Aviation and several specialized companies, including EgyptAir, the Holding Company for Airports, Misr Ground Services and Misr for Complementary Industries. In addition to forming work teams corresponding to the university's work group in the ministry to discuss more than 30 proposed ideas for future projects with officials in these companies and to discuss ways of cooperation as well,

This crystallized over the course of two meetings as the working groups were divided and all previous experiences with many ministries, authorities and companies were awarded 5000 pounds within the framework of the directives and recommendations of His Excellency President Abdel Fattah El-Sisi to localize local technology.



# Workshops



# ENGINEERING TECHNOLOGIES

## DAY 1

### 27 February 2022

27 February, 2022

Day 1: Elsevier 1st day addressed the following topics related to the academic research and how to improve it using Elsevier tools.

61 students attended 6 hours of hands-on sessions and tried Elsevier tools (Knovel and Engineering Village).

Topic	Speakers
Introduction to EKB resources	Dr. Fady Anees (Elsevier Country Ambassador)
Discovering Engineering Research Literature using Engineering Village	Dr. Fady Anees (Elsevier Country Ambassador)
Develop Engineering Competencies using Knovel.	Eng. Amir Beshai (Regional Manager – Elsevier Engineering, Africa)



# ENGINEERING TECHNOLOGIES

## DAY 2

### 28 February 2022

Day 2: Eduvate Company presented smart home technologies over two sessions.

113 students attended 6 hours of hands-on sessions

Topic	Speakers
Smart Homes Technologies, Lec#1	Eng. Omar Hisham (Eduvate Marketing Manager)
Smart Homes Technologies, Lec#2	Eng. Omar Hisham (Eduvate Marketing Manager)



Workshops



# ENGINEERING TECHNOLOGIES

## Day3

**1 MARCH 2022**

Day 3: SMC Company presented the solar energy fundamentals over two sessions.  
60 students attended 6 hours of hands-on sessions

Topic	Speakers
Fundamentals of Solar Energy, Lec#1	Eng. Saeed Mohammed (SMC - Project Engineer)
Fundamentals of Solar Energy, Lec#2	Eng. Saeed Mohammed (SMC - Project Engineer)



# ENGINEERING TECHNOLOGIES

## Day4

**2 MARCH 2022**

Day 4: Elsevier 2nd Day

54 students attended 6 hours of hands-on sessions

Item	Speakers
Introduction to Scholarly Research using Elsevier tools	<b>Dr. Shaimaa Haikal (Elsevier Ambassador)</b>
How to read and write an abstract	<b>Dr. Shaimaa Haikal (Elsevier Ambassador)</b>



Workshops



# ENGINEERING TECHNOLOGIES

Day5

3 MARCH 2022

Day 5: IT Gate Academy set the roadmap for the Engineering students to enter the networking and security fields throughout the workshop sessions.  
86 students attended 6 hours of hands-on sessions

Item	Speakers
Networking Career Path	Eng. Ahmed Abdul Hameed (CEO of IT Gate Academy)
Cyber Security Career Path	Eng. Ahmed Abdul Hameed (CEO of IT Gate Academy)



# **1- Road Lane Line Detection for Autonomous Driving Using Computer Vision**

Vehicle speed monitoring and management of highways is the critical problem of the road in the modern age of growing technology and population. A poor management results in frequent traffic jam, traffic rules violation and fatal road accidents. Using traditional techniques of RADAR, LIDAR and LASAR to address this problem is time-consuming, expensive and tedious. This project presents an efficient framework to produce a simple, cost efficient and intelligent system for vehicle speed detection. The daily life of people encounters more problems as the population continuously increases in urban area, and road traffic becomes more congested because of high demand and less level of road capacity and infrastructure. Since the effects of these problems are significant in daily life, it is important to seek efficient solutions to reduce them. Vehicle speed detection is very important for observing speed limitation law and it also demonstrates traffic conditions.

## **2- On and Off-Page Search Engine Optimization**

Search Engine Optimization (SEO) is imperative for websites to improve the rank for search results and get more online visits mentioned by the client. This project implements some Off-page SEO techniques to improve this ranking. Off-page ranking signals is more important than the on-page ranking factors. That is, what happens off-site is much more difficult to control. This is where reputation and trust come into play and why inbound links and social media are so critical to determine how the website's pages rank. It gives better and upgraded results to clients, which assists them with viewing the well-known page among the quantity of pages accessible in the search results. In addition, Empowers the websites to contend with other adversary's site as every single site proprietor hope to see their very own site on the list before other's websites.

## **3- P2P Delivery Management System**

The continuously growing online shopping is increasing the number of attended home deliveries. However, some challenges exist including inflexible scheduling, high pricing and inconvenient tracking. The concept of peer-to-peer (P2P) delivery allows a traveler carries a parcel from the sender to the receiver while undertaking a trip they already intended to take and receives a fee to contribute towards their travel costs. The future of ecommerce relies on improved and satisfactory delivery services. A few standalone P2P delivery systems are available while the demand is exponentially increasing. Most delivery services have inflexible scheduling. - Most models vary between different platforms but essentially a traveler who is on route between two cities will pick up a package and take it to the recipient at the other end of their trip.



# **1- Skin Cancer Detection Using Machine Learning**

**Skin cancer is the most common form of cancer. It occurs when there is an uncontrollable growth of abnormal cells in a layer of the skin and most frequently develops on skin exposed to the sun. About a third of cancers in the world are skin cancers and the rate continues to increase. In fact, the cases of skin cancer all over the world raised by 50% due to the ozone layer depletion. Using machine learning, deep learning and image processing will increase the accuracy of the skin cancer prediction. The problem is that skin cancer occurs due to sun exposure and as a result it causes damage of skin which is needed to be predicted to treat it early. This project aims to use machine learning technology to detect skin cancer at early stages to help in proactively minimize the death rate and improve mankind health strategy.**

# **2- Intelligent Neonatal Incubator**

**The preterm infant care is one of the most important, delegate and sensitive area in the Bio-medical field. A surrounding exactly like that in the womb is crucial for their survival premature birth is a worldwide problem. Neonates, who are born premature, often don't have enough maturity to regulate their temperature. These infants have low metabolic heat production rate and may have high heat loss from the skin. Premature infants are kept in infant incubators which provide convective heating. There are two kinds of techniques available to control the incubator temperature. Skin control often leads to large fluctuations in the incubator air temperature. Air control also leads to skin temperature fluctuation. The question remains if both the skin temperature and the air temperature can be simultaneously used in the control. The temperature space is to be divided into several subdomains. The crisp values of skin and air temperature will be first justified to obtain membership values which then input to a rule base algorithm to obtain the output.**

### 3- I based lung cancer diagnostics framework

Lung cancer is one of the top causes of death in humans around the world. The primary problem is cancer, which is defined as a group of disorders in which irregular cells divide uncontrollably and infect neighboring tissues and since that lung cancer must be detected early to reduce the worldwide death rate's impact. First, the patient can answer some questions to detect if a CT scan is needed. Also using Cancer Seek Test (Blood work) to predict cancer to support results of the deep learning model. Since lung cancer is only recognized when the disease has progressed, it is vital to anticipate the disease by using any medical imaging technology at an early stage. By collecting different datasets and pre-processing them this will improve and support the accuracy of the model. The purpose of this project is to create an algorithm for automatically classifying early lung cancer, and detect nodules on CT images using deep learning and computer vision. As a result, the proposed solution will be 2 paths. First a 2D Convolution neural network for classifying lung cancer if its malignant or benign, our goal is to try to increase accuracy compared to other systems. Then 3D convolution neural network that will be trained to detect stage 1 lung cancer, our goal is to improve the preprocessing to achieve better accuracy than other systems. Also a U-Net model for segmentation this gives confidence for doctors to make sure of the location of cancer and where the model searched.

### 4- Down Syndrome Detection System Using Deep Learning

Down syndrome is one of the most common genetic conditions that occurs when there is an extra copy of chromosome 21. Any genetic condition is always a stress-causer to parents and families to its children and even adults who suffer this condition. One of the main causes of lack of ability to deal correctly with mental disorders is that parents do not know prior to delivery that they will be having a child with this condition. Down syndrome has many symptoms and features that can help medical professionals and people identify people with down syndrome. The purpose of this research and project is to initialize a fully automated medical system that takes sonographic images as input that are conducted during pregnancy to determine whether or not the fetus has Down syndrome by extracting features and by detecting other medical symptoms that are physical in the sonographic images. As previous models of this system have been attempted, our model aims to deliver a more accurate, more inclusive, faster, and cheaper alternative that we trust will be a great contribution to the medical industry. It will also be a great motivation for parents to conduct sonograms and screening of Down syndrome whether or not it is common in their families in order to be well-prepared if their fetus appears to have Down syndrome.



## 5- Down Syndrome Data and Simulation Model

Having a kid with Down syndrome might alter the entire family's lifestyle. These differ depending on the child's age and from family to family, recognizing and accepting learning disabilities is a difficult process and requires adaptation by the entire family to promote the optimal development of the child. Recognizing family health issues and changing lifestyles are essential to providing adequate service. Identifying the problem and using the information to plan childcare can be very helpful but it is hard especially when there is not enough awareness or a place that they can go to guide and help them at many different aspects, such as health, education, and activities. To address this problem, we have found that using a mobile application design that provides access to parent resources, educator resources, medical professional resources, as well as events for people with Down syndrome and their families. Also, this application will help parents have more knowledge on the case of their child, which may prevent any health crises for their child. The

## 6- Stock Performance Forecasting

The stock market is a great place to earn money and learn about the financial systems and financial institutions that run the economics of the world. Since the birth of the financial markets the market was place to buy and sell assets, just a simple buy or sell exchange, but every year the market kept getting bigger and more advanced and included a lot more asset classes than only stocks, like bonds, commodities, futures contracts and many other derivatives. With the introduction of all these asset classes the governing systems of the market kept getting stronger and more complicated, and with that came the need for artificial intelligence which is used to balance the market by means of algorithmic trading, but algorithmic trading or high frequency trading can sometimes be used by certain market makers or brokers to manipulate the market to sway it in a way that benefits their own financial position. Therefore it is imperative to try to analyze the current state of the markets to see if they are fair or transparent enough, or if there are some improvements that can be done to create a better market for the retail investor. This project provides a solution that differs from other AI stock prediction tools as it doesn't only rely on the provided data, but also analyses the emotional aspect of the trading market in terms of working with data that was only accessible to big banks and financial institutions. By doing this we can study and predict the outcomes of small and large transactions, thus having a sense of the general emotions and sentiment of traders and or big institutions.

## 7- Radiological Diagnosis of COVID-19

Currently, COVID-19 is the most dangerous and deadly disease for the human body caused by the novel coronavirus. Although the diagnosis of infection with Covid-19 is microbiological, imaging techniques play an important role in supporting the diagnosis, grading the severity of disease, guiding treatment, detecting complications, and evaluating the response to treatment. The lungs are the main organ involved, and chest X-rays, whether obtained in conventional X-ray suites or with portable units, are the first-line imaging test because they are widely available and economical. Deep learning algorithms can be considered a suggestive alternative diagnosis. Deep learning-based models have an extraordinary capacity to offer an accurate and efficient system for the detection and diagnosis of COVID-19. The application of deep learning in the field of COVID-19 radiologic image processing reduces false-positive and negative errors in the detection and diagnosis of this disease. Aid clinical decision-making. It offers a unique opportunity to provide fast, cheap, and safe diagnostic services to patients.

## 8- Anomaly Detection and Flagging using CCTV and Neural Networks

Throughout the past two decades the demand for security and surveillance systems has been exponentially increasing since the incident of 9/11. This demand accompanied by the ever-growing advancements in the field of artificial intelligence has led to surveillance systems which can identify everything from an object moving whether it is humanoid or not and its potential threat. As a result, this project tackles this problem by developing a full functional surveillance system with the ability to detect threats through abnormality and track them throughout the surrounding area, decreasing wasted time and human error caused by surveillance personnel leading to a more sustainable environment of working as the system will be able to classify the type of anomaly making it easier for surveillance personnel to inform the grads in the area. Such a system will track the treats using a unique id in the surrounding environment making tracking the anomalous behavior more suitable job that any person can perform.



## **9- AIM - Students Advising System Using Machine Learning**

**Academic advising is complex time-consuming process done each academic semester. In traditional academic advising, advisors spend a great deal of time and effort to support the numerous amounts of students each semester. In this project , an automated student advising system is proposed to automate the process and overcome the weaknesses and drawbacks of performing the advising process in the traditional and manual way. The system uses artificial intelligence and machine learning algorithms to predict which courses are best to enroll in for a particular student based on multiple criteria such as the student's recent and overall performance. By applying this system, the student in need of advising will be able to meet his/her goals of completing the program in the least possible time and maximizing his/her GPA.**

## **10- AIM - Automatic Staff schedule system**

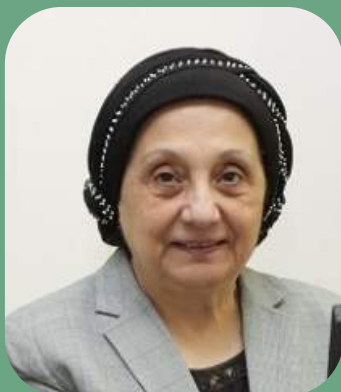
**Academic staff scheduling is a complicated process which consumes huge amount of time and effort. Each semester, the staff needs to perform the daunting process of establishing several types of schedules all while ensuring no exhibits any time or infrastructure conflicts. Manual schedule process increases the possibility of human error and conflicts in both time and infrastructure. As a result, we can confirm that creating and managing schedules is time-consuming and incredibly hard. In response of these changes, we developed an automated scheduling system. The use of an automated scheduling system will alleviate the heavy burden on the scheduling committee and will save valuable time and resources. Furthermore, the automated system eliminates the possibility of human errors and inaccuracies. The system builds various types of schedule such as staff schedule, courses schedules, and rooms schedules. This will provide very good results while saving a lot of effort and time.**

# 04 Industrial Program



## **Staff Members**

### **Program Leader**



Dean of Faculty of  
Engineering  
Prof. Nahed Sobhi



**Dr. Mohamed Hassan**

### **Professors**

### **PhD / Lecturers**



**Prof. Tarek Mahmoud Elhossainy**



**Dr. Sameh Ahmed Salah**

## Assistant Lecturers



L.A. Ali Bahig Ali



L.A. Yasser Mohamed  
Saafan



L.A. Sherine Ibrahim  
Bishara



L.A. Omnia Reda  
Mazroaa

## Teaching Assistants



Eng. Ahmed Maher Khairy



Nehal Talaat Mahmoud  
Administration Assistant  
( Secretary Dean's office)



## PUBLICATIONS

**Prof. Tarek El-Hossainy**

**Tarek El-Hossainy<sup>1</sup>, Mahmoud Abdrabou<sup>2</sup>, Abdallah Abdelkawy<sup>3</sup> "Investigating Tool Wear, Chip Behaviour and Spring Back Action Using FEM" . MSA University, Vol. 1 , issue 3, pp 39-53. (2022)**

**Dr. Sameh Salah El Din**

**Sameh A. SALAH<sup>1</sup>, Ahmad MUSTAFA<sup>2,3</sup> "INTEGRATION OF ENERGY SAVING WITH LEAN PRODUCTION IN A FOOD PROCESSING COMPANY". Journal of Machine Engineering, 2021, Vol. 21, No. 4 , pp. 5-20.**

**(2022) – Reviewed Papers by Yasser M. Safan**

**E. S. Ghith and F. A. A. Tolba, "Real-Time Implementation of an Enhanced PID CONTROLLER based on Marine Predator Algorithm (MPA) for Micro-robotics System," 2022 3rd International Conference on Artificial Intelligence, Robotics and Control (AIRC), 2022, pp. 40-45.**

**Eng. Sherine Bishara**

**– Sherine Bishara (MSA) "Designing Supply Chain to Hedge against Disruptions: A Review of Literature in General and Agro Food supply chains". Industrial Engineering and Operations management Society 7th North American International conference, 2022**

**Eng.Ahmed Mostafa, Eng.Hoda A. Allam , Eng. Omnia Bassam Hassan , Abrar Inayat h, Sameh A. Salah**

**Ahmad Mustafa a,b,\* , Fumiya Niikura c, Carlo Pastore d, Hoda A. Allam e, Omnia Bassam Hassan e, Muhamad Mustafa f,g, Abrar Inayat h, Sameh A. Salah i, Ahmed Abdel Salam j, Reham Mohsen e,k "Selective synthesis of alpha monoglycerides by a clean method: Techno-economic and environmental assessment." Sustainable Chemistry and Pharmacy 27 (2022) 100690, journal homepage: [www.elsevier.com/locate/scp](http://www.elsevier.com/locate/scp).**

## Extracurricular activities

**LA. Sherine Ibrahim Bishara**

**LA Shereen Ibrahim Bishara has shared in Organizing of Industrial Engineering Event "How Being an ISE Graduate Opens up Opportunities"), which was held at MSA University. June 2022**

**Eng. Yasser Mohamed Saafan**

**LA Yasser Mohamed Saafan has shared in Organizing of Industrial Engineering Event "How Being an ISE Graduate Opens up Opportunities"), which was held at MSA University. June 2022**

**Eng. Ahmed Maher Khairy**

**LA Ahmed Maher has successfully completed :**

**The (Training of AI ), which was held by Huawei May 2024.**



# Joint venture

## Application 2

**Development of Eco on chip system**

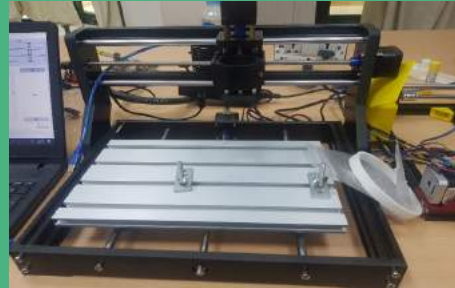
**Team work:**

**Postgrad. St. Yusuf Hesham Mohamed, Dr. Ahmed Gomaa & Dr. Mohamed Refaat**

**Faculty of Biotechnology.**

**Prof. Tarek El Hossainy**

**Industrial Systems Engineering Department, Faculty of Engineering.**



**Fig. 3. The device to be modified for Eco on chip system.**

## Application 1

**A modified version of the open-sourced “OpenScan” DIY 3D acquisition device shown in Fig. 2**

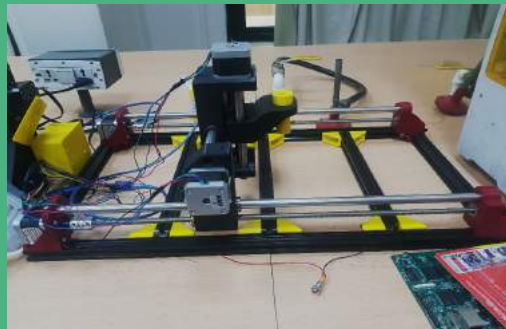
**Team work:**

**Dr. Ahmed E. Gomaa & Prof. Ayman Diab**

**Faculty of Biotechnology**

**Prof. Tarek El hossainy**

**Industrial Systems Engineering Department, Faculty of Engineering**



**Fig. 4. The device to be modified for a DIY open source CNC-based auto-bacterial cloning system.**

## Application 3

**A DIY open source CNC-based auto-bacterial cloning system**



**Fig. 2: A modified version of the open-sourced “OpenScan” DIY 3D acquisition device.**



## Cooperation with Faculty of Biotechnology

**A planned cooperation between the Department of Industrial Systems Engineering, Faculty of Engineering and Faculty of Biotechnology was decided by Prof. Nahed Sobhy (Dean of Faculty of Engineering) and Prof. Ayman Diab (Dean of Faculty of Biotechnology).**

**As two small CNC Course project machines were manufactured in MFG455m course (Numerical Control Machines and CAD/CAM) under the supervision of Prof. Tarek El Hossainy & Eng. Wael Taie, shown in Fig. 1, these machine & some parts were required by Faculty of Biotechnology for some applications**



**The two machines & some parts delivered from Department of Industrial Systems Engineering, to the Faculty of Biotechnology.**

**These machines & some parts were delivered to the Faculty of Biotechnology for developing product devices to be used in the following applications:**

## **“How being an ISE graduate opens up opportunities?”**



**Marwan El-Hennawy**  
**Supply Chain at Tetra Pak**  
**Graduated Spring 2010**

### **Career:**

#### **Tetra Pak:**

**Dec 2019 – Present: - Customer Service and Design Manager - Supply Chain Customer Service and Design Manager - Supply Chain .**  
**Jul 2018 - Dec 2019- Senior Demand Planner / Customer Service Representative (CSR) Senior Demand Planner / Customer Service Representative (CSR).**

**Apr 2016 - Jul 2018- Customer Service Representative / Demand Planner Customer Service Representative / Demand Planner.**

**EZZSTEEL:- Foreign Procurement Specialist, Aug 2011 - Apr 2016- Local Purchasing Specialist Local Purchasing Specialist, Feb 2013 - Jun 2013.**

**Masters Consultancy project, Cummins Inc. Cummins Inc., Apr 2014 - Jun 2014Rumst, Belgium Rumst, Belgium.**

**TraineeTrainee: Lafarge Cement Lafarge Cement, Jul 2009 - Aug 2009**



## **“How being an ISE graduate opens up opportunities?”**



**Mohamed Rashdan**  
**(Graduated Spring 2013)**  
**Production Supervisor at**  
**General Motors**

### **Career:**

#### **General Motors:**

**Body shop production supervisor.,**  
**Mar 2022 – Present.**

**General Assembly Production Engineer, Mar**  
**2019 - Mar 2022.**

**Geocycle logo Maintenance Engineer, Sep**  
**2017 - Mar 2019.**

**General Motors, Maintenance Engineer, Nov**  
**2014 - Sep 2017.**

**Maintenance Planning EngineerGSKGSK,**  
**May 2014 - Nov 2014.**



**Ahmed Yehia Adham**  
**(Grdauated Spring 2012)**  
**Sales manager at USG ME,**  
**Dubai**

### **Career:**

**Projects Sales Manager USG Middle East Dec**  
**2020 – Present.**

**Saint-Gobain Gyproc Middle East Project**  
**Sales Manager Project Sales Manager Sep**  
**2015 - Dec 2020.**

**GASOS Bin Hamoodah GASOS Bin Ha-**  
**moodah Technical Sales Coordinator Techni-**  
**cal Sales Coordinator Nov 2014 - Aug 2015.**

## **“How being an ISE graduate opens up opportunities?”**



**Mostafa Ahmed Mekky**  
**(Graduated Spring 2018)**  
**Project Manager at Fawri Microfinance**

### **Career:**

**IT Project Manager Fawry Microfinance, Oct 2021 – Present**

**Projects Officer, Cultiv LLC · Full-time Cultiv LLC, Nov 2020 - Oct 2021.**

**Quality Assurance Engineer, INDEVCO Group, Aug 2018 - Nov 2020.**

**Operations Manager Egyptian Federation of American Football LLC. Egyptian Federation of American Football LLC., Sep 2017 - Sep 2018**



**Mohamed Mokhtar Radwan**  
**(Graduated Spring 2020)**  
**Inventory Planning -Ghabbour Logistics**

### **Career:**

**Inventory planning coordinator Inventory planning coordinator GB Auto, Oct 2021 – Present.**

**Production Planning Engineer Samsung Electronics Dec 2020 - Sep 2021.**

**Trainee , WADI Group · Internship WADI Group · Sep 2019 - Sep 2020**



# **Summer Joint Course**

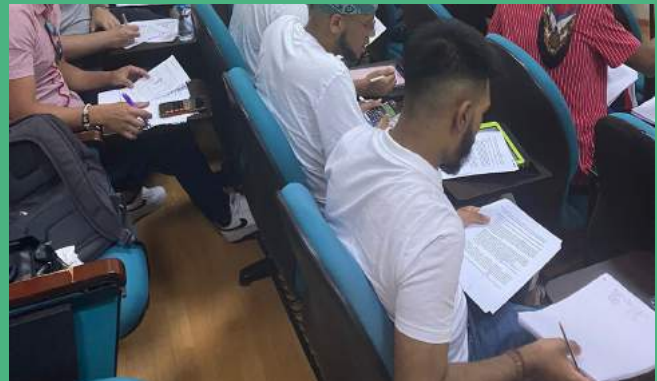
## **Summer Greenwich University Course**

### **Green Manufacturing systems**

#### **Industrial Systems Engineering Department**

**Instructors: Dr. Ahmed Mostafa and L.A/ Eng. Sherine Bishara**  
**Duration: 12th of June – 23rd of June**

**Number of students: 9 students from Greenwich University.**  
**Topics include: Municipal solid waste management, P2 Environmental audit, ISO 14001, Industrial air pollution monitoring and circular economy.**  
**During the lecture the topic was explained and discussed, they watched videos to help elaborate on the topic. During the tutorial exercises were solved by the LA then more problems were solved in groups, creating a discussion between them. Theoretical questions were answered individually by Menti-meter online platform, results were shared and discussed. Also a case study was presented and solved. In the end, a group project was assigned to solve a case study and present it in the class.**



**Photo 3: Students are working individually**

**Photo 1: Dean of faculty of engineering with the Greenwich representative, the head of international partnership unit, the course instructors and the students**



**Photo 4: Students are working in groups**

**Photo 2: Course instructors with the students**

## Field Trip Report

### Covered Topics:

1. Introduction to Juhayna group, products and factories.
2. Visiting the production line and going through the process with the production manager of each branch, the facility is divided into 2 main Sections:
  - i. Juice Preparation Tanks department
  - ii. Juice Filling department
  - iii. Warehouse department
  - iv. Quality Labs department
3. Questions and feedback from students.

Field Trip Advisor : Eng.Sherine Bishara

Date:  
21/02/2022





# Elmarakby Steel Factory, Dec. 2021

## Field Trip Report

### Covered Topics:

1. Introduction to elmarakby steel group, products and factories.
2. Visiting the production line and going through the process with the production manager of each branch
3. Questions and feedback from students.

Field Trip  
Advisor : Eng. Ahmed Maher

Date:  
20/12/2021



**The graduation projects are focused on two main areas:**

**A- Industrial Engineering area:**

**the projects deals with production enhancements in famous industrial factories and companies using different industrial techniques. After implementation of the proposed solution, the efforts are appreciated from the factories stake holders. Samples of the best projects which have been implemented are :**

**Factory  
Products**



Cooking base



Food box



Cosmetics container

**1- Improving the Productivity in Cleopatra Plastic Factory**

**Cleopatra plastic factory was established in 1988. Located in the industrial zone in 6th of October, it has 30 plastic injection molding machines, each produces a different product. The factory deals with external customers where they give the factory the required molds that they want the factory to inject the plastic in and produce the required demand.**

**In the plastic injection molding process, the raw material goes through steps to create the final product. Firstly, the raw material is manually fed into the injection molding machine, gets melted and injected by the machine into the mold then cooled off and ejected.**

**After investigation, it was found that The factory's production rate does not meet the demand. One of the products produced is the "cooker's Legs" for Union air Company, which is made from ABS plastic material, the factory current production is 600 presses per 12-hour shift and aiming to increase it to 900 per 12 hours shift.**

**The aim of this project to improve the productivity of the TH-M8 plastic injection molding machine in Cleopatra plastic factory to increase the productivity using industrial engineering methodologies such as the Lean Six Sigma technique (DMAIC), SMED methodology, and Incentive Plan.**

**The Implementation of new machine has increased the productivity around 6,863 Cooker bases per day for the ENGLE machine instead of the old machine productivity where it was 4,519 Cooker bases per day and the defects rate was around 0-3% of the production.**



## **B- Mechanical projects area:**

**the students able to design and manufacture prototypes of machines they designed in different mechanical branches, environmental areas and renewable energy fields. Samples of the best projects are :**

### **Development of a Device to Transform Air Humidity to Fresh water**

**Water scarcity is one of the most serious and critical issues of today's world. Water is considered one of the most important resources in the world. Despite the fact that water covers more than two third (about 70%) of the Earth's surface, but fresh water which can be used for drinking and carrying out everyday chores still scarce (only about 2.5%). The world faces major challenges due to fresh water scarcity. In addition, the demand of clean water is increasing, and the water is getting reduced by evaporation due to global warming, and water quality is getting affected due to water sources pollution.**

**Furthermore, seawater desalination is not within everyone's reach as it requires additional energy to extract it, and negatively affects water quality. The technical and scientific solutions that is currently available to this serious problem is partial and costly. Therefore, the world is facing a critical problem in what is considered the source of life for all human beings.**

**This project aims to contribute in solving the clean drinking water problem through the air condition units by condensing the humidity in air, and transform it to fresh water. The proposed system unit is divided into three parts: mechanical, electrical, and the water treatment and filtration system to guarantee the expected outcome from the collected water.**

**The mechanical system consists of a refrigerant cycle with a compressor capacity of 1.5 horse power, while the electrical system is responsible of controlling the mechanical system through the Arduino Uno circuit and relay. Technically, the air conditioner condensate distilled water. Therefore, the collected water passes through the water treatment process and filtration system to remove sediments and contaminants, and to gain the required additives of minerals to make this type of water drinkable. After assembling the device, the tests have been conducted to measure the amount of water collected that ranged between 1.6 to 2 liters during 6 operational hours per day. Therefore, the amount of condensed water varies according to the environmental weather condition**



**Assembled Unit Views**



**Filtration Unit**



**Fig. 1: Oil Tec products**



**Fig. 2: Oil filling machine**

## **2- Time Waste Reduction of the COMACO Cooking Oil Filling Line in Oil Tec Factory**

**Oil Tec is an Egyptian company based on an oleo-chemical plant in Sadat city and part of a group of companies working in the field of edible oils, soap, feed additives, and oleo-chemicals. The company was established in 1999 and focuses on the field of refining, mixing, and packaging oils and manufacturing plastic bottles to obtain the highest levels of food safety, quality, and production.**

**After investigating COMACO filling line of edible oils in the factory, a significant number of problems were noticed. The most prominent is that the current production plan and the switching between the different products on the line causes a changeover that averages from 60 min to 120 min per the 8-hour shift and this project is aiming at a reduction of 20 to 30 mins from that total wasted time.**

**This project is concerned with reducing time loss of the filling line in the Oil Tec factory using industrial engineering methodologies such as the SMED (Single Minute Exchange of Dies) and the 5S. These lean techniques will be used simultaneously to reduce the changeover wasted time of the COMACO production filling line while also creating a more organized, optimized, and productive workspace.**

**Implementing the SMED led to the standardization of all the activities involved in the changeover sequence. Improvements were also agreed upon and implemented which included operators' work done concurrently and work distribution done properly. The successful implementation of the both the SMED and 5S led to the following results:**

**Production time per shift increased by 34.5 mins**

**Total pieces produced per shift increased by 365 pieces/8hr-shift**

**Percentage of production capacity increased by 10.13% percentage**

**A total reduction of 17 mins in the total changeover time was also achieved (14.4%).**



### 3- Productivity Improvement by Reducing Material Waste in Corrugated Paper-board Process

**UNIPAKNILE** is a member of **INDEVCO Paper Containers**, a division of the **INDEVCO Group**, established in 1996 and located in **Cairo, Egypt**. Operating corrugated packaging manufacturing and converting companies across the Middle East. The company specializes in supplying a wide range of industrial and agricultural corrugated packaging solutions, as well as delivery boxes.

The project focuses on reducing material waste that reduces the profitability of the company, as well as raising cardboard sheet productivity and achieving the greatest possible production rate while maintaining the required quality level. The cardboard manufacturing process was investigated to detect the sources of the production problems. During the investigation, a significant amount of material waste related to warehouse and production process was observed.

The project aims to reduce material waste from 377 tons per month to around 267 tons per month with a reduction of 29.1%, using industrial engineering techniques such as lean 5S. This reduction in waste will raise the company's productivity while also improving the material quality and thus the manufacturing process.

Implementing lean 5S, saves a total of \$ 60,225 per month and reduces waste by 13.89%.

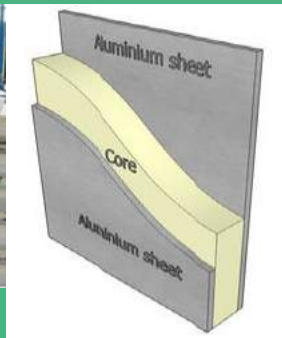
Profit sharing, recognition, and special benefit incentive programs were implemented in the project. Total incentives cost =\$3,162 per month. Every month, each operator will receive an additional 1,300 L.E.

The first step in reducing peeling waste in the warehouse is to equip the forklift with a new clamp attachment that has sensors to measure and manage the gripping force as well as a rotational feature that allows transportation with reels parallel to the ground. The new clamp reduced material waste by 15.33% which saves a total of \$ 66,470.

The most commonly used papers, flute and kraft paper, are subjected to various forecasting techniques. The overall revenue after applying forecasting techniques rather than conventional methods is \$183083.45 each trimester



**Factory Products**



## Factory Products

### 4- Production Scheduling in Sandwich Panel Industry

Alex group factories are in Alexandria, supplies steel to construction material and steel manufacturing companies. It started a new project called Alex Panel, which produces sandwich panels.

Sandwich panels are an ideal building material for modern industrial structures. They're tough but simple to operate, with more thermoregulation, soundproofing, and fire protection. Two metal sheets with chemical foam in between. Both sides are shaped with dies so it can fit with each other's to make wall panel or roof panel.

Alex panel has a critical problem which is number of setups. From the given data collected and observed. It was found out that in each order the workers need to change many dies along the conveyor to be ready for the next product, each product size processed with its own die size.

This project focuses on using the appropriate scheduling that minimized 63% of stoppages to changeover in four weeks implementation. The production system was facing bottlenecks among their processes. Therefore, appropriate analytic tools such as scheduling techniques were used to avoid number of stops with the help of Simulation Arena Software, as it is one of the most powerful tools available in a decision making.

Simulation model to all the proposed solutions with simulation Arena software to give results and they were compared with the current production plan to calculate the reduction of 53.4 % of the total wasted time every week.

Implementing First Come First Served plan for 4 weeks on the production line with the implementation stages, the wasted time was reduced by 63%.

After implementation of the proposed solution the profit increased by EGP 3,348,000



## EVENTS



**The Industrial Systems Engineering Department organized an event under the title “How being an ISE graduate opens up opportunities?” on the 4th of June 2022**

**The Faculty of Engineering invited a group of alumni to share their knowledge and vast experience in this field and how they reached these important positions. The speakers presented their opinion about studying in this department after they were exposed to the work-life, shared their Experience, achievements, the importance of the department in the market, and helpful tips that would help in the coming career.**



# **05 Mechatronics**

## **Progra44rrm**



# Staff Members

## Professors



Prof. Mostafa Zaki Mohamed  
University Name: Leeds University, UK, 1985  
Mansoura University 1997  
Head of Mechatronics Systems Engineering,  
Faculty of Engineering, MSA University.

## Associate Professors



Assoc. Prof. Dr.  
Ahmed Badawy

PhD from The University of StrathClude, UK, 2007.  
Associate Prof. in Military Technical College 2015.  
Former Head of Eng. Mechanics Department, MTC.



Assoc. Prof. Dr.  
Khaled N. Faris

PhD from Cairo University, Egypt, 2006.  
Associate Prof. in Electronics Research Institute (ERI) National Research Centre (NRC) 2016.



Assoc. Prof. Dr.  
Amgad Bayoumy

PhD from University of Paul Sabatier, FRANCE, 2002  
Associate Prof. in Mechanical Engineering, 2020  
Former Head of Aircraft Mechanical Department, 2013.

## PhD /Lecturers



Dr. Hussein Hamdy Shehata  
PhD from Hamburg University of Technology  
GERMANY, 2014  
Assistant Prof. at Benha University, 2016  
Assistant Prof. at MSA University, 2019  
IEEE/iROS member, CLAWAR member



Dr. Mohamed Abdel Motaleb  
PhD from Mechanical Design and Production  
Department, Faculty of Engineering, Cairo Uni-  
versity, 2018.

## Assistant Lecturer



Eng. Wael Taie



Eng. Ahmed Mostafa



Eng. Abd El Rahman EL-Kattan



## Teaching Assistant



Eng. Nada Selim



Eng. Mina Sameh



Eng. Mahmoud Mostafa



Eng. Shahd Ehab



Eng. Yossef Hossam



Eng. Mahmoud Khaled  
Muawad Abdel Hamed

## Lab Technicians



Mr. / Emad Mostafa Tawfik



Mr. / Mahmoud Gaber



Nehal Talaat Mahmoud  
Administration Assistant  
( Secretary Dean's office)

## 2021 Research Papers

Assoc.Prof.Amgad Bayomi

Youssef, Abdelrahman; Bayoumy, Amgad M; Atia, Mostafa R.A: " Investigation of Using ANN and Stereovision in Delta Robot for Pick and Place Applications" IIETA International Information and Engineering Technology Association, Mathematical Modeling of Engineering Problems; Vol. 8, No. 5, October, 2021, pp. 682-688.

Nada selim, Ahmed Masoud, and Amgad Bayoumy: "Driver-in-the-Loop for computer-vision based ADAS testing", Conference: 2021 3rd Novel Intelligent and Leading Emerging Sciences Conference (NILES) October 2021, DOI:10.1109/NILES53778.2021.9600491.

Dr. Hesein Shehata

H. H. Shehata, Karoline Kamil A Farag, and H. El-Batsh, "Mobile Robot Obstacle Avoidance Based on Neural Network with a Standardization Technique", in Journal of Robotics, vol. 2021, Hindawi Publisher, ID 1129872, doi.org/10.1155/2021/1129872.

H. H. Shehata and J. Schlattmann: "Best-Fit Parameters Optimization for Improving the Robot Path in Unknown Environments", International Journal of Robotics and Computer-Integrated Manufacturing (RCIM ). In Press



### External Examiner



Prof. Mostafa Zaki Mohamed

Examiner for The Scientific Work Submitted to the Permanent Scientific Committee for Promotion of Assistant Professors and Professors in the Field of Mechanical Engineering And Engineering Production.(Since 2008 up to now).

- Dr. Mohamed Ahmed Ramadan – Banha University – Promoted to Associate Professor (2019).

- Dr. Roubi Abdelstar - Banha University  
Promoted to Associate Professor (2019).

- Dr. Mostafa Mohamed Alsayed Alhadry-  
Alexandria University - Promoted to Associate Professor (2019).

- Dr. Emad Aldin Farouq Alkashef - Cairo  
University - Promoted to Professor (2020).

Examiner for The Scientific Work Submitted to the Permanent Scientific Committee for Promotion of Assistant Professors and Professors in the Field of Applied Art. (Since 2010 up to now).

The name “Mohamed, M.Z.” is mentioned in 2113 papers uploaded to Academia.

### Referee for thesis

The effect of high pressure dye casting process parameter on the porosity and mechanical properties of Aluminium Silicon (ADC 12) alloy. A master degree in engineering production and mechanical design, faculty of engineering, Mansoura University, 2017.

Mechanical properties and photocatalytic degradation of organic dyes using (Ca-cnt/Tio<sub>2</sub>-nh<sub>2</sub>) composite nanofibers under Uv irradiation. A master degree in engineering production and mechanical design, faculty of engineering, Cairo University, 2017.

Design and control of a robot with multiple contactless joints using active magnetic bearing. A PhD degree in mechatronic and robotic engineering, graduate school of innovative design engineering, Egypt- Japan University (E-Just), September 2018.

Multi objective optimum design of a quarter car model fitted with an mr-damper. A PhD degree in mechanical engineering, faculty of engineering, Alexandria University, 2018.

Effect of applying lean maintenance in oil & gas fields. A master degree in mechanical engineering, faculty of engineering, Helwan University, 2019.

Fabrication and characterization of pan/go-zno nanofibers with enhanced mechanical properties and its application in water treatment. A PhD degree in mechanical engineering, faculty of engineering, Cairo University, 2019.

7. The effect of heat treatment on mechanical and electrochemical behavior of novel near-beta Ti Alloy for biomedical applications. A PhD degree in mechanical Design and production Engineering, Cairo University, 2022.



## Extracurricular activities

Dr. Khaled Faris has been awarded PGCert in Higher education from UoG , 11 th july, 2019.



Dr. Khaled Faris



Dr. Khaled Faris is a Fellow of the UK higher education Academy, since 21/08/2019, under recognition reference PR 171170.

Dr. Ahmed badawy is currently enrolled in the PG certificate program and then obtains Fellowship in the UK Higher education academy.



Dr. Ahmed Badawy

Dr. Hussien Shehata is currently enrolled in the PG certificate program and then obtains Fellowship in the UK Higher education academy.



Dr. Hussien Shehata

## Extracurricular activities



Dr. Hussien Shehata

2021- Member of External Audit Committee, National Authority for Quality Assurance and Accreditation of Education “NAQAAE”, Mansoura Faculty of Engineering, Mansoura University.

2022- Member of External Audit Committee, National Authority for Quality Assurance and Accreditation of Education “NAQAAE”, Faculty of Engineering, October 6th University.

2022- Member of External Audit Committee, National Authority for Quality Assurance and Accreditation of Education “NAQAAE”, Faculty of Engineering, Cairo University.

Successful Patent submission (Phase-2 completion) to the Deutsche Patent-und Markenamt (DPMA), intelligent sensor against car stealing. (2021)

Head of R & D at Toshiba-El-Araby Group (2021 - present)

Dr. Hussein Hamdy Shehata, PhD from Hamburg University of Technology, GERMANY, 2014, Assistant Prof. at Benha University, 2016, Assistant Prof. at MSA University, 2019, IEEE/iROS member, CLAWAR member.

2022- Member of External Audit Committee, National Authority for Quality Assurance and Accreditation of Education “NAQAAE”, Faculty of Engineering, Cairo University.

Technical consultant at Cadbury Dairy Milk for the design and implementation for an automated belt conveyor (2019-2020).

Consultant of the Navigational Issues and Path Planning for the project Monitoring and Controlling of the Cranes’ Movement in Port-Said Port in collaboration with ALSAKR Trading & Manufacturing (2018-2019)

## Master supervision

M. Sc. thesis supervision for Karoline Farag (Hybrid Algorithms for Autonomous Robot Path Planning), Benha University.



# Workshops

## THE MINISTRY OF CIVIL AVIATION TWO-DAY WORKSHOP

Event date : Mar 2022.

The working group were from the Faculties of Engineering, Art and Design and Computer Science and they visited the Ministry of Civil Aviation and several specialized companies, including EgyptAir, the Holding Company for Airports, Misr Ground Services and Misr for Complementary Industries. In addition to forming work teams corresponding to the university's work group in the ministry to discuss more than 30 proposed ideas for future projects with officials in these companies and to discuss ways of cooperation as well.

This crystallized over the course of two meetings as the working groups were divided and all previous experiences with many ministries, authorities and companies were presented within the framework of the directives and recommendations of His Excellency President Abdel Fattah El-Sisi to localize local technology.



# Workshops

## Photo-Voltaic Workshop

Event date: Jan. 2022

Towards Green University, the Outstanding Hub, faculty of Engineering invited the SMC group: SMC is a fresh outbreak provides all relative works & services to Solar Energy:{PV Solar plants, Solar Water Heaters, PV Modules, Energy Saving System, Consulting} also provides Training for Electrical engineering students in different branches.

They introduced MSA University students to the field of PV solar energy and the latest developments that this field has reached in the Egyptian market, starting with the concept of solar energy in general and passing through the types of stations or as we like to call them the applications in which solar energy is used and the size of projects available in the market.

All of that have been covered through out three sessions on Monday 3rd Jan 2022. They were very interactive practical sessions. Our students participated in measuring the electric power generated by the solar panels.





# COMPETITIONS

## THE SEMI-FINALISTS IN THE INNOVATION CATALYST 2022 COMPETITION

### THE SEMI-FINALISTS IN THE INNOVATION CATALYST 2022 COMPETITION

#### Honorary Board:

Marwan Mahmoud, 3rd level student at the Faculty of Engineering, Mechatronics Department.

Ahmed Essam El-Din – 4th level student at the Faculty of Engineering, Mechatronics Department.

Ahmed Farahat, 3rd level student at the Faculty of Engineering, Mechatronics Department.

Ahmed Mohammed Farouk, 4th level student at the Faculty of Engineering, Mechatronics Department.

Zeyad Ahmed Hegazy, 4th level student at the Faculty of Engineering, Mechatronics Department.

Omar Ashraf, 4th level student at the Faculty of Engineering, Mechatronics Department.

Abdel-Rahman Safwat, 4th level student at the Faculty of Engineering, Mechatronics Department.



The “X-Bionics” team from October University of Modern Sciences and Arts (MSA University)- Faculty of Engineering – Mechatronics Systems Engineering succeeded in being qualified for the semi-final stage of the Innovation Catalyst 2022 competition, which was held under the auspices of the Ministry of Higher Education and Scientific Research academy.



Supervisor/ Dr. Ahmed Badawy

# COMPETITIONS



## DESIGNING A SATELLITE MOON PROJECT (Sept. 2021)

The team of the Faculty of Engineering consists of students who won:

Yahya Imad Ahmed Raja

Yara Amr Ahmed Hanaei

Mohamed Hassan Othman Hassan Al-Namros

Iyad Khaled Abdel Gayed Mohamed

Mohamed Ahmed Mohamed Ahmed El Sudany

Noor Aladdin Hanafi Muharram

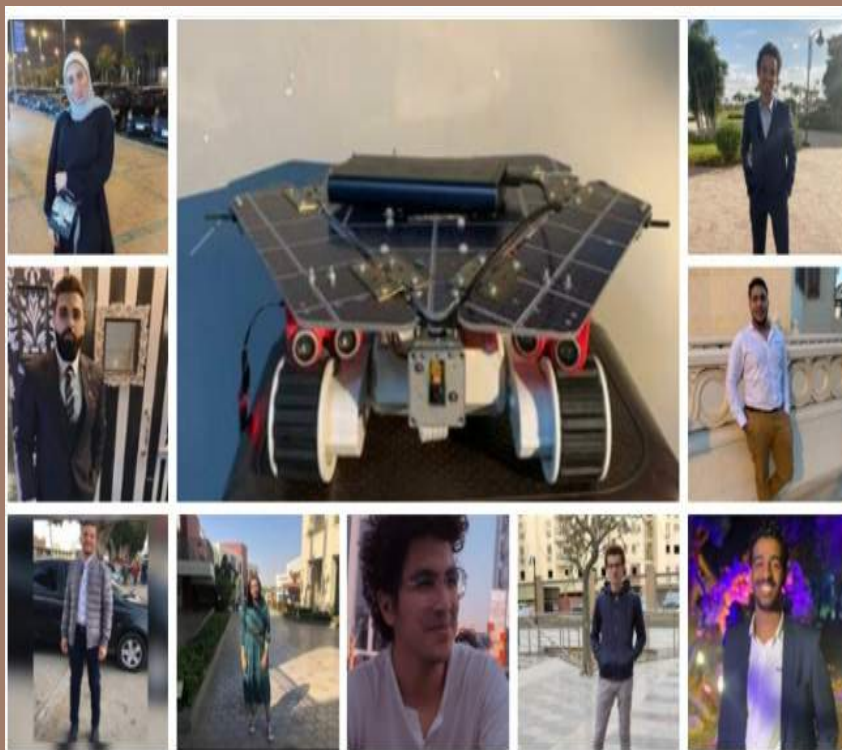
Nader Hamed Abdel Alim Abdel Maqsoud

Sarah Hisham El-Sayed Abdo El-Morsy

Abdul Rahman Tariq Muhammad Ahmad Owais

MSA University would like to congratulate the students of the Faculty of Engineering from the Mechatronics department who won the second place among all public and private universities by designing a satellite in the Universities Moon Project initiated by the Egyptian Space Agency.

The students were able to design and implement a Space Exploration Rover System after they got trained at MSA University's satellite at the Egyptian Space Agency. The Space Exploration Rover System consisted of a mobile robot that collects information and images, senses the surrounding environmental factors, navigates them automatically, retains the information and then sends it to the ground control station through a special protocol and controls the robot through the station to perform different tasks from distance.





# COMPETITIONS

## SMART CITIES HACKATHON (Mar 2022)

### Honorary Board:

#### Students:

Mohamed Hisham, Faculty of Engineering, Team Leader and his role as the project programmer, mechanical design work and linking the project on Amazon.

Ahmed Mohamed Ahmed, Faculty of Engineering, and his role in designing electrical circuits and participating in mechanical design.

Rawan Yasser, Faculty of Art and Design, and her role is to make different designs for the resulting pieces of furniture for the project.

Abdul Aziz Osama and Islam Khaled, Faculty of Management Sciences, and their role in the business model for project marketing.

#### Project Supervisors:

Prof. Dr. Mostafa Zaki

Assoc. Prof. Dr / Ghada Abdel Hadi, Faculty of Engineering, the main supervisor of the project Team Mentor.



500 teams submitted to the competition, and they were shortlisted for 40 teams, including 3 teams from MSA University

The student teams participating in the “Smart Cities Hackathon”, held at Benha University, were 40 teams representing 25 public and private universities

#### 1. Omega Hydroponic Team

The Omega Hydroponic team won second place in the Smart Utilities track, and the prize value is 3000 Egyptian pounds. They also won the award for the best project in the use of financial resources in smart cities for the Smart Utilities track

The economist “Best use of financial resources in smart cities” with the value of 5000 pounds.

# COMPETITIONS

## Smart segregation container

### Honorary Board:

Lydia Magdy, 4th level student at the Faculty of Arts & Designs, Graphics and Media Arts Department.

Asma Ahmed, 4th level student at the Faculty of Arts & Designs, Graphics and Media Arts Department.

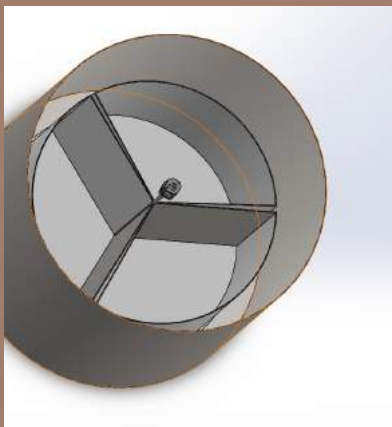
Dalia Yasser, 4th level student at the Faculty of Arts & Designs, Graphics and Media Arts Department.

Abdullah Ayman, 4th level student at the Faculty Of Computer Science, Software Engineering.

Mohamed Yasser, 2nd level student at the Faculty of Engineering, Mechatronics Department.



The “Tag Smart” team from October University of Modern Sciences and Arts - MSA University succeeded in being qualified for the second stage of the Innovation Support Fund 2022 competition, which was held under the auspices of the Ministry of Higher Education and Scientific Research Academy.



Supervisor/ Dr. Mohamed Abdel- Motaleb Mechatronics Department



Supervisor/ Dr. Sara AhmedGraphics and media arts department



# Funded Graduation Projects - TICO Center of Excellency - MSA Feb. 2022



Dr. Hussien Shehata

Dr. Khaled Faris

Dr. Amgad Bayoumy

The Mechatronics Department had the largest share of funding for the Tico office, where the department won funding for three projects out of six funded projects for the entire university. The projects were under the supervision of: Dr. Khaled Nagdy Faris, Dr. Amgad Bayoumy and Dr. Hussein Shehata, as a result of the continuous support from Prof. Nahed Sobhi, and Prof. Mostafa Zaki.

## Honoring Distinguished Students Academic Year 2020/2021



Prof. Nahed Sobhi The Dean of The Faculty of Engineering and Prof. Mostafa Zaki- the Head of the Department of Mechatronics and esteemed Staff are always keen to honor outstanding students to encourage them and motivate other students.



Jan 2022



Student training committee has organized Field trip to Egypt Air for 15 students from the Faculty of Engineering MSA University in cooperation with Egypt Air. The trip aimed to make the students see how their academic studies could be applied to the actual work. During the trip the students visited the power rooms, and took on site sessions where Eng. Ahmed Talaat And Eng. Ahmed Hanfy explained the most modern technologies used in the plane simulator nowadays. The students also got the opportunity to use the plane simulator and see how it functioned.



Student training committee has organized Field trip to El-Marakby Steel for students of Faculty of Engineering MSA University in co-operation with El-Marakby Steel. The field trip was for Mechatronics, Industrial, and electrical systems Engineering students. The trip aimed to make the students see how their academic studies could be applied to the actual work.



Jan 2022



MSA University in cooperation with ElSewedy Electrometer has organized a field trip for 23 students. The trip aimed to make the students see how their academic studies could be applied to the actual work. During the trip the students visited the electricity, water, plastics, and copper factories, which make them aware of the whole production process of creating the electrometers. The student got on site sessions by Eng. Mohamed Elshennawy, Production Manager, and Eng. Es-lam Rafaat, Production Engineer, which make them able to connect between the theoretical studies and the actual work.

# **06 General Engineering Department**



## Staff Members

### Professors



Prof. Hafez A. Radi,  
Head of GSE DepartmentID:  
4781



Prof. Magd Elias Kahil ID:  
4777

### Associate Professors



Assoc. Prof.  
Nabila Hassan Ahmed Nowaira  
ID: 4791



Assoc. Prof.  
Ghada Abdelmouez Mohammad  
AbdelhadyID: 3579



Assoc. Prof.  
Mohamed Said Hussein FahmyID:  
7043



## Staff Members

### PhD /Lecturers



Dr. Maha Ibrahim Abd El Aleem  
MostafaID: 4792



Dr. Mohamed Khalil Ibrahim  
KhalilID: 7793



Dr. Ahmed Mustafa Mohamed  
HamedID: 12285



Dr. Hossam Abdel Gaafar  
Okasha HammedID: 13175

### Lecturers Assistance



LA. Noha Mostafa Mohamed  
RashadID: 9591



LA. Dahlia Mohamed Ismail ID:  
10228



LA. Nesma Nour-Eldin Ali Go-  
maa  
ID: 10785



LA. Hoda Anwar Mohammed  
ID: 12790



LA. Nora Hany Ibrahim Sha-  
heenID: 11160



## Staff Members

### Teaching Assistant



TA. Diaa Hafez Ibrahim Mohamed  
medID: 3578



TA. Esraa Sayed Hussien Ameen  
ID: 13567



TA. Hana Alaa Mohammed Ali ID:  
13722



TA. Ateya Mostafa Sayed  
Shawarb ID: 7535



TA. Farah Gamal Ali Taher Awa-  
dID: 13666



TA. Mohamed Wael Samir Sobhy  
Khalil ID: 13726



## RESEARCH & PUBLICATIONS

Magd E. Kahil, Motion of Poly-vectors in Fractal Clifford Spaces, MSA Engineering Journal (2022) Vol 1, Issue 2, pp 125  
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<https://onlinelibrary.wiley.com/doi/full/10.1002/pat.5253>

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Mustafa, A. and F. Niikura, Green synthesis of isopropyl palmitate using immobilized Candida antarctica lipase: Process optimization using response surface methodology. Cleaner Engineering and Technology, 2022: p. 100516.  
<https://www.sciencedirect.com/science/article/pii/S2666790822001215>

Mustafa, A., et al., Selective synthesis of alpha monoglycerides by a clean method: Techno-economic and environmental assessment. Sustainable Chemistry and Pharmacy, 2022. 27: p. 100690.  
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## RESEARCH & PUBLICATIONS

A Game Theory-Based Fractional Order Model for The simulation of Human Responses in an Emerging Epidemic, M. Khalil, Progr. Fract. Differ. Appl. 8, No. 3, 447-457 (2022) <https://www.naturalspublishing.com/Article.asp?ArtcID=21832>

A Fractional Variable Order Model of COVID-19 Pandemic, N. H. Sweilam, M. Khalil, A. Sayed, Progr. Fract. Differ. Appl. Progr. Fract. Differ. Appl. 8, No. 4, 475-484 (2022) . <https://www.naturalspublishing.com/files/published/32m49669p6zha9.pdf>

‘Oumuamua: A Mysterious Visitor From Deep Space, M. Khalil, M. Said, H. Osman, N. Younis, N. Khaled, Y. Amr, N.A. Mohamed, A. Ibrahim, IJAA, 9 (1) (2021). <https://www.sciencepubco.com/index.php/IJAA/article/view/31381>

M.S.Fahmy, A.I.Ahmed, M. Khalil “On Reliability:A Mathematical Fault Tree”, Journal of Reliability: Theory & Applications, 2022 (submitted).

M.S.Fahmy, A.I.Ahmed, M. Khalil “On Reliability:A Mathematical Fault Tree”, Journal of Reliability: Theory & Applications, 2022 (submitted).

N.M. Rashad, Ashraf A.M. Khalaf, “Design and Simulation of Millimeter-Wave Broad-band Modified Ankh-Key Antenna for 5G and Beyond Technologies Applications”, Procedia Computer Science, Volume 182, 2021, Pages 21-27, ISSN 1877-0509, <https://doi.org/10.1016/j.procs.2021.02.004>. <https://www.sciencedirect.com/science/article/pii/S1877050921004683>

N. M. Rashad, A. I. Hussein and A. A. M. Khalaf, “Two-Element Pharaonic Ankh-Key Array Antenna Design, Simulation, and Fabrication for 5G and Millimeter-Wave Broad-band Applications,” in IEEE Access, vol. 10, pp. 15175-15182, 2022, doi: 10.1109/ACCESS.2022.3148589



## Funded Projects

Assoc. Prof. Ghada Abdelhady

Received funding from the Academy of Scientific Research and Technology (ASRT) Egypt to fund the “Water quality conservation in smart hydroponic cultivation” project, 60,000 EGP, Fall 2021.

Received funding from the Academy of Scientific Research and Technology (ASRT) Egypt to fund the “Detection and analysis of sub-surface objects” project, 14,700 EGP, Fall 2021.

Received funding from the Academy of Scientific Research and Technology (ASRT) Egypt to fund the “Omega Hydroponic Garden” project, 30,000 EGP, Fall 2021.

## HONORNG Awards & Recognition

Dr. Ahmad Mustafa

Trophy In appreciation for the Excellency in promoting the applied research with industrial partners, Awarded by Faculty of Engineering, MSA University, Egypt, 2022.



## Awards and Certificates

Assoc. Prof. Ghada Abdelhady

Faculty of Engineering Trophy awards at MSA University for “Outstanding achievements in supervising students’ Projects”, April 28, 2022.

Prof. Nahed Sobhi, Dean of the Faculty of Engineering, honored Assoc. Prof. Ghada AbdelHady, the head of the Outstanding Hub and head of Probation Committee, in appreciation of her great efforts with the students.

Dr. Ghada has recently supervised number of graduation projects that could successfully funded by the Academy of Scientific Research and technology, ASRT. Other projects have also selected and won the second place in the Smart Cities Hackathon, Benha University.





## EVENTS

BIOTECHNOLOGY JOURNAL CLUB IN COLLABORATION WITH FACULTY OF ENGINEERING, 24 May 2022

The Biotechnology Journal club support the development of Sustainable , Green and Clean synthesis of important chemicals. The club demonstrated a successful journey in publishing a recent paper under the title of “ Selective synthesis of alpha monoglycerides by a clean method: Techno-economic and environmental assessment “

The paper is a successful cooperation between The Faculty of Biotechnology and The Faculty of Engineering.



The paper was published in Sustainable Chemistry and Pharmacy , with impact factor 4.4 , Q2 Journal, SJR 0.72





## EXTRACURRICULAR ACTIVITIES



Prof. Magd Kahil was supervising on March 23, 2022 an M.Sc. Thesis on Statistics on the relation between Differential Geometry and Statistics at Cairo University. The thesis is centered on using different types of geodesic regression equation in curved spaces such as a Riemannian manifold to replace the usual linear regression equation in flat space. These equations were compared and contrasted to obtain a better estimation to correlate between the effect of age for males on the shape of Corpus Callosum and Alzheimer's disease.

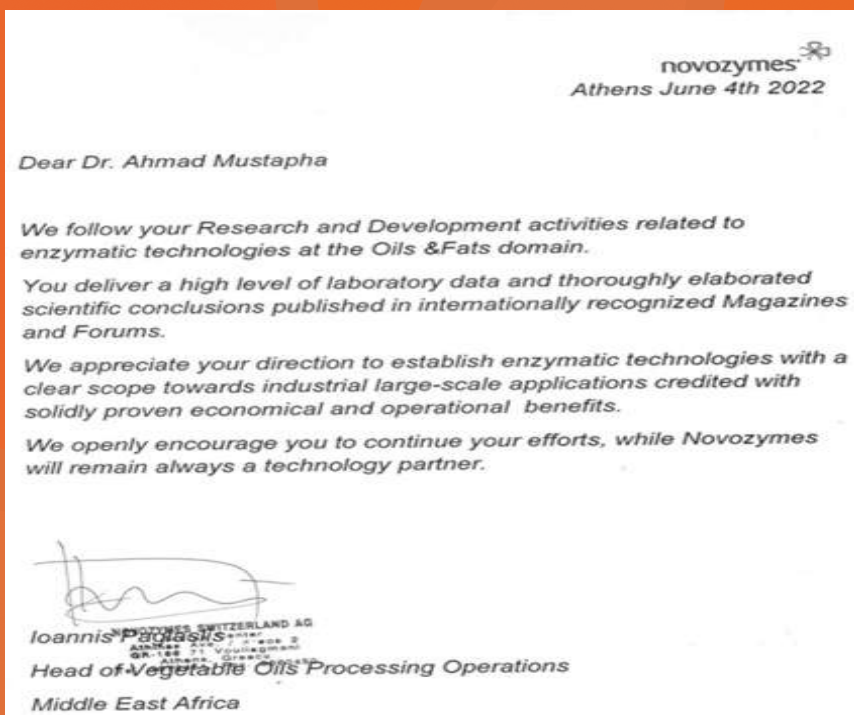


## Certifications/ Dr. Ahmad Mustafa

### Awards & Recognition

Dr. Ahmad Mustafa

Letter of Appreciation from Novozymes company to Dr. Ahmad Mustafa due to the efforts in the green production of value added products



- Presenter certificate in the AOCs Annual Meeting & Expo, May 2022, USA, to Dr. Ahmad Mustafa, presentation title: Selective synthesis of Alpha Monoglycerides by Clean Method: Techno-Economic and Environmental Assessment
- Presenter certificate in the 6th Green and Sustainable Chemistry Conference Dr. Ahmad Mustafa. Online conference. Nov. 2021
- Presenter certificate, Euro Fed Lipid conference, October 2021, presentation title: Green Production of Esters: Does Enzymatic Technology capable of replacing chemical Technology? by Dr. Ahmad Mustafa
- Certificate of review one paper in sustainable energy technologies and assessments journal, to Dr. Ahmad Mustafa.
- Certificate of review three papers in journal of oil palm research, MPOB, Kuala Lumpur, Malaysia, to Dr. Ahmad Mustafa



# ORIENTATION DAY OCTOBER 2021





## EXTRACURRICULAR ACTIVITIES

### Awards & Recognition

Eng. Nora Shaheen

Jun 2022

Eng. Nora Shaheen has been awarded in the honorary event entitled “Digital Annual Strategy Review” where all MSA AI-Certified Employees were invited.

The winners of the strategy’s annual awards were announced and rewarded by Prof. Dr. Nawal El Degwi and Prof. Dr. Khayri AbdulHameed.

This came in recognition to her certification as Microsoft Azure AI Expert (AZ 102)



### HCIA-AI Certification/ Huawei ICT Academy

In March 2021, Eng. Nora Shaheen has been certified as HCIA-AI instructor in Huawei ICT Academy, she helped in delivering the course of HCIA-AI to MSA University students from different faculties.

In August 2022, She was honoured in Huawei as an instructor who delivered HCIA-AI Course to different faculties across MSA University.

#### Brief on HCIA-AI Certification:

Passing the HCIA-AI V3.0 certification is an indication of getting introduced to the AI development history, the Huawei Ascend AI system, the full-stack all-scenario AI strategy, and the algorithms related to traditional machine learning and deep learning. Also students are introduced to the basics of build, train, and deploy neural networks by using development frameworks TensorFlow and MindSpore.



## EVENTS

### The 3rd Round “Engineering Majors Declaration Day”.

**“Engineering GSE Students Majors Declaration Day” 3rd Round, 19 September 2021**



The 3rd Round of the annual event “Engineering Majors Declaration Day”. The Faculty’s Academic Staff members give the students brief talks to understand the faculty’s different majors (ASE/CSE/ECE/ISE/MSE).

## EVENTS & WORKSHOP

### 4th Round GSE Engineering Departments Orientation Day July 2021

4th Round GSE Engineering Departments Orientation Day  
July 2022

This event is carried on annual basis for GSE Students who are about to declare their majors.

It was organized by Eng. Nora Shaheen (Lecturer Assistant) at the Faculty of Engineering with the support of the faculty’s Dean (Prof Dr. Nahed Sobhi), the heads of the departments, academic staff members from all majors.

Students got the chance to have an overview about each major and received answers on their questions from the professors, lecturers and TAs.





## **EVENTS & WORKSHOP**

### **COM155 Workshop**

**October 2021**

This Workshop was organized by Assoc. Prof. Ghada Abdel-Hady - The coordinator of the COM155 course and the representative of the outstanding students in the Outstanding Hub and Creative Students committee, Faculty of Engineering..





## EVENTS & WORKSHOPS

### The Hows Of Academics Symposium

May 2021

**This Symposium was organized by Assoc. Prof. Ghada AbdelHady and Eng. Nora Shaheen the representative of the outstanding students in the Outstanding Hub and Creative Students Committee, Faculty of Engineering.**





## **EVENTS & WORKSHOPS**

### **Solar Energy Workshop**

**January 2022**

**This Workshop was organized by Assoc. Prof. Ghada AbdelHady, and the Outstanding Hub team. They invited the SMC team which introduced MSA University students to the field of PV solar energy and the latest developments that this field has reached in the Egyptian market, starting with the concept of solar energy in general and passing through the types of stations or as we like to call them the applications in which solar energy is used and the size of projects available in the market.**

**All of that have been covered throughout three sessions on Monday 3rd Jan 2022. They were very interactive practical sessions. Our students participated in measuring the electric power generated by the solar panels.**





## COMPETITION

### SMART CITIES Hackathon

MARCH 2022

**Assoc. prof Ghada Abdel-Hady and Eng. Nora Shaheen have participated in the mentorship of Re-data Team who won 2nd place in the smart waste management track, in the 1st Round of Smart City Hackathon organized by Benha University in partnership with Amazon Web Services.**





## COMPETITION

### SMART CITIES Hackathon

MARCH 2022

Assoc. prof Ghada Abdel-Hady has participated in the mentorship of Omega Hydroponic project Team who won second place in the Smart Utilities track. The prize value is 3000 Egyptian pounds.



V The Omega Team also won the award for the best project in the use of financial resources in smart cities for the Smart Utilities track



The economist "Best use of financial resources in smart cities" with the value of 5000 pounds. This was in the 1st Round of Smart City Hackathon organized by Benha University in partnership with Amazon Web Services.





## **EVENTS & WORKSHOPS**

### **Engineering Technologies Workshop**

**Feb 2022**

**This workshop was organized by Assoc. Prof. Ahmed Diao- ECE Dept. Head, Assoc. Prof. Ghada Abdelhady and the outstanding hub team. the workshop titled “Engineering Technologies workshop” which hosted a group of engineering companies in various fields, including solar energy, optical fibers, networks and cyber-security and smart home technology over 6 days of training inside the university campus.**

**This work culminated in a program to train the students of the Faculty of Engineering in the methods of scientific research and how to write research, through a specialized program provided by Elsevier specifically for the Faculty of Engineering, and to train the students attending the program.**





# Competition

## ICT Competition 2021/2022 , 19 October 2021

**After the remarkable success of MSA with Huawei In the period from 2017 to 2020, MSA, in cooperation with Huawei, decided to engage the Artificial Intelligence course in MSA faculties .**

**Based on the new protocol, MSA will provide more than 1000 training opportunities in the Artificial Intelligence track for all faculties integrated in the curriculum. Artificial Intelligence is the future, and students have the opportunity to be part of that future. By the end of the training, students will be aware of the Artificial Intelligence technologies which are used in your career.**

**Moreover, the new cooperation protocol with Huawei provides the students to join the international ICT competition in China 2022 ...**

**Huawei ICT Competition is here! Opportunity for all youth to learn key technological innovations “Network Track & Cloud Track”, and get access to a variety of courses on Huawei’s talent platform.**





## Competition

### **Huawei ICT Competition 2021-2022 Conference & Roadshow , 06 November 2021**

**Huawei ICT Competition 2021-2022 Conference & Roadshow at MSA University Campus.**

**This event introduced Huawei ICT global competition 2021-2022.**

**All students in the ICT-related domain were encouraged to join this event to know more about the roadmap of the competition and how to join it.**

**Huawei ICT Competition is a competitive ICT talent exchange program developed globally for university students.**





## HONORING – COMPETITIONS MECHATRONICS

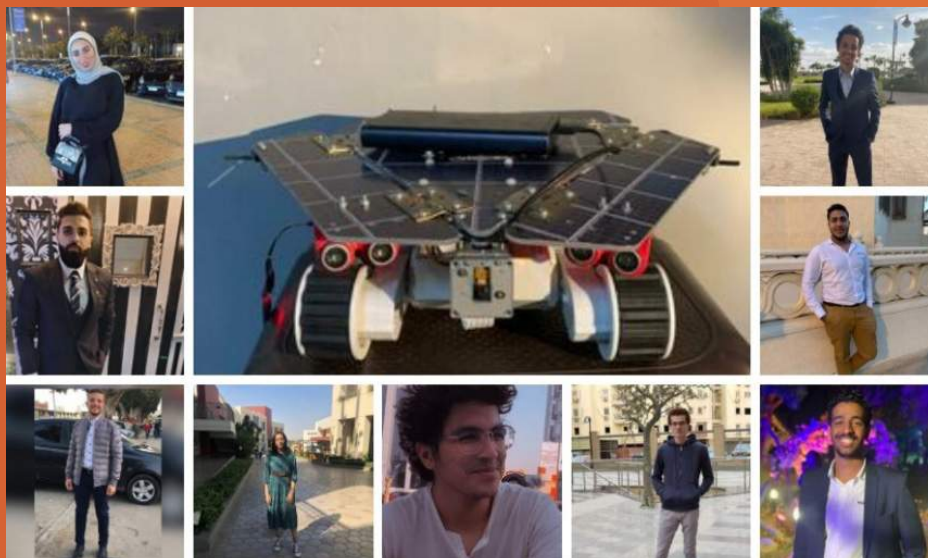
### Designing a satellite Moon Project

22 September 2021

**MSA University would like to congratulate the students of the Faculty of Engineering from the Mechatronics department who won the second place among all public and private universities by designing a satellite in the Universities Moon Project initiated by the Egyptian Space Agency.**

**The students were able to design and implement a Space Exploration Rover System after they got trained at MSA University's satellite at the Egyptian Space Agency. The Space Exploration Rover System consisted of a mobile robot that collects information and images, senses the surrounding environmental factors, navigates them automatically, retains the information and then sends it to the ground control station through a special protocol and controls the robot through the station to perform different tasks from distance.**

**This participation came within the framework of the cooperation protocol between the Faculty of Engineering and the Egyptian Space Agency and of the participation between teams from the Faculty of Engineering in the Universities Satellite Project, as well as the establishment of a training satellite at the university to develop the students' experiences.**





## HONORING – COMPETITIONS mechatronics

**Kunouz Hossam El-Din the student of the Mechatronics Department at the Faculty of Engineering - MSA University won the second place in the Siemens Smart Cities project “2021 Best-In-Class” Student Kunouz participated in the Siemens training, which included training on smart cities. More than 35 students from public and private universities participated in this training, which lasted for 4 weeks. Kunouz Hossam El-Din Mohamed is the youngest student who participated in this training, and her team won second place in the competition and was honored by the CEO of Siemens, Mr. Mustafa Al-Bagouri, who praised her performance and success in the training program despite her young age.**





## HONORING – COMPETITIONS



**Seven students from MSA University were among 30 students who were selected after interviewing and testing more than 200 students from various Egyptian public and private universities to attend and participate in the training course at the Policy and Business Development Unit at the Ministry of Youth and Sports. Honorary board from Faculty of Engineering : Fairouz Ibrahim Buhairi Badr - Ahmed Hossam Abdel Fattah Ali - MSA University students presented their skills, initiatives and vision to develop business and sports and youth activities to be approved by the plan of the Ministry of Youth and Sports in the presence of His Excellency the Minister of Youth and Sports at the Olympic Center in Maadi Congratulations to our distinguished students. Our heartfelt wishes for more success and success to all MSA students and graduates.**



# 07 Organizing Team





Head of Quality Assurance Unit  
Prof. Maysa Omar



Dr. Karim M. Ayyad



L.A. Nermine Nofal



T.A. Jessy Tarek