

# IMAS 2023

1st IEEE International Microwaves and  
Antennas Symposium in Africa  
IEEE conference # 55807

IEEE MTT-S AND IEEE AP-S HAVE COME TOGETHER TO SPONSOR THE IMAS2023. THE FIRST EDITION OF IMAS2023 WILL TAKE PLACE ON 7-9 FEB. 2023 IN CAIRO, EGYPT (IN-PERSON). IT IS TECHNICALLY SPONSORED BY AIN SHAMS UNIVERSITY AND THE GERMAN UNIVERSITY IN CAIRO. THIS CONFERENCE AIMS TO PROVIDE AN IDEAL PLACE FOR THE EXCHANGE OF SCIENTIFIC AND TECHNICAL INFORMATION, AT BOTH ACADEMIC AND INDUSTRIAL LEVELS, WITH FOSTERS COLLABORATION AND COOPERATION IN THE MICROWAVES, ANTENNAS & PROPAGATION DOMAIN AT AFRICAN AND GLOBAL LEVELS.

IMAS2023 CONSISTS OF INVITED AND CONTRIBUTED PAPERS TO PROVIDE AN OVERVIEW OF THE CURRENT VSTATE-OF-THE-ART IN ANTENNAS& PROPAGATION, MICROWAVE CIRCUITS, PHOTONICS AND MEASUREMENTS, HIGHLIGHTING THE LATEST DEVELOPMENT AND INNOVATION REQUIRED FOR FUTURE WIRELESS APPLICATIONS. IMAS2023 WILL INCLUDE TECHNICAL SESSIONS, POSTER SESSIONS, SPECIAL SESSIONS, INVITED TALKS, WORKSHOPS, TUTORIALS, BANQUET AND SOCIAL EVENTS. CONTRIBUTIONS FROM INDUSTRY, UNIVERSITIES, RESEARCH CENTERS AND OTHER INSTITUTIONS ARE WELCOMED.

## IMPORTANT DEADLINES

PROPOSALS FOR SPECIAL SESSIONS AND TUTORIALS  
**15TH SEP. 2022**  
DEADLINE FOR PAPER SUBMISSION  
**15TH SEP. 2022**  
NOTIFICATION OF PAPER ACCEPTANCE  
**15TH NOV. 2022**  
FINAL SUBMISSION AND EARLY REGISTRATION  
**15TH DEC. 2022**  
PLEASE REFER TO THE WEBSITE FOR SUBMISSION  
INSTRUCTIONS AND FURTHER DETAILS.



## IMAS2023 CHAIRS

### CONFERENCE CO-CHAIRS

AYMAN EL-TAGER | HANY HAMMAD

### TPC CO-CHAIRS

HADIA EL-HENNAWY | AMR SAFWAT

### G. SECRETARY

HUSSEIN KOTB

### WEB MASTER

AHMED KHATTAB

### ORGANIZED BY:

GERMAN UNIVERSITY IN CAIRO (GUC),  
NEW CAIRO CITY, EGYPT.

## WORKSHOPS

ADVANCED SPACE TECHNOLOGIES  
WIRELESS TECHNOLOGIES FOR SMART CITIES

## AWARDS

IMAS2023 best paper award, best poster award,  
best student paper award



## CONFERENCE TOPICS (includes but not limited to)

### PROPAGATION AND RELATED TOPICS

- P01 TROPOSPHERIC PROPAGATION
- P02 OUTDOOR/ INDOOR /URBAN PROPAGATION
- P03 SATELLITE PROPAGATION MODELING
- P04 MULTI-LINK MIMO AND COOPERATIVE CHANNELS
- P05 VEHICLE-TO-VEHICLE AND VEHICLE-TO-INFRASTRUCTURE CHANNELS
- P06 CHANNEL-SOUNDING AND CHANNEL-ESTIMATION TECHNIQUES
- P07 MILLIMETER- AND SUBMILLIMETER- WAVE PROPAGATION
- P08 UWB PROPAGATION
- P09 BODY-CENTRIC PROPAGATION
- P10 OTHER ADVANCED PROPAGATION TOPICS

### ANTENNAS AND RELATED TOPICS

- A01 ELECTROMAGNETIC THEORY AND NUMERICAL TECHNIQUES
- A02 ANTENNA INTERACTIONS AND COUPLING
- A03 ANTENNA SYSTEMS AND ARCHITECTURES
- A04 IMAGING, SCATTERING, DIFFRACTION AND RCS
- A05 SMALL ANTENNAS, RF SENSORS AND WEARABLE ANTENNAS
- A06 ARRAY ANTENNAS, BEAMFORMING, REFLECT ARRAYS AND TRANSMIT ARRAYS
- A07 ADAPTIVE AND RECONFIGURABLE ANTENNAS
- A08 ACTIVE AND INTEGRATED ANTENNAS
- A09 MIMO, ANTENNA DIVERSITY, SMART AND SIGNAL PROCESSING ANTENNAS
- A10 LENS ANTENNAS AND RADOMES
- A11 ADVANCED RF MATERIALS, METAMATERIALS, SELECTIVE SURFACES AND EBG
- A12 MILLIMETER-WAVE, SUBMILLIMETERWAVE AND THZ ANTENNAS
- A13 HIGH-POWER ANTENNAS
- A14 NANO ANTENNAS
- A15 OTHER ADVANCED ANTENNA TOPICS

### MEASUREMENTS TOPICS

- M01 MEASUREMENT OF RADAR SCATTERING AND RADAR CALIBRATION TECHNIQUES
- M02 ADVANCES IN NEAR-FIELD, FAR-FIELD, COMPACT AND RCS TEST RANGES
- M03 EMI/EMC/PIM CHAMBER DESIGN, MEASUREMENTS AND INSTRUMENTATION
- M04 OTHER ADVANCED MEASUREMENT TOPICS

### RF/MICROWAVE CIRCUITS AND SYSTEMS TOPICS

- R01 SEMICONDUCTOR DEVICES AND COMPONENT MODELING FOR RF APPLICATIONS
- R02 MONOLITHIC AND HYBRID INTEGRATED ACTIVE CIRCUITS
- R03 MONOLITHIC AND HYBRID PASSIVE COMPONENTS AND CIRCUITS
- R04 RECEIVER AND TRANSMITTER RF FRONT-END
- R05 NOVEL WAVEGUIDES AND NEW PHENOMENA IN WAVEGUIDES
- R06 RF PACKAGING AND PACKAGE MODELING
- R07 RFID SYSTEMS
- R08 RF MEMS, MOEMS AND MICROSYSTEMS
- R09 ELECTRONIC WARFARE AND OTHER MILITARY APPLICATIONS OF RF/MICROWAVES
- R10 EMERGING AREAS INCLUDING NANOTECHNOLOGY AND BIOMEDICAL APPLICATIONS
- R11 WIRELESS AND CELLULAR ARCHITECTURES, COMPONENTS, AND CIRCUITS
- R12 WIRELESS SENSOR NETWORK AND ITS APPLICATIONS IN INTERNET OF THINGS (IOT)
- R13 WIRELESS POWER TRANSFER TECHNIQUES
- R14 OPTICAL/FIBER TECHNIQUES
- R15 OTHER ADVANCED RF TECHNIQUES

### PHOTONICS AND THZ TOPICS

- P01 OPTICAL NETWORKS AND SYSTEMS
- P02 FIBER OPTICS DEVICES AND SUBSYSTEMS
- P03 DETECTION, SENSING, AND ENERGY
- P04 BIOPHOTONICS AND MEDICAL OPTICS,
- P05 CIRCUITS AND SYSTEMS FOR THZ APPLICATIONS
- P06 OTHER ADVANCED PHOTONICS TOPICS



7-9 FEB. 2023



GUC, Cairo, Egypt



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Cairo is Egypt's sprawling capital city. As the largest city in Africa and the 6th largest city in the world, Cairo has so much to see and do. Located on the banks of the Nile River, Cairo, holds the special distinction of being home to the only one of the Seven Wonders of the Ancient World still standing: the Great Pyramid, completed around 2540 B.C, just outside the city on the Giza Plateau. This city is full of rich history, exciting experiences, delicious coffees, and fabulous food. You will be amazed by the local culture, food and shopping opportunities the city will offer, plus you will have the opportunity to go back in time to a world where Pharaohs ruled the region.

The German University in Cairo is an independent, non-profit oriented Egyptian private institution, managed by a consortium of Germans and Egyptians with the vision of building a leading center of excellence in teaching and research that will effectively contribute to the general welfare nationally and internationally and endeavour the scientific, technical, economic and cultural cooperation between Egypt and Germany.

German University in Cairo is located on 577000 m2. The Campus includes a 70400 m2 sports area, 77500 m2 industrial Park in one of the most high-high tech educational complex in the arena. The German University in Cairo is the largest Educational Institute that covers research that is linked to industry, academic programs that are associated to business and covers activities that are linked to the society with 10000 students in undergraduates program, and more than 500 in post graduate studies. It is the only integrated German university outside Germany that has 3 Bologna cycles, namely B.Sc., M.Sc. and Ph.D offering 71 study programs (31 undergraduate and 40 postgraduate)

