



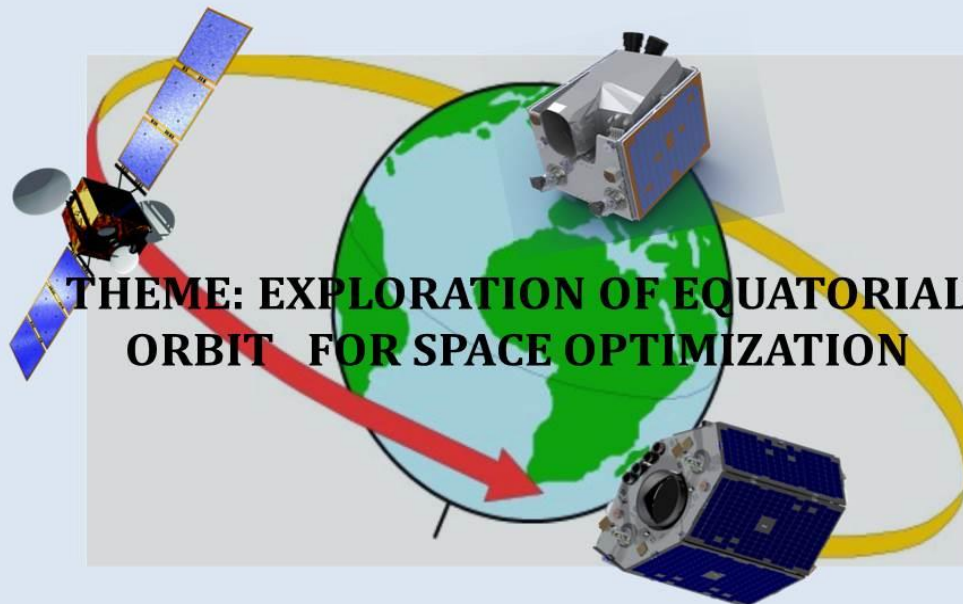
CENTRE FOR SATELLITE TECHNOLOGY DEVELOPMENT
NATIONAL SPACE RESEARCH & DEVELOPMENT AGENCY
FEDERAL MINISTRY OF SCIENCE AND TECHNOLOGY

PRESENTS

**9TH ANNUAL SPACE CONFERENCE/EXHIBITION
ANNOUNCEMENT & CALL FOR PAPERS**



DATE: 20TH & 21ST AUGUST, 2019



**VENUE: Senator (Prof.) Robert Boroffice Multipurpose Conference
Complex**

**Obasanjo Space Centre, Km-17, Umaru Musa Yar'Adua Expressway
(Airport Road). Abuja – FCT, Nigeria.**

We are in space to keep the pace!

Satellites obey the physical laws of universal gravity. They move along orbits calculated for their mission around the center of the Earth and their speed depends on their altitude. Each orbit is adapted for a specific mission. Orbit selection dictates the mission parameters in earth orbiting space missions. To achieve desired mission parameters, Earth regions of interest are typically identified and the spacecraft is maneuvered continuously to visit only these regions. The equatorial plane – a gateway to space is strongly influenced by electromagnetic forces that arise due to the geomagnetic field lines which run horizontally over the magnetic equator. The impact of this phenomenon on space based technologies has made the region a point of collaborative focus in scientific research. Equatorial orbits are advantageous for several reasons; it has the lowest Delta-V (Δv) requirement of any orbit and sites near the equator make good locations for in-orbit construction and spaceports with broad launch site angles north, west, east and maximum earth speed. Placing a low earth orbit gateway over the equator offers added advantages. For an equatorial launch site, the energy to orbit is minimized. There would be no need for concern regarding differential orbit plane precession rates for orbits of differing altitudes. All ancillary vehicles such as servicing satellites and fuel depots would all be in one plane, minimizing propellant and maneuvering requirements.

The unique equatorial location of Nigeria just north of the equator and east of the prime meridian provide geographical advantages for use of satellites in the equatorial and near-equatorial inclination orbits for varying space missions and data utilization which would benefit countries situated in the region. Nigeria must take advantage of her unique location along the equator to utilize space and the by-products of space technology to make significant strides in optimizing this resource for her space application programs.

This year's conference is formulated to address space optimization for the exploration of the equatorial orbit; It would serve as a platform for consultants, companies, academia, researchers and professionals within and outside the industry to explore the technical requirements and considerations, operation and application, challenges and opportunities of the equatorial and near- equatorial orbits in the development of satellite technology around the equatorial belt as against traditional preference of polar orbits. It will also generate high level discourse that would lead to recommendations that will engage countries along the equatorial strip to identify the niche areas on which we could leverage our strengths and maximize derivable benefits for the development of Africa and the global space community.

Technical & poster presentations on research innovations are welcomed.

CALL FOR PAPERS

This announcement serves as an invitation to all potential participants of the **2019 CSTD ANNUAL SPACE CONFERENCE** to submit abstract(s) of paper(s) for presentation.

The abstract(s) should include;

- i. The title of the paper, the full name(s) and affiliation(s) of the author(s) in the order of first name, middle name/initial and last name. Please do not include titles e.g. Prof, Dr., Mr., Mrs. Etc. Indicate the name of the presenter/corresponding author with an asterisk (*) immediately after his/her last name including his/her email address and phone number.
- ii. A single paragraph of not more than 300 words. Please note that abstracts should not contain references, citations, graphs, illustrations or equations.
- iii. Accepted Format – Abstract(s) (MS-Word, Times New Roman, Font 12) and Full Paper (Power Point & MS-Word, Times New Roman, Font Size 12)

All abstracts forwarded to the e-mail address below should bear the subject “Abstract _Author’s name”, while full text should bear the subject “Full Text _ Author's name”.

Excellent peer/critical review of accepted papers would be published in a special edition of the “ARID Zone Journal of Engineering, Technology and Environment”. Consequently, authors of accepted abstracts would be requested to submit a full text of their paper(s).

Papers must have relevance to one or more of the sub-themes listed below. Only papers received on schedule would be considered.

Full paper should not exceed 10 pages and must be double spaced. It must include;

Abstract (Max. 300 words), Five (5) major keywords related to a selected area of your paper should be indicated, introduction, literatures’ reviewed, materials and methods, results and discussions, conclusion, recommendation, acknowledgement (If any) and references.

All abstract(s)/paper(s) submission should be done electronically via our website at www.cstd.nasrda.gov.ng

CONFERENCE SUB-THEMES

- ✦ Space based technologies and Software Applications for equatorial and low latitude missions
- ✦ Design, development and deployment of small satellites for scientific and experimental missions
- ✦ Application of data science, robotics, machine learning and artificial intelligence in space optimization
- ✦ Space transport, propulsion technologies, emerging trends and innovations in the science and technology of spacecraft
- ✦ Smart structures, composites and functional intelligent materials & miniaturization at component levels
- ✦ Space weather effects, impacts and dynamics on space based assets within the Equatorial Ionosphere, associated anomalies and techniques for probing it
- ✦ Sustainability of the space enterprise; developing a broad based public - private sector intervention program, space infrastructural development, bilateral and multilateral partnerships, risk assessments and mitigations

IMPORTANT DATES

Call for papers:	Monday, May 20th, 2019
Abstract submission deadline:	Wednesday, June 19th, 2019
Paper submission deadline:	Monday, July 22nd, 2019
Submission of corrected reviewed paper:	Thursday, August 1st, 2019
Notice of paper acceptance:	Tuesday, August 6th, 2019
Submission of power point / pdf slides:	Friday, August 9th, 2019

Conference Date - Tuesday 20th & Wednesday 21st, August - 2019

REGISTRATION

Registration for this conference is free but mandatory for all participants.

POSTER SESSIONS & EXHIBITIONS

There shall be space(s) for scientific, book and industrial product exhibition (hardware and services) during the conference. Those intending to present their paper(s) as poster or exhibit their products are required to indicate their interest by using the subject header **“Poster_Author's name”** for forwarded poster and **“Exhibition_ProductType_Author's name”** for exhibition. **The final decision will however be made by the technical committee.**

SUBMISSIONS

All abstract(s) / paper(s) submission should be done electronically at

www.cstdspaceconference.com

Or via our website

www.cstd.nasrda.gov.ng by clicking on the menu: **CSTDWEEK**

For further enquiries, please contact the technical committee via

cstdweektechnicalcommittee@gmail.com

We look forward to your favourable response. Accept the assurance of our highest regards.

CONTACT DETAILS

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See website for further enquiries & Information.

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