



Civil and Architectural Engineering Department Newsletter

Issue 07

September 2020



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Message from Head of the Department

Dr. Mohammed Hussein
Associate Professor, BSc (Hons) PhD (Cantab) MIAV
PGCHE FHEA



I am pleased to introduce the 7th edition of the newsletter of the Department of Civil and Architectural Engineering at Qatar University. The newsletter presents the Department's activities and news for the academic year 2019-2020. This academic year was very special due to COVID-19 pandemic, which became evident in the middle of the year. The pandemic resulted in switching of large number of activities to online-mode and it presented an added challenge for faculty, staff and students. Nevertheless, this initiated an admirable level of determination by everyone to achieve their goals for the academic year. As can be seen within the pages of this newsletter, the Department has made a great progress and continued forward in its mission to be recognized regionally and internationally as a leading department that provides high quality education, research and community service. Beside running of its undergraduate and postgraduate programs and the support of its student, during 2019-2020, the Department completed the work needed for the internal audit of its undergraduate program, progressed the work to obtain the ISO-17025 as a first teaching-department at Qatar University to make this effort, continued its successful organization of the industrial workshops, organized the International Conference on Civil Infrastructure and Construction in collaboration with Ashghal and the Ministry of Municipality and Environment, organized the first Winter Camp to attract high school students to study civil engineering. Through the work in these activities, the Department made significant interaction and collaboration with the industry including the government sector, private sector, and professional institutions. I hope the newsletter gives you a good idea about the Department's activities and news, and I hope you enjoy reading it.

DEPARTMENT NEWS

INTERNATIONAL CONFERENCE ON CIVIL INFRASTRUCTURE AND CONSTRUCTION (CIC 2020)



The Department of Civil and Architectural Engineering organized the International Conference on Civil Infrastructure and Construction (CIC 2020) with strong support from the College of Engineering in Grant Hyatt Hotel from the 2nd to the 5th of February 2020. The conference was held under the umbrella of the World Congress for Engineering & Technology (WETC-2020) that the College of Engineering organized as part of the celebration of its 40th anniversary. The CIC 2020 conference was organized in collaboration with the Public Works Authority (Ashghal) and the Ministry of Municipality & Environment (MME).



The conference was the first and the largest of its kind in Qatar and the Middle East. The conference received large number of contributions from all over the world, with **130 accepted papers from 16 different countries**. The conference provided a platform to discuss the next-generation infrastructure and its construction among key players such as researchers, industry professionals and leaders, local government, clients, construction contractors and policymakers of the construction industry. The conference program involved four different themes: **Construction Management and Process, Materials and Transportation Engineering, Geotechnical, Environmental, and Geo-environmental Engineering, and Sustainability, Renovation, & Monitoring of Civil Infrastructure.**

The Civil and Architectural Engineering Department in partnership with the College of Engineering received strong financial support for the conference. This support came from **Ashghal, Qatar Rail, Qatar Diar, CCC, Alsarh, Supreme Committee for Delivery and Legacy, QNRF, National Tourism Council, Alwaha, JH Construction, Altawfeeq, WSP, Qatar Building Company and Salfo**. The conference attracted top keynote speakers from the most prestigious engineering institutions including the **President of the American Society of Civil Engineers (ASCE), the Chair of 2019 Board of Directors of the Project Management Institute (PMI), the President-elect of the Institution of Civil Engineers (ICE) and the President of the International Association for Bridge and Structural Engineering (IABSE)**. The conference also attracted top executive speakers from key stakeholders in Qatar including Ashghal, MME, Qatari Diar, Supreme Committee, Qatar Green Building Council, and Qatar Rail.



The conference received strong support from its professional partnership, consisting of the **American Society of Civil Engineers (ASCE)**, **Institution of Civil Engineers (ICE)**, **Engineers Australia (EA)**, **Qatar Lean Construction Institute (LCI)**, **Project Management Institute (PMI)**, **American Concrete Institute (ACI)**, **Green Building Council**, **Qatar Society of Engineers**, **Federation of Arab Engineers**, and the **International Association of Bridge and Structural Engineering (IABSE)**. The conference was a successful event for the Department, the College and the University. One of the many significant outcomes the conference provided is the strong exposure of the undergraduate and postgraduate students to presentations by experts from all over the world. The Department also received strong support from the students who volunteered to make the conference a very successful event.







Industrial WORKSHOPS



The CAE Department offers a number of lectures each year given by industrial experts. In the academic year 2019-2020, four workshops were organized to offer undergraduate and graduate students the opportunity to meet and benefit from experts from various industries in civil engineering in different disciplines.




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Anil Oruganti, Senior Projects Engineer, Ashghal

Anil Oruganti is Senior Projects Engineer for Infrastructure works of Bridges, Tunnels and Drainage structures working within Design Department of Ashghal. He has a total of 17+ years of experience mostly on bridges and tunnels design, design reviews (PMC), co-ordination and has wide exposure to many design software.



Theodoros Tzaveas, Line Manager for disciplines of Bridges, Tunnels and Geotechnical, Ashghal

Theodoros Tzaveas is a Line Manager for disciplines of Bridges, Tunnels and Geotechnical working within Design Department of Ashghal. Theodoros 20+ years of experience is mostly on bridges and tunnels design but also has diverse civil engineering experience including management, construction, procurement, handovers and project controls.

THE DEPARTMENT OF CIVIL AND ARCHITECTURAL ENGINEERING AT QATAR UNIVERSITY & ENGINEERS AUSTRALIA INVITE YOU TO ATTEND THE INDUSTRIAL SEMINARS

Design Review and Approvals process for Transportation Structures

DAY & DATE: WEDNESDAY, 13 NOVEMBER 2019


VENUE: College of Engineering, Qatar University. More information will be sent after registration.

REGISTRATION: [Register for free here](#)


SCHEDULE OF SEMINAR:
 6:15pm: Registration
 6:30pm: Start of seminar
 7:15pm: Q&A session
 7:30pm: Coffee and snacks
 8:00pm: End

ABSTRACT
 This workshop presents about the Design review of Al Bustan North Interchange project, Al Bustan North Pedestrian Bridge, Al bidda pedestrian Underpass and Al wukair (QS 49) Underpasses. The work presents about the review and approval of principle (AIP) document, design drawings with calculations, independent checker certifications and overall design co-ordination with both the parties, i.e. consultant and contractor for smooth run of the project. In achieving these, various codal requirements were referred to such as BS, DMRB, Euro, AASHTO and local QCS with IAN's guidelines.

For enquiries, please email civil@qu.edu.qa



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Ali Kara, Ashghal

Ali Kara is Senior Projects Engineer at the Public Works Authority (Ashghal) working in the Highway Projects Department. He has intensive experience in construction management, value engineering, and Design and Build projects. Eng. Kara had coordination responsibility in a number of large projects in Qatar including the Construction of the Shamal Road, as well as Al Rufaa Street (Celebration Road). He is well known for design works and stakeholder coordination in most of the Expressway projects of Ashghal and is a constant presenter of road side safety conferences in Transportation Research Board, Washington DC.

THE DEPARTMENT OF CIVIL AND ARCHITECTURAL ENGINEERING INVITES YOU TO ATTEND THE INDUSTRIAL WORKSHOP ENTITLED

Challenges in Design-and-Build Project Management in Qatar – Case study of Al Bustan South Project


DAY & DATE: WEDNESDAY, 18 SEPTEMBER 2019

VENUE: Building B09 Room F106 at the College of Engineering at Qatar University. [Registration Link](#)


SCHEDULE OF WORKSHOP:
 6:15pm: Registration
 6:30pm: Start of presentation
 7:15pm: Q&A session
 7:30pm: Coffee and snacks
 8:00pm: End

ABSTRACT
 This workshop presents the recent developments in the Design and Build Al Bustan Bridge and Highway Project as part of the Qatar Expressway Programme and the lessons learnt from it. Al Bustan South Project comprises Design and Construction of an Expressway to the North of Doha with Grade separated Junctions, Four-Lanes Dual Deck to form a 1,946 meter long Bridge Structure. The works include Drainage System, Irrigation Transmission Pipelines, Water Pipelines, Foul Sewer, Landscape, Artscaping Works. Design and building of highways and bridges in urban areas with very tight schedules are always big challenges to contractors as well as to the employers. The employer must manage the busy existing traffic to provide work zones to the contractors. The existing utilities and relocation of them in a restricted urban corridor, have introduced major issues in the structural design to accommodate the foundations. Consideration of these relocations changed the entire concept of bridge's design and construction. To improve life around the city and have aesthetic harmony in these structures, the employer had to make important provisions.

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Steve Bird

Steve has worked in the Asset Management Field for 40 years in various sectors including Water and Waste Water, Air Traffic Control, Roads, Metro, Facility Management, Chemical, Power Transmission and Airports.

Having started his professional life as a Maintainer, and having been an Asset Manager for a number of years and he is now a consultant advising on AM implementation in the Middle East. He has also worked in the UK, across the GCC, and Africa

Having been involved with the initial generation of PAS55 (the first Asset Management standard) and developing the assessment/certification methodology for the UK Institute of Asset Management, he has most recently been involved in writing a ISO and involved with ISO55001 development.

He also assessed companies against both standards (PAS55 and ISO55001) and is now undertake progression assessments to journey towards certification.

THE DEPARTMENT OF CIVIL AND ARCHITECTURAL ENGINEERING AT QATAR UNIVERSITY AND THE INSTITUTION OF CIVIL ENGINEERS QATAR (ICE) INVITE YOU TO ATTEND THE INDUSTRIAL WORKSHOP ENTITLED

Why Asset Management shouldn't work in Qatar , but it does!


DAY & DATE: Monday, 11th December 2019 at 6:15pm at Qatar University

REGISTRATION: [Register for free here](#), confirmation email will be sent to those registered.


SCHEDULE OF SEMINAR:
 6:15pm: Registration
 6:30pm: Start of workshop
 7:15pm: Q&A session
 7:30pm: Coffee and snacks
 8:00pm: End

ABSTRACT
 Why Asset Management should not work in Qatar, but it does! The key task within asset management is to prioritise investment and to develop acceptable levels of risk, however when access to capital is not really a problem and one works in a risk adverse environment what is the true challenge and why bother.

For enquiries, please email civil@qu.edu.qa



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Dr. Guna GUNALAN, ASCE 2020 PRESIDENT

K.N. Gunalan (Guna) is the President of ASCE. He is Senior Vice President of transportation Alternative Delivery, Americas at AECOM, based in Salt Lake City, UT. Previously, he was a Vice President at Parsons Brinckerhoff (PWS). Guna has managed large complex infrastructure projects, providing technical advice on civil, structural, geotechnical, pavement, and materials issues on a variety of projects around the world.

The Department of Civil and Architectural Engineering at the College of Engineering in Qatar University is pleased to invite you to attend a presentation by:

President of American Society of Civil Engineers (ASCE)

Title: Engineering the Future
Date and time: Thursday, 6 February 2020 at 11:00am.
Venue: Building B09 Room F106 at the College of Engineering.

Presentation will cover:
 Civil Engineers role, responsibility; current state of profession.
 What is ASCE doing to help the profession & the professional to meet the challenges of the future.

For enquiries, please email civil@qu.edu.qa

1. Design Review and Approvals process for Transportation Structures

As part of the industrial workshop series, CAE department conducted a seminar on “Design review and Approvals process for Transportation Structures” on the 13th of November 2019 at the office of research and graduate studies, College of Engineering. Senior Project Eng. Anil Oruganti and Line Manager Theodoros Tzaveas from Ashghal delivered the exciting session about the design review of Al Bustan North Interchange project, Al Bustan North Pedestrian Bridge, Al bidda pedestrian underpass and Al Wukai underpass. The review and approval principle document, design drawings with calculations and other important processes during the smooth run of the projects were discussed during the workshop.



2. “Why Asset Management shouldn’t work in Qatar, but it does”

The Department of Civil and Architectural Engineering arranged a workshop with the Institute of Civil Engineers, Qatar on “Why Asset management shouldn’t work in Qatar, but it does!” on the 11th of December 2019 at the Office of graduate studies, College of Engineering, Qatar University. Steve Bird, an expert in the field of asset management in various sectors including Water and Wastewater, Air traffic control, metro, power transmission and airports talked about the key tasks and challenges on asset management in Qatar.



3. Design and Build Project Management in Qatar

The Department of Civil and Architectural Engineering at Qatar University collaborated with Ashghal in hosting a workshop on “Challenges in Design-and Build project management in Qatar, Case study of Al Bustan South Project” on the 18th of September 2019 at the Office of graduate studies, College of Engineering, Qatar University. Eng. Ali Kara, a Senior Project Engineer at Ashghal delivered an exciting session about the recent developments in the Design and Build of Al Bustan Bridge and Highway Project and the lessons learnt from it. He discussed about the important provisions provided by the employer to improve the life around the city and its aesthetic harmony among the academics and professionals from other companies.



4. Engineering the Future

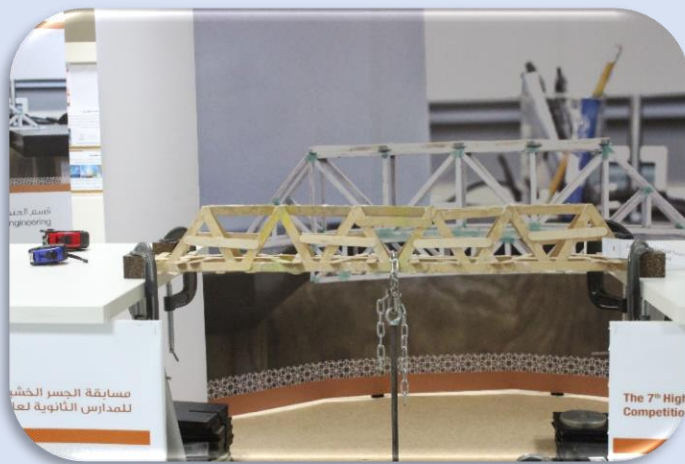
Dr. Guna Gunalan, the president of American Society of Civil Engineers (ASCE), delivered a presentation on “Engineering the Future” on the 6th of February 2020 at the office of research and graduate studies, College of Engineering, Qatar University. Dr. Gunalan is a Senior Vice President of Transportation Alternative Delivery at AECOM, Salt Lake City. The role, responsibility and current state of profession of Civil Engineers and the support given by ASCE to meet the challenges of the future were discussed during the session.





7th Wooden Bridge Competition

The Department of Civil and Architectural Engineering organized the 7th High School Wooden Bridge Competition (HSWBC) to motivate students to join the field of engineering in general and civil engineering in particular. Teams of high school students constructed bridge models using sticks and glue as per the instructions and guidelines provided by the faculty and staff during their visit to the school as part of the outreach program. The competition aims to equip secondary school students with the main skills of civil engineering and to enable them to test, design and build small bridges of different usages. On the final day of the competition, loads were applied at the center of each bridge to measure how much load each bridge can withstand. The team with the largest load Carrying Capacity Bridge would win the first place. **Eighteen Independent High Schools** participated in the competition.



Winners

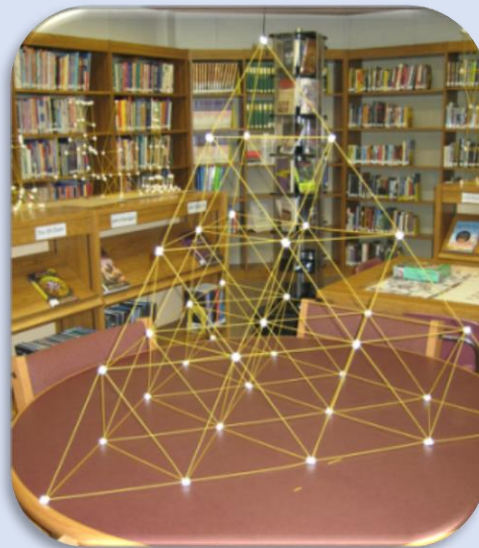


Sr. No.	School Name	Position
1	Ahmed Bin Hanbal Secondary School	1 st Place
2	Banking Studies & Business Administration Secondary S	2 nd Place
3	Hamad Bin Abdullah Bin Jassim Secondary School	3 rd Place



The Spaghetti-Marshmallow Tower Competition

The Department of Civil and Architectural Engineering organized the Spaghetti-Marshmallow Tower Competition during the 7th High School Wooden Bridge Competition (HSWBC) on the 11th of November 2019. Teams were asked to construct the highest possible tower using two bags of spaghetti and three bags of marshmallows within 75 minutes as per the instructions and guidelines provided. The students designed the tower by including beams, foundation, columns and braces for their structure. The team from Qatar University: Mohammad Talhami, Abdurahman Kashem and Almodather Mohamed won the competition with the highest built tower.



Qatar Steel Hunt Competition



The Department of Civil and Architectural Engineering at Qatar University conducted the Qatar Steel Hunt Competition. In this competition students and staff were asked to take a Selfie with a steel structure inside Qatar containing as many of the structural steel elements as possible. The elements to be included in the picture can be columns, beams, trusses, bracing members, different steel sections and connections and base plates. All pictures were reviewed based on the total number of correct items found in the picture. The quality and creativity of photos were also considered.

Out of the 12 participants the four winners are listed below.

Rank	Winner
1 st	Maher El-Areir
2 nd	Nasser Alnohmi
3 rd	Mohammed Talhami
4 th	Mohammed Alobaidli

Senior Design Poster Competition

Senior Design Poster Competition Fall 2019

The Senior Design Poster Competition was held on the 20th of November 2019 in front of the Civil and Architectural Engineering Department. **Seven groups** participated in this competition. Here are the details of the winners:

SDP-II Poster Competition Winner Details:

Position	Students	Title of Project	Primary Supervisor
1 st	Fadil Kahil	Design of a pedestrian crossing (either a bridge or a tunnel)	Dr. M. Elshafie
	Abdulfattah M. Fawaz		
	Khalid Gamal Mahjoub		
	Freh Alsalamah		
2 nd	Christian Justine Samson	Design of a GCC rail system with consideration of operation and maintenance	Dr. Hussein
	Javad Kohansal		
	Syed Azlan Amjad		
	Ahmad Ibn Mahmoud		
3 rd	Yahia Zakria Alrajjo	Design of a New Interchange in Doha	Dr. O. Sirin
	Hamza Ghonim		
	Mohammed Aboura		
	Abdalla Aref		
	Khaled Elsafady		



1st place

2nd place3rd place

Senior Design Contest Fall 2019

The Senior Design –II Spring 2019 Contest was held on the 27th of November 2019 in the College of Engineering. **Seven groups** participated in this competition. The students presented their project to the Jury members as well as to internal and external examiners. Here are the details of the winners.

Position	Students	Title of Project	Supervisors
1 st	Omar Elwan	Analysis and Design of New Central and Maintenance Store Buildings at Qatar University	W.Al-Nahhal A.Al-Hawari M.Gunduz
	Anas Elgamal		
	Abdulaziz Al Jassim		
	Abdalla elhawary		
2 nd	Fadi Kahil	Design of a pedestrian crossing	M.Elshafie O.Sirin A.Al-Hawari M.Gunduz
	Abdulfattah M. Fawaz Alzeibak		
	Khalid Gamal Mahjoub Mohamed		
	Freh Alsalamah		
	Christian Justine Ramirez Samson		
3 rd	Yousef Eltetr	M.A.R.K Hotel and Security building	K.Shaaban R.Al-Raoush M.Gunduz
	Hassan Sayed		
	Mohamed Teryak		
	Maher Alareir		

Senior Design Contest Spring 2020

The Senior Design –II Spring 2019 Contest was held on the 29th of April 2020 ONLINE. **Nine groups** participated in this competition. The students presented their project to the Jury members as well as to internal and external examiners. Here are the details of the winners:

SDP –II Contest Winner Details:

Position	Students	Title of Project	Supervisors
1st	Ahmed Jolak	Design of a multipurpose sports hall at Qatar University.	Wael Al Nahhal M.Elshafie A. Al-Hawari
	Wardan Khatib		
	Ahmed Eltahan		
	Mohamed Khalil		
2nd	Mohammed Fayed	Al -Hout Tower	M.S.Al-Ansari R. Al-Raoush M.Gunduz
	M.Fares Hout		
	Anas Hamed		
	Nasser Al-Kubaisi		
3rd	Moaaz Ramadan	M.A.R.K Hotel and Security building	M.S.Al-Ansari R. Al-Raoush M.Gunduz
	Ahmad Musleh		
	Rashid Al Suwaidi		
	Khalid Abdelaziz		





Site visits



Construction Sites

Aiming to enrich the student experience in various Civil Engineering disciplines, the Department of Civil and Architectural Engineering organized several site visits for students during this academic year. The students visited different construction sites in Doha on October 21st, 2019. Also, on the 23rd of November 2019, the CAE students visited a steel factory and Al Bustan South Project in Doha in collaboration with the Institution of Civil Engineers.



OTHER



The Department of Civil and Architectural Engineering organized for the first time, **the Civil Engineering Winter Camp** as one of the activities to attract high school students to study Civil Engineering at Qatar University. The camp was held from the 22nd to the 26th of December 2019 in Ibn Khaldoun Hall. The students taking part in the camp participated in a large number of fun-educational activities in Civil Engineering. In the first day, they built a cable-stayed bridge. In the second day, they built sections of railways and experienced the effects of axle profile of the moving wheels on railway tracks. In the third day, they participated in experiments in Geotechnical Engineering showing the failure of buildings on different types of foundations. In the fourth day, they participated in activities in the field of BIM and transportation engineering. In the last day of the camp, the students worked on a designed exercise of surveying to layout points on a ground beside the University Library.



WINTER Camp



HONORING STUDENTS VOLUNTEERED IN THE CIC 2020



The Department of Civil and Architectural Engineering honored students who volunteered in the CIC 2020 on the 6th of February 2020. The Dean of the College of Engineering Dr. Khaled Naji and the department head Dr. Mohammed Hussein along with the Conference Chairman Dr. Okan Sirin presented mementos to students who supported the CIC conference which was held on 2nd – 5th of February 2020 at Grant Hyatt Hotel, Doha.





SUBJECT RANKING

The Department of Civil and Architectural Engineering is moving up in the Shanghai Ranking. The department is ranked among the top **151-200** universities in the world compared to last year where the department was ranked among the 201-300 universities in the world.



STUDENT SUCCESS STORIES



- ✓ **Eng. Mohammed Amin Ibrahim,** got the second place in the best poster competition during the Engineering Management Open Day on Thursday, November 14, 2019.



Our graduate students have been very successful in obtaining the Graduate Sponsorship Research Award (GSRA) by Qatar Foundation in the most recent 6th and 7th cycles.

	GSRA Number	Student Name	Program
1	GSRA6-1-0301-19005	Abathar Al-Hamrani	Ph.D. student in Civil Engineering
2	GSRA6-1-0509-19021	Mhd Ammar Nabil Hafiz	Ph.D. student in Civil Engineering
3	GSRA6-1-0509-19022	Abdulrahman Abushanab	Ph.D. student in Civil Engineering
4	GSRA7-1-0217-20002	Jamal Hannun	Ph.D. student in Civil Engineering
5	GSRA7-1-0419-20019	Alaa Taha	Ph.D. student in Civil Engineering
6	GSRA7-1-0429-20028	Radwan Alfahel	Ph.D. student in Civil Engineering
7	GSRA7-1-0511-20048	Firas Alkadour	Ph.D. student in Civil Engineering



FACULTY AWARDS AND ACHIEVEMENTS



- ✓ Prof. Riyadh Al Raoush has been promoted to Full professor in Civil Engineering.



- ✓ Prof. Usama Ebead has been acknowledged in the College of Engineering End of Year Event 2019-2020 for his efforts in research.



- ✓ Dr. Okan Sirin has been acknowledged in the College of Engineering End of Year Event 2019-2020 for his service efforts in the department. Dr. Okan has recently joined the Editorial Board of Advances in Civil Engineering Journal.



- ✓ Eng. Salem Alnaimi completed his MSc from the University of Central Florida in December 2019.



- ✓ Eng. Khaled Rabie has been promoted to Grade "F".



- ✓ Eng. Muhammad Shekaib Afzal has been promoted to Grade "F".

DEPARTING FACULTY MEMBERS



The Department of Civil and Architectural Engineering would like to express its high appreciation and gratitude for Dr. Khaled Shaaban for his efforts during his work at Qatar University. Thank you Dr. Khaled and we wish you all the best in your future endeavors.

Newsletter Editors

- **Dr. Alaa Al-Hawari**



- **Dr. Mohammed Hussein**



- **Eng. Safna Nishad**

