

**ESA ESoA Course on ANTENNAS for SATELLITE APPLICATIONS organised by G. Toso, E. Gandini**

**11<sup>th</sup> edition, May 18-22 2026, ESA-ESTEC, The Netherlands**

	<b>Day1 May 18<sup>th</sup> 2026</b>		<b>Day 2 May 19<sup>h</sup> 2026</b>		<b>Day 3 May 20<sup>th</sup> 2026</b>		<b>Day 4 May 21<sup>st</sup> 2026</b>		<b>Day 5 May 22<sup>nd</sup> 2026</b>
<b>9:00</b>	1. Introducing ESA ESTEC and the Course (G. Toso, E. Gandini, ESA-ESTEC)	<b>9:00</b>	6. Earth observation instrument antennas (L. Salghetti Drioli, ESA-ESTEC)	<b>9:00</b>	11. Navigation Antennas (D. Trenta, ESA-ESTEC)	<b>9:00</b>	16. User Segment Antennas (E. Gandini, ESA-ESTEC)	<b>9:00</b>	21. Multibeam Antennas Architectures, part II, Overlapped Subarrays and Discrete Lenses (G. Toso, ESA-ESTEC)
<b>9:40</b>	2. Basic of Antennas, frequencies, orbits (E. Gandini, ESA-ESTEC)  with Coffee break in the middle	<b>10:40</b>	Coffee break	<b>10:40</b>	Coffee break	<b>10:50</b>	Coffee break	<b>11:00</b>	Coffee break
		<b>11:00</b>	7. High Frequency Earth Observation (E. Saenz, ESA-ESTEC)	<b>11:00</b>	12. New Space Antennas (C. Tienda, ESA-ESTEC)	<b>11:10</b>	17. Additive Manufacturing (M. van der Vorst, ESA-ESTEC)	<b>11:15</b>	22. Mechanical lecture
		<b>12:00</b>	8. Science Antennas and Instruments (S. van Berkel, ESA-ESTEC)	<b>12:00</b>	13. RF Antenna Measurements (L. Rolo, ESA-ESTEC)	<b>12:00</b>	18. Large Reflector Antennas (P. Moseley, ESA-ESTEC)	<b>12:15</b>	23. Future Trends and Research Lines (E. Saenz, ESA-ESTEC)
<b>13:00</b>	Lunch	<b>13:00</b>	Lunch	<b>13:00</b>	Lunch	<b>13:00</b>	Lunch	<b>12:45</b>	Closure of the course
								<b>13:00</b>	Lunch
<b>Lunch Break</b>									
<b>14:00</b>	3. Feed systems and radiators (A. Tornese, ESA-ESTEC)	<b>14:00</b>	9. Service Antennas (V. Iza, ESA-ESTEC)	<b>14:00</b>	14. Multibeam Antennas Architectures, part I, Single Feed per Beam, Multi Feed per Beam, Active Arrays (G. Toso, ESA-ESTEC)	<b>14:00</b>	19. Low Frequency Antennas (B. Byrne, ESA-ESTEC)	<b>14:00</b>	24. ESA Antenna Measurements Facilities, (I. Barbary, E. Van Der Houwen, A. Riccardi, ESA-ESTEC)
<b>15:00</b>	Coffee break	<b>14:45</b>	Coffee break	<b>16:20</b>	Coffee break	<b>15:00</b>	Coffee break		Final Questionnaire, online homework (*)
<b>15:20</b>	4. Reflector Antennas (S. Mercader-Pellicer, ESA-ESTEC)	<b>15:10</b>	10. TICRA Tools for Space Antennas RF Design: Methods, Applications, and Insights (C. Cappellin, TICRA)	<b>16:40</b>	15. Beam Forming Networks and Digital Beam Forming (P. Angeletti, ESA-ESTEC)	<b>15:15</b>	20. Advanced Hybrid Workflows for Antenna Placement in Space Applications (C. Gomez Molina, Ansys)		
<b>16:20</b>	5. Satellite radio-frequency payloads and instruments – Overview, needs and challenges (S. D’Addio, ESA-ESTEC)			<b>18:40</b>	Social Dinner				
<b>18:00</b>	Welcome cocktail								

(\*) The final questionnaire is not mandatory but useful for all the participants. It contains multiple choice answers and permits PhD students to get 3 international credits. At the end of the Course all the participants will receive the link to fill in online the questionnaire. The questionnaire can be completed online in the week after the course. From the moment every participant starts completing the questionnaire online, the link will remain open for a maximum time of 2 hours. A first Certificate of Attendance will be given to all the participants. A second Exam Certificate will be given only to the participants who will complete the final questionnaire obtaining a minimum score of 18 out of 30. The participants obtaining the best scores in the final questionnaire will be acknowledged.