
Departmental Seminar

Seminar Title	: Compound Barker Code Generation for High Range Resolution at Longer Range of Indian ST Radar.
Speaker	: Mohit Tanti.
Supervisor	: Prof L P Roy
Venue	: EC303, Seminar Room
Date and Time	: 30 Jul 2025 (05.30PM)
Abstract	: The Indian Stratosphere-Troposphere (ST) Radar taken under consideration is provisioned with handling the average to peak transmitted power (P_{av}/P_t) value up to 15.6×10^{-6} . Baud length of $6\mu s$ corresponds to a range resolution of 900 meters for a 13-bit Barker code in traveling longest range. In this paper, we propose to use a compound Barker code in traveling the same range but with an improved range resolution of 37.5 meters. Compound Barker codes are generated to get this improved range resolution, for the baud length of $0.25\mu s$. The basic operation of the proposed solution is to utilize the highest value of P_{av}/P_t , which results in the generation of compound Barker code of suitable length to travel the longest distance.