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Alexandria, Egypt 18 – 20 December 2023



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## Day 1 — December 18, 2023 (Monday)

0 0 0 0 1 0 1 1	Antennas		00001011 [2]	Video Processing	
Day/Date	December 18, 2023 (Monday)		Day/Date	December 18, 2023 (Monday)	
Time	15:00 – 16:30 hrs		Time	15:00 – 16:30 hrs	
Chair(s)	Prof. Saber Zainud-Deen, Menoufia		Chair(s)	Prof. Mohammed Abo-Zahhad, E-JUS	ST,
	University, Egypt, and Prof. Ahmed			Egypt, and Dr. Moataz	
	Allam, E-JUST,Egypt			Abdelwahab,E-JUST, Egypt	
Room:	206		Room:	Prof. Abo-Ismail Theater	
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	ed Linear Frequency Diverse Array for			Stick with Object Detection, Obstacle	
Multi-Target D	etection		Avoidance, and IoT Monitoring for Enhanced		
Saber Zainud-D	een, Hend Malhat and Mona Badawy		Navigation and Safety		
				nan, Ahmed Allam, MoatazAbdelwahab, wy, Bassam Kobasy, Habib Eltabakh and	
Paper ID:82		Pg 5	Omar Essam	neg, zuceum recueg, rincue zinnemur unur	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Experimental S for Nematode	Study on Microwave Heating of Soil Control		D ID:100		D- 25
Tanemasa Asano	o, Hideaki Iwahori, Ahmed Allam, Osamu		Paper ID:108		Pg 25
Muta, Haruichi Kanaya and Adel B. Abdel-Rahman			RDIFR: Robust Digital Image Forgery Recognition System for Image Splicing Using Deep Learning		
Paper ID:56		Pg 9	Ali Waleed, Ibrahim Nezar, Amel Mohamed, El-Sayed El-Rabaie and Nariman Abdel-Salam		
*	tudy of Lumped and				
	ement Matching Networks on		Paper ID:57		Pg 30
	f 2.45 GHz Rectifier		CBSB: Robust C	Cancelable Biometric System for Banks	
Yassmeen Afify,	Ahmed Allam and Adel Bedair		Using Deep Lea	,	
Paper ID:65		Pg 13	Bassel Yasser, An Nariman Abdel-S	nel Mohamed, El-Sayed El-Rabaie and Salam	
A Simulation S	study on Triple-Square		1 variant 2 louer C	<i></i>	
Complementar	y Split-Ring Resonator for		Paper ID:29		Pg 34
	Blood and Aqueous Solutions		•		1801
Measurements			Using AI Techn	osis by Anomalous Sound Detection	
Esraa Mansour, Mohamed I. Ahmed, Ahmed Allam, Ramesh K. Pokharel and Adel B. Abdel-Rahman			Ü	Sahar Abdelrahman Ismail and Rania	
Tunican IC. 1 oku	aret ana Tace D. Houet Kannan		Ziedan	Summ Houthuman Ishan and Panta	
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Joint Communication Radar Systems Based on Time-Modulated Plasma-Based Intelligent Reflecting Surface			Paper ID:68		
				e Detection for Autonomous Vehicles cocessing and Real-Time Analysis	
Shaymaa Gaber, Anas Zainud-Deen, Hend Malhat and			Hany Atallah, R	asha Hussein and Adel Abdelrahman	

Mona Badawy

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JAC-ECC 2023	Day/Date Time Chair(s)	December 18, 2023 (Monday) 16:30 – 18:00 hrs Prof. Adel B. Abdelrahman, E-JUST, Egypt, and Prof. Hend Malhat, Menoufia University, Egypt		Day/Date Time Chair(s) Room:	December 18, 2023 (Monday) 16:30 – 18:00 hrs Prof. Ahmed Zaky, E-JUST, Egypt, ar Prof. Samir Elsagheer, E-JUST, Egypt 203	
C 20	Room:	201				
23 –				Paper ID:61		Pg 58
– Tecl	Paper ID:78  Recharging Zero Energy Devices: Multi-Frequency RF Energy Harvesting Perspective  Patrick Odong, Ahmed H. Abd El-Malek, Ahmed Allam, Asano Tanemasa and Adel B. Abdel-Rahman		Pg 42	Classification of Libya Floods and Morocco Earthquakes Using CNN-Based Deep Learning Models		
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gra				Deep learning is Competing with Random forest in Computational Docking		
mme	Hala Mohammed Elsayed, Anwer S. Abd El-Hameed, Ahmed Allam, Ramesh Pokharel and Adel Bedair			Mohamed A. Khamis, Basem Galal and Walid Gomaa		
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	Paper ID:16 Optimization of Coaxial Feed Position Selection and		Pg 50	Enhancing Road Safety using the Internet of Vehicles: A Machine Learning-Based Collision Detection Approach		
	Exploitation of Metasurface to Improve Microstrip Antenna Radiation Performance			Samir Elsagheer,	Yara Atallah and Hassan Hashem	
	Kyrillos Youssef, Ahmed Abd El-Malek, HaruichiKanaya and Mohammed Abo-Zahhad  Paper ID:111  Mutual Coupling Reduction Techniques for Dual Band MIMO Antenna		Pg 54	Paper ID:95		Pg N/A
				Optimization of PID Controller Parameter Estimation using the Geometric Mean Optimizer		
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	Session [5] Day/Date Time Chair(s)	Selected Topics in Communications December 18, 2023 (Monday) 16:30 – 18:00 hrs Prof. Maha Elsabrouty, E-JUST, Egy and Dr. Ahmed H. Abd El-Malek, E-JUST, Egypt			Session [6] Day/Date Time Chair(s)	Topics in Internet of Things December 18, 2023 (Monday) 16:30 – 18:00 hrs Prof. Mohammed Abo-Zahhad, E-JUST Egypt, and Dr. Rami Zewail, E-JUST Egypt	
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		yama, Takumi Suzuki, Shuhei Saito,			Micro-Python Language		
1	Hirofumi Sugani	ıma and Fumiaki Maehara			Mervat Elalem, Mohamed A. Sobh and Ayman M. Bahaa El-Din		
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					Scheduling Moo Computing	del for IoT in Hybrid Fog-Cloud	

Mohamed Issa and Mohamed Ghetas

## Day 2 — December 19, 2023 (Tuesday)

Session [7] Selected Topics in Artificial
Intelligence

Day/Date December 19, 2023 (Tuesday)

Time 14:30 – 16:00 hrs

**Chair(s)** Prof. Walid Gomaa, E-JUST, Egypt and

Prof. Ahmed Fares, E-JUST, Egypt

**Room:** 203

Paper ID:21 Pg 125

CNN-Based Receiver Architecture for Full-Duplex MIMO Communication Systems

Maggie Shammaa, Sara Younes, Maggie Mashaly and Ahmed El-Mahdy

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Arabic text sentiment analysis and emotion classification using transformers

Nada Mossad, Youssef Mohamed, Ahmed Fares and Ahmed Zaky

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Decision Transformer-Powered Traffic Control System

Mahmoud Nawar, Abdalla Saad, Basem Elhalawany and Ahmed Fares

Paper ID:87 Pg 142

ArmorNet: Animated cartoon pornography detection using transformer network

Mahmoud Taha, Abdulwahab Al-Sammak, Shady Elmashad and Ahmed B.Zaky

Paper ID:51 Pg 148

An Efficient Deep Learning Approach for sEMG Hand Gesture Classification

Ahmed Omar, Mohamed Abbas, Khalil Yousef and Kasem Khalil Session [8] Selected Topics in Communications

Day/Date December 19, 2023 (Tuesday)

**Time** 14:30 – 16:00 hrs

Chair(s) Prof. Maha Elsabrouty, E-JUST, Egypt,

and Prof. Osamu Muta, E-JUST, Egypt

Room: 204

Paper ID:45 Pg 152

RAN Functional Split Options for Integrated Terrestrial and Non-Terrestrial 6G Networks

Mohamed Rihan, Tim Due, MohammadamiVakilifar, Dirk Wubben and Armin Dekorsy

Paper ID:102 Pg N/A

Direction of Arrival Estimation Approach Based on Gauss-Newton Method

Rania Helal, Ahmed Nasser and Osama Elnahas

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Toward an Autonomous Centroid-based Deployment of Multi-UAV for Full Disaster Area Coverage

Seddiki Manel, Mouaici Mouna and Benchaïba Mahfoud

Paper ID:47 Pg 163

Clustering Techniques for Frame Delay Variations in Mobile Networks

Mohamed Tharwat Waheed, Hazem Abdelaziem, Ibrahim Mahmoud and Ammar Mohamed Session [9] Topics in Circuits and Systems Day/Date December 19, 2023 (Tuesday) Time 14:30 - 16:00 hrs Chair(s) Prof. Mohammed S. Sayed, E-JUST, Egypt, and Dr. Ahmed Shalaby, Benha

University, Egypt

Room:

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Transformer Tank VCO based on Inverse Class-F Architecture for mm-Wave Applications using 180nm CMOS Technology

Marwa Mansour and Islam Mansour

Paper ID:46 Pg 263

A Novel Approach to AES S-BOX and Inverse S-BOX Design on FPGA Devices

Ahmed Mohamed Abdel Razik and M.RiadElghonemy

Pg 176 Paper ID:50

An investigation of line and frame based descriptions on designing sprite drawing hardware in high-level synthesis

Yuka Otani and Akira Yamawaki

Paper ID:49 Pg 180

A Complete Automated Analog Flow from Design Generation to Post-layout Verification

Amr Mohamed Rashed, Ziad Amr Abd-Elghafar and Islam Nashaat

Session [10] Selected Topics in Biomedical

Engineering

Day/Date December 19, 2023 (Tuesday)

Time 14:30 - 16:00 hrs

Dr. Rami Zewail, E-JUST, Egypt, and Dr. Chair(s)

Sameh Nashaat, E-JUST, Egypt

Room:

Paper ID:98 Pg 184

Joint Sign Language Recognition and Translation using Keypoint Estimation

Hossameldin Mahmoud, Mustafa Elattar and M. Saeed Darweesh

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Dual Deep Learning for Sleep Classification Mohamed Abdelmagid, Marwa Yusuf, Basem M. Elhalawany and Ahmed Fares

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Transfer Learning for Multi-label Emotion Recognition: A Promising Approach for Biomedical Applications

Mohamed Mahmoud and Sherif Elgohary

Paper ID:103 Pg 198

Efficient Automatic External Defibrillator using the Slope of Hilbert Transformed ECG Signals

Samir Elsagheer, Mohamed Sayed and Mohsen Hassan

Paper ID:92 Pg 203

Towards a Low-cost Non-Invasive Patient Operated Electric Muscle Stimulator for People with Spinal Cord Injuries

Hany Shaker, Asmaa Sayed, Safaa Mahran, Mohamed Abbas, Kasem Khalil and Khalil Yousef

IAC-ECC 2023	Session [11] Selected Topics in Artificial Intelligence  Day/Date December 19, 2023 (Tuesday)  Time 16:15 – 17:45 hrs  Chair(s) Prof. Ahmed Fares, E-JUST, Egypt, and Prof. Ahmed Zaky, E-JUST, Egypt  Room: 203		and	Session [12] Day/Date Time Chair(s) Room:	Selected Topics in Communications December 19, 2023 (Tuesday) 16:15 – 17:45 hrs Prof. Elsayed Elrabie, Menoufia University, and Dr. Sherief Hashima RIKEN-AIP, Japan 204	,	
	Your Cat's Body	med Hassan, Ahmed Gad, Haitham	Pg 207	with User-Term	valuation of Cooperative Positioning inal Collaboration mu Muta and Yutaka Jitsumatsu	Pg 240	
— Technical Programme	Paper ID:64  Improving Diabetes Forecasting: An Ensemble Approach with Feature Selection in Time Series Analysis  Nour Abosen, Ahmed Safwat, Omnia Nabil, Ahmed Zaky and Samir Elsagheer		Pg 212	Maximization for Muhammad Hose	Reinforcement Learning based Sum Rate Maximization for UAV-Assisted NOMA System Muhammad Hosam, Mohamed Ehab, Baraa Mohamed, Dina Saad, Fatma Gamal, Osama Elnahas and Omar		
ro e	Paper ID:94 Physician Scheol Programming	duling using Constraint Satisfaction ed M.Salama, Ahmed Fares and Ahmed	Pg 218	5G-IoV Networ	d Hosny, Mohamed El-Shazly, Nehal	Pg N/A	
	Negative Breast	e Learning Classification for Tipple Cancer a Abozaid, Samir Elsagheer and Ahmed	Pg 224	Securing the Su Communication	ght Authentication Scheme for bstation and Control Center ns in Smart Grids am Khairy and Ihab Ali	Pg 249	
	on One-Class St and Deep Auto AdhamHaggag, A	ing Cells in Cellular Networks Based upport Vector Machines Algorithm encoders Adham Nassar, Alhassan Khaled, Mazen oliman, Mohamed E. Gad and M. Saeed	Pg 230				
	Model for Auth Yousef Adel, Mos	abic Generative Question-Answering entic Religious Text stafa Dorrah, Ahmed Ashraf, Abdallah noud Mohamed, Mariam Wael and	Pg 235				

Session [13] Selected Topics in Circuits and Systems

Day/Date December 19, 2023 (Tuesday)

**Time** 16:15 – 17:45 hrs

Chair(s) Prof. Mohammed S. Sayed, E-JUST,

Egypt, and Dr. Ahmed Shalaby, Benha

University, Egypt

**Room:** 201

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Advances in Lithium-Ion Battery SOC Prediction: A Data-Driven GRU-RNN Framework.

Alamir Hassan, Abdallah Yehia, Rami Zewail, Omar Abdel-Rahim, Mohamed Shahin and Moayadeldin Tamer

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A Low Power Modified Strong-ARM Latch-Based Comparator for Biomedical Applications in 130nm CMOS Technology

Eman Atef, Mohamed Abbas and Khalil Yousef

Paper ID:107 Pg 171

Efficiency Enhancement in Virtual Power Plant through an Improved Particle Swarm Algorithm for Optimal Power Generation Optimization

Jeremiah Amissah, Omar Abdel-Rahim, Diaa-Eldin Mansour, Sobhy Abdelkader and Sammy Kinga Session [14] Selected Topics in Biomedical

Engineering

Day/Date December 19, 2023 (Tuesday)

**Time** 16:15 – 17:45 hrs

Chair(s) Prof. TanemasaAsano, Kyushu

Univerity, Japan and Dr. Sameh

Nashaat, E-JUST, Egypt

**Room:** 210

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Towards An Augmented Reality Goggles Integrated with a Mobile-Based Medication Adherence System *Aya Taghian, Ahmed H. Abd El-Malek, Mohammed S.* 

Sayed and Mohammed Abo-Zahhad

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Review on Non-Invasive ML-Enhanced Electromagnetic Blood Glucose Monitoring

Adel B. Abdelrahman, Ahmed Allam, Rami Zewail, Esraa Mansour, Abdelazim Atta, Abdelrahman Ashraf and Mohamed H. Shahin

Paper ID:59 Pg 277

A Magnetic Sensor for Artery Pressure Monitoring Menduh Furkan Aslan, Omar Kerbouche, Tugba Selcen Navruz and Mustafa Ilker Beyaz

Paper ID:55 Pg 281

Efficient Low Cost Automatic External Defibrillator Circuit

Mohammed Sayed, Samir Elsagheer and Mohsen Hassan

Paper ID:110 Pg 285

Metamaterial Based Unidirectional Antenna for Bone Fracture Detection

Wongani Moyo, Ahmed Allam, Adel Behair and Asano Tanemasa