

**Section Name United Arab Emirates Section**

**Reporting Officer Name Dr. Fatma Taher**

**Section Vitality**

- The Chapter Societies election of the term 2021-2022 was achieved in 15<sup>th</sup> of Dec. 2021
- The next elections for the Section Committee will be achieved in 1<sup>st</sup> of Oct. 2022
- Meetings dates in 2021: fill
  - 10<sup>th</sup> of Feb. 2022
  - 3<sup>rd</sup> of Mar. 2022
  - 8<sup>th</sup> of Mar. 2022
  - 16<sup>th</sup> of Mar. 2022
  - 29<sup>th</sup> of Apr. 2022
  - 5<sup>th</sup> of May. 2022
  - 30<sup>th</sup> of Jun. 2022
  - 19<sup>th</sup> of Sept. 2022

To maintain section vitality, the following are considered:

- Arranging regular section meetings.
- Organizing the IEEE Student day and the annual meeting.
- Establish partnership with local and regional entities.
- Inviting IEEE students to attend organizations’ events.
- Attract international conferences
- Arrange regular seminars

**We recommend:**

- Capitalizing on opportunities to promote the values and benefits of IEEE. One way of doing so is to request an IEEE booth in all conferences and exhibitions that the IEEE UAE sponsors.
- Conducting professional activities to attract more members from the industry.
- Establish UAE Section Award for best volunteer (Activities, influencer, etc)
- Support new student branches

**2021 Achievement:**

- **Total Meetings: 8**
- **Events: 51 (2021)**
- **Results:**

Grade	2014	2015	2016	2017	2017	2018	2019	2020	2021
Fellow	2	2	2	2	2	3	2	2	<b>5</b>
Senior Member	98	112	122	127	130	141	151	171	<b>173</b>
Member	760	761	748	744	656	628	663	537	<b>565</b>
Associate Member	45	24	25	23	18	24	24	24	<b>22</b>
Affiliate	20	21	19	6	19	6	8	8	<b>8</b>
Graduate Student Member	77	122	156	103	78	45	65	90	<b>92</b>
Student Member	606	665	750	473	519	570	391	375	<b>428</b>
<b>Total</b>	<b>1,608</b>	<b>1,707</b>	<b>1,822</b>	<b>1,476</b>	<b>1,422</b>	<b>1,417</b>	<b>1,311</b>	<b>1,216</b>	<b>1,312</b>

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• **List of Events:**

1. Academia and Industry Research Collaboration - Patented (USA) Security System : United Arab Emirates Sect Jt Ch, SP01/COM19
2. Benefits of IEEE membership, student's perspective : American University-Ras Al Khaimah
3. IEEE Student Branch Inauguration : Skyline University College
4. WEBINAR on Growth of Software as a Service (Challenges and Opportunities) : United Arab Emirates Section CAS04/SSC37/PEL35
5. Benefits of being an IEEE Student Member : New York University Abu Dhabi
6. IEEE UAE Virtual Annual General Meeting - 2020 : United Arab Emirates Section
7. Distinguished Microwave Lecture Webinar "ANALOG PHOTONIC SYSTEMS: FEATURES & TECHNIQUES TO OPTIMIZE PERFORMANCE" : United Arab Emirates Section, MTT17/IM09/AP03
8. Distinguished Microwave Lecture Webinar "What is my measurement equipment actually doing?" : United Arab Emirates Section, MTT17/IM09/AP03
9. Workshop on "Data Analytics and Artificial Intelligence" : Skyline University College
10. 2nd IEEE INTERNATIONAL CONFERENCE ON COMPUTATIONAL INTELLIGENCE AND KNOWLEDGE ECONOMY (ICCIKE 2021) : Amity University Dubai
11. Webinar on Introduction to Data Science and Analytics : United Arab Emirates Section CAS04/SSC37/PEL35
12. The Effelsberg Radio Observatory - Serving Astronomy for 50 Years : United Arab Emirates Sect Jt Ch, SP01/COM19
13. WEBINAR on Integrated Circuits Design Technology and Challenges : United Arab Emirates Section CAS04/SSC37/PEL35
14. WEBINAR on "Use Cases of GIS and Remote Sensing Projects: from Concepts to Applications" : United Arab Emirates Section Chapter, GRS29
15. "2. What it takes to be a successful entrepreneur : United Arab Emirates Sec Jt. Chap, EMB18/CS23/RA24"
16. IEEE PES DISTINGUISHED LECTURE WEBINAR: Energy Efficiency in Smart Buildings through IoT Sensor Integration : United Arab Emirates Section Chapter, PE31
17. Chapter meeting : United Arab Emirates Sec Jt. Chap, EMB18/CS23/RA24
18. Applying to Graduate School : New York University Abu Dhabi
19. Optical Spectrum Analysis : United Arab Emirates Sect Jt Ch, SP01/COM19
20. Workshop on "Advances in Physical Layer Security for 6G networks" at the 28th International Conference on Telecommunications 2021 : United Arab Emirates Section
21. NATURE-INSPIRED OPTIMIZATIONALGORITHMS APPLIED TO CONTROL : United Arab Emirates Section
22. Workshop on Advanced Data Science Methodologies : United Arab Emirates Section CAS04/SSC37/PEL35
23. Webinar invitation: How LiFi Future-Proofs Wireless Communications : United Arab Emirates Section
24. WEBINAR on "Spatial Enhancement of Hyperspectral Satellite Imagery" : United Arab Emirates Section Chapter, GRS29
25. The 2nd Forum for Women in Research "Quwa: Empowering Women in Research and Innovation" : United Arab Emirates Section
26. WEBINAR on "Remote Sensing of Soil Salinity in the United Arab Emirates" : United Arab Emirates Section Chapter, GRS29
27. Student Branch Welcome Event and IEEEExtreme Info Session : New York University Abu Dhabi
28. IEEEExtreme Information Session : American Univ of Sharjah
29. Intro To MATLAB : American Univ of Sharjah
30. IEEE CASS Seasonal School 2021 on Domain Specific Accelerator Architectures 20 – 24 September 2021 : United Arab Emirates Section CAS04/SSC37/PEL35
31. IEEE CASS Seasonal School 2021 on Domain Specific Accelerator Architectures : Lebanon Section Jt. Chapter, IE13/PE31/CAS04/PEL35
32. IEEE CASS Seasonal School 2021 on Domain Specific Accelerator Architectures : United Arab Emirates Section CAS04/SSC37/PEL35

33. Webinar Invitation: Application of Remote Sensing and GIS to Flood and Rainwater Harvesting : United Arab Emirates Section Chapter, GRS29
34. IEEE CASS Seasonal School 2021 on Domain Specific Accelerator Architectures : United Arab Emirates Section CAS04/SSC37/PEL35
35. Intro To Python Workshop 1 : American Univ of Sharjah
36. IEEE CASS Seasonal School 2021 on Domain Specific Accelerator Architectures 20 – 24 September 2021 : United Arab Emirates Section CAS04/SSC37/PEL35
37. Workshop Invitation: Mendeley Skills for Researchers : United Arab Emirates Section
38. IEEE CASS Seasonal School 2021 on Domain Specific Accelerator Architectures 20 – 24 September 2021 : United Arab Emirates Section CAS04/SSC37/PEL35
39. Building a Career in Cyber Security : United Arab Emirates Section CAS04/SSC37/PEL35
40. Artificial Intelligence & Its Applications in Space and Medical Field : United Arab Emirates Section
41. Applications of Remote Sensing in Air Quality Monitoring : United Arab Emirates Section Chapter, GRS29
42. Geospatial Multicriteria Analysis for Earthquake Risk Assessment: Case Study over Fujairah, UAE : United Arab Emirates Section Chapter, GRS29
43. IEEE UAE Student Day 2021 : United Arab Emirates Section
44. Advancements and Future Trends in Modern Antenna Systems for Communications and for Sensors : United Arab Emirates Section, MTT17/IM09/AP03
45. IEEE Distinguished Lecturer Webinar. Physical Layer Security: Latest Trends, Threats, and Countermeasures : United Arab Emirates Sect Jt Ch, SP01/COM19
46. Microwave sensing in the modern society : United Arab Emirates Section, MTT17/IM09/AP03
47. Invitation: Women in Engineering Forum 2021 : United Arab Emirates Section
48. CALL FOR PAPERS: 28 th IEEE International Conference on Electronics Circuits and Systems : United Arab Emirates Section
49. Empowering Women in Technical Roles : United Arab Emirates Section
50. Webinar: Spin Wave Computing : United Arab Emirates Section Chapter, PE31
51. Webinar invitation: MIXED-SIGNAL CIRCUITS FOR IN-MEMORY COMPUTING IN AI : United Arab Emirates Section

#### Events Details:

Many of the listed events are virtual. However, we list few events which are not.

##### 1. IEEE WIE 2021

- a. This event is sponsored by Women in Circuit and System Society (WiCAS) and it is part of the 28th IEEE International Conference on Electronics Circuits and Systems, IEEE ICECS 2021, that held at the Sofitel Dubai, The Obelisk, Dubai, UAE. The event was on Monday 29th /November/2021, from 4:00 to 6:00 PM.



2. **Industrial Forum 2021**

- a. This forum was organized by the IEEE industrial relationship chair.



3. **IEEE ICECS 2021**

- a. ICECS is a premier international conference dedicated to circuits and systems, design, and innovations. It is held annually in Region 8 (EU, Africa, and Middle-east). The theme of the conference is Security of Microelectronic Circuits and Systems. The ICECS-2021 held from November 28th till December 1st, 2021, at the Sofitel Dubai The Obelisk in Dubai, UAE.



#### 4. IEEE GCAIoT 2021

- a.  The 2021 IEEE GCAIoT aims to provide a forum for researchers from both academic and industry fields to share their latest research contributions and exchange knowledge with the common goal of shaping the future of the interaction among Artificial Intelligence (AI), Machine Learning (ML), Internet of Things (IoT), 5G and Future Technology Trends to develop Sustainable smart healthy cities. Contributed papers are solicited describing original works in these fields and related technologies. All papers need to include a paragraph about the “managerial impact” of their proposed contribution, for example, implications in terms of what it means to manage the new technology, how to do the transition, how to operate and so forth, in the broader context than just the technology. We also encourage contribution that addresses the unprecedented COVID-19 and future similar epidemics, and how to use AI and IoT to fight altogether.



#### 5. DeSE2021

- a. The 14th International Conference on the Developments on eSystems Engineering (DeSE2021) will continue the success of the previous DeSE conferences.
- b. Link: <https://www.sharjah.ac.ae/en/Media/Conferences/DeSE2021/Pages/ov.aspx>



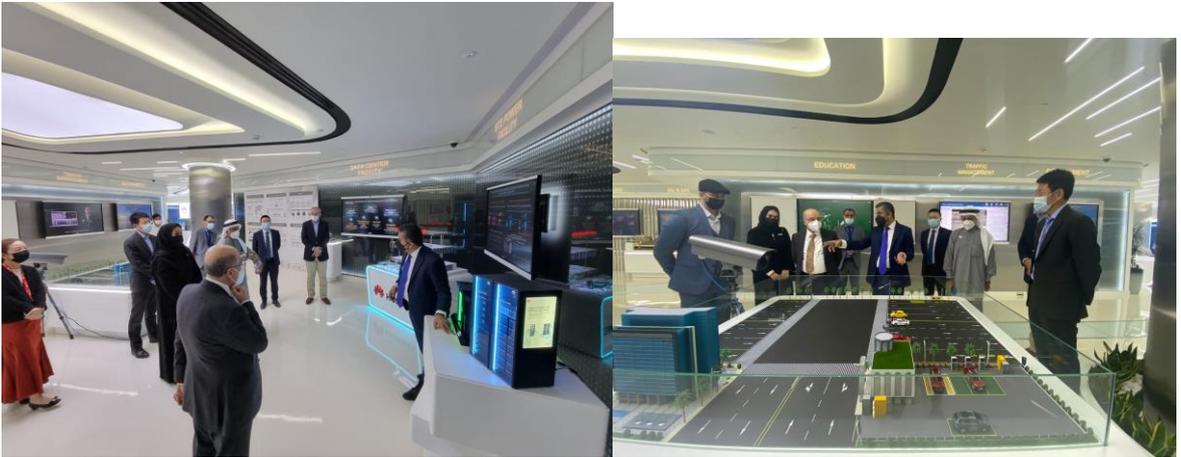
6. **IEEE Gathering by Dubai Tourism**

- a. This is a lunch gathering by IEEE UAE Section and its partner (Dubai Tourism) to discuss the support in organizing events and attracting conferences.



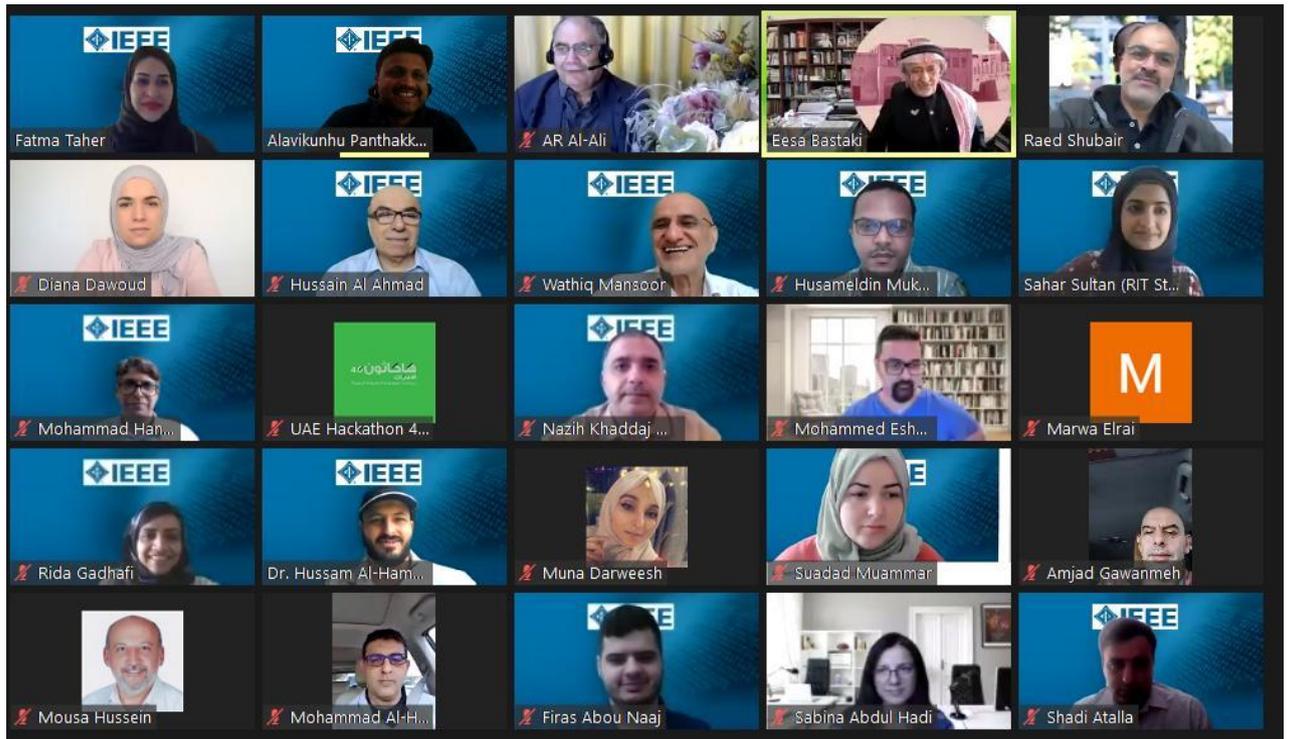
7. **Huawei Visit 2022**

- a. This is the first visit to Huawei lab after signing a collaboration MoU to support ICT events.



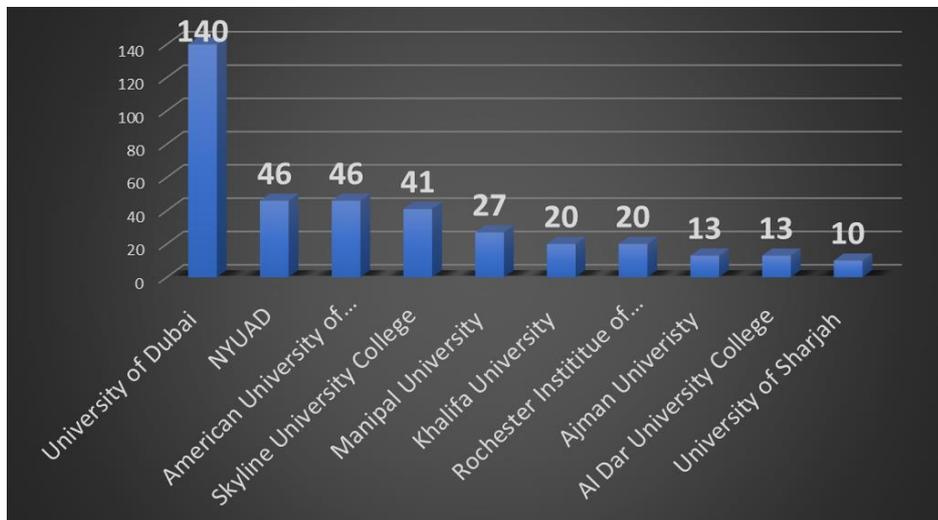
8. AGM 2020

a. This AGM meeting was held virtual on Feb. 2021.



**Students**

The UAE Section has 24 student branches and there are initiatives to open more soon. The figure below shows the top 10 branches in UAE.



- The list of activities in 2021 as follow:
  - Benefits of IEEE membership, studentâ€™s perspective : American University-Ras Al Khaimah
  - IEEE Student Branch Inauguration : Skyline University College
  - Benefits of being an IEEE Student Member : New York University Abu Dhabi
  - Workshop on â€œData Analytics and Artificial Intelligence : Skyline University College
  - 2nd IEEE INTERNATIONAL CONFERENCE ON COMPUTATIONAL INTELLIGENCE AND KNOWLEDGE ECONOMY (ICCIKE 2021) : Amity University Dubai
  - Applying to Graduate School : New York University Abu Dhabi
  - Student Branch Welcome Event and IEEEExtreme Info Session : New York University Abu Dhabi
  - IEEEExtreme Information Session : American Univ of Sharjah
  - Intro To MATLAB : American Univ of Sharjah
  - Intro To Python Workshop 1 : American Univ of Sharjah

### Affinity Groups

We have only two Affinity Groups: WIE and YP.

- The list of activities in 2021 as follow:
  - The 2nd Forum for Women in Research "Quwa: Empowering Women in Research and Innovation"
  - Invitation: Women in Engineering Forum 2021
  - Empowering Women in Technical Roles

### Chapters

UAE Section has 14 technical chapters, however some of them are join chapters.

1. Communications / Signal Processing Society:
2. Power and Energy Society:
3. Computer Society:
4. Education Society:
5. Robotics and Automation Society / Control Systems Society / Engineering in Medicine and Biology Society:
6. Geoscience and remote sensing society:
7. Microwave Theory & Techniques Society / Antennas and Propagation / Instrumentation & Measurement Society:
8. Power Electronics Society / Solid-State Circuits Society / Circuits and System Society:

### Industry

The IEEE UAE Section is striving to enrich its relationship with the industry. Here are some of the steps taken toward that:

- All the below was done online due to the COVID 19.
- Engaging industry members to participate in the IEEE Student Day online.
- Engaging industry members in the Section meetings and Annual meeting through Zoom or other platforms.
- Inviting industry members to attend technical events like seminars and symposiums.
- Renew the current MoUs with universities and organizations.
- Increase our partnership with the industry through long term MoUs and partnership agreements.
- Initiating technical workshops for IEEE members developed by the industry.

#### For further improvements, we suggest:

- Initiating Company Bulk Membership within IEEE.
- Hosting IEEE seminars and competitions.
- Visit the big companies with an engineering background and invite them to join IEEE.
- Encourage our partner companies to host the IEEE students during their intern program.

### Activities since the last report

Sign MoUs with Zayed University, Huawei and Dubai Electronic Security Center

#### Planned activities

- Webinars
- Online Poster presentation
- Digital photography competitions
- celebration events

### How Region 8 can be of help to your Section, members, and activities

The most challenge is the membership fees for students.

#### Any other issues of interest

No other issues so far.