

# Satellite Communication & Engineering Workshop

29th - 30th July 2021  
Protea Hotel Midrand, JHB RSA



## YOUR EXPERT FACILITATOR

**Mr. Mayank Sharma**

Founder & Managing Director of Celestial Space Technologies GmbH

- ▶ Space engineer
  - ▶ Winner:
    - \*INNOspace masters challenge 2019 – OHB category
    - \*IGLUNA Space Award 2020
  - ▶ Guest lecturer in Swiss University
- "If space is new Internet, then moon is the Modem."

## ABOUT CELESTIAL

Celestial enables data-driven industries to stay ahead of the increasing demands on telecommunication performance. To achieve this, Celestial develops innovative technology for space and terrestrial applications. This includes high-performance small satellite antenna, active array antenna, and radar systems for applications across different industries, and precision tracking and navigation solutions for the mobility sector. Ultimately, Celestial wants to propel all industry actors forward by providing industry-grade engineering and academic educational training. Celestial is a limited liability company headquartered in Germany.

## INTRODUCTION

This workshop aims to learn and share knowledge on Satellite Communication & Engineering. The workshop provides expert feedback on the satellite communication practical problems and antenna design concepts for a small satellite. You will be exposed to real-time satellite missions' cases and will test your understanding and knowledge during the workshop. The workshop facilitator is a space engineer who has acquired years of Satellite Communication & Engineering experience as a professional and is ready to share with those just starting to learn about the satellite ecosystem and capabilities.

Hands-on experience is the best way to acquire knowledge. Many educational institutes and industrial organizations organize workshops and training programs for their students and industry colleagues for a better understanding of satellite communication. The importance of such training is that it helps participants realize their areas of interest. Celestial & Alintacorp have taken the initiative to organize a master class workshop to nurture and support the interest of students and industry colleagues towards space communication.

## OBJECTIVES

By the end of this training course, participants will be able to:

- Design and understand satellite communication links for any space mission
- Understand the antenna performance graphs and select any particular patch antenna based on the datasheets

## YOUR BENEFITS

Collaboration	Contacts	Feedback	Knowledge Space	Industry
Post workshop Collaboration Opportunity	Space Industry Specific Contacts Opportunity	Expert feedback available	Communication Architecture	New space industry and focus

## WHY ATTEND?

Your organization will benefit through excellent exposure to the leaders in Satellite Communication and Engineering. By attending the course, you will be able to update your knowledge of state-of-the-art Satellite Communication technology and receive name recognition at this 2-day event. This workshop is an exciting opportunity to learn about the latest Satellite Communication technology and trends. It will provide a forum for education and knowledge transfer, and it will expose the executive participants to the latest Problem-Solving solutions. Benefit from a world-renowned speaker, the most recent techniques, tactics, meet experts, and learn about the latest updates in the field of Satellite & Wireless Communication.

## WHO SHOULD ATTEND?

This training course is suitable for a wide range of professionals but will specifically address:

- Communication engineers
- Electrical engineers
- Space engineers
- Anyone with a communication, electrical, or space engineering background
- Managers and business developers looking to extend their knowledge to engineering



## WORKSHOP OUTLINE

### Day 1 Topics

#### Topics:

- Critical factors and assumptions
- Transmission and reception architecture
- Antennas and RF components
- Noise sources
- Pointing errors
- Polarization
- Modulation
- Signal to noise ratio
- Summary sheet

#### Tutorial:

- Low Earth Orbit satellite case study
- Resources for further learnings

### Day 2 Topics

#### Topics:

- Antenna types
- Patch antenna significance (off the shelf available antennas)
- Patch antenna types
- Antenna tuning
- Feeding types
- Fairfield results analysis
- Performance enhancement techniques

#### Tutorial:

- Antenna design hand calculations

## WORKSHOP TIME TABLE

08:30 Registration and Arrival Coffee

09:00 Workshop Starts

11:00 Coffee Break

13:00 Lunch

14:00 Workshop resumes

15:00 Snack break

16:00 End of Workshop

The presentation session will start at 09:00 GMT. The link to join the virtual workshop will be available for registered delegates from 28<sup>th</sup> June 2021 onward.

### Virtual Attendance

Virtual presentation/participation in digital conferencing that is made possible using digital technology including embedded digital elements (texts, tables, graphs, or videos) for PowerPoint sharing. This workshop will be a hybrid event where the delegates can opt for virtual participation or physical, on-site participation. The digital conference tool is not decided yet but Zoom and Google Meet are considered.

### In-Person Attendance

Due to COVID-19 we are shortening the conference to 2 days with a virtual attendance option via Zoom. We will also be limiting the number of in-person attendees to ensure social distancing



# REGISTRATION FORM

SATELLITE COMMUNICATION & ENGINEERING WORKSHOP  
29th - 30th July 2021

## Registration Fee's

R 8 000/\$ 550 Virtual attendance  
R 12 000/\$ 830 In-Person Attendance

In-Person Registration fees include the following Entitlements:

Entrance to all sessions, Arrival coffee, daily Lunch, Snacks, refreshments, supplementary course learning material & certificate of attendance

### COMPANY DETAILS

Organization: .....

Address: .....

City: .....

Phone: .....

### METHODS OF PAYMENT: BANK TRANSFER:

#### OUR BANKING DETAILS:

NAME: ALINTACORP PTY LTD T/A eTutorSa

BANK: STANDARD BANK

A/C: 221500766

BRANCH: 001255

SWIFT CODE: SBZAZAJJ

Quoting Invoice number as reference

### Delegate Details:

1. Full Names: .....

Designation: .....

Email: .....

2. Full Names: .....

Designation: .....

Email: .....

3. Full Names: .....

Designation: .....

Email: .....

4. Full Names: .....

Designation: .....

Email: .....

5. Full Names: .....

Designation: .....

Email: .....

6. Full Names: .....

Designation: .....

Email: .....

### Terms and Conditions

By Completing this Registration form the delegates accept the terms and conditions as stated on the form.

Full Payment must be received prior to the event date. Alintacorp reserves the right to refuse entry into the event should full payment not have been received prior to this date. Cancellation will be charged under the term set out below.

**2. Cancellations, No shows & Substitutions:** Cancellations received in writing more than 21 days prior to the event being held carry a 50% cancellation fee. Should cancellations be received between 21 days and the date of the event, the full event fee is payable and non – refundable. Non- payment or non-attendance does not constitute cancellation. No show will be charged the full registration fee. Cash alternatives will not be offered, however, substitutes at no extra charge are welcome.

**3. Alterations to advertised package:** Alintacorp reserves the right to alter this programme without notice or penalty and in such situations no refunds or part – refunds or alternative offer will be made. Should Alintacorp permanently cancel an event, for any reason whatsoever, the Client shall be provided a credit of the equivalent amount paid towards the cancelled event. In the case of a postponed or cancelled event, Alintacorp will not be responsible for covering airfare, accommodation,

**4. Copyright:** All intellectual property rights in the materials distributed by Alintacorp in connection with this event are expressly reserved and any unauthorized duplication, publication or distribution is prohibited.

Contact us for Earlybird Booking Special

Workshop Venue (In-Person attendance). Protea Hotel Midrand, Johannesburg, South Africa

