

**UNIVERSITY OF TURKISH AERONAUTICAL ASSOCIATION**  
**GRADUATE SCHOOL OF AERONAUTICS AND ASTRONAUTICS**  
**AEROSPACE ENGINEERING PROGRAM**

**GRADUATE SEMINAR SERIES**

**CONTINUOUS COVERAGE FOR CONSTELLATION SATELLITES**

by

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Satellites have been used for several needs such as navigation, communication, remote sensing, and imaging. The more Earth observation data that is needed, the more stringent the requirements are for data accuracy and real-time observations. Multiple satellite systems must be designed, and their performance must be examined in order to encounter these needs. There are important factors for coverage problems. One of them is the position of the satellite(s) from the point of satellite number (constellation) and configuration, consisting of orbital parameters in order to achieve maximum coverage. The other factor is the cloudiness which means the percentage of visibility of the target area. Therefore, to avoid the visibility problem, constellation satellites are super advantageous in this area. The main factors which affects the situation are the orbital parameters, orbital planes, the number of satellites, and how the satellites must be positioned in the orbit. In this seminar, I will define the problem, introduce background information and explain possible solutions to the problem.

Date: January 13, 2024 Tuesday

Time: 14:00

Location: 102 Amfi