Third Laureate
Applied Research

● **Project title:** Network of fixed and mobile satellite antenna systems with the ability of automatically adjust to the GSO satellites (SHAMS)

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Abstract:

The purpose of design and production of the Shams system is to achieve the technology of satellite network elements locally, to provide two-way, real time video, telephone, data and internet communication via satellite. The main applications for SHAMS network can be crisis Management, passive defense, Mobile ATM, mobile BTS, SNG vehicles for broadcasting Audio & Video over satellite,…

The SHAMS network consists of three independent sub-systems as follow:

● 1.2 m, KU band, GSO satellite auto tracking system, (MSAT120-)

It's working stationary that means the vehicle needs to stop for tracking operation, then system automatically track and find the target satellite.

● Auto-Deploy Fixed Satellite antenna system (AFSAT-AD)

It is a fixed auto-track antenna that can be utilized inside HUBs for different applications like monitoring, two-way communication, jamming…

● Satellite Network Management System

This is management software is to optimize satellite networks band width, monitoring and control the network elements, and communicate with the antennas controllers (MSAT120- & AFSAT-AD) as well .

SHAMS system can be consists of unlimited number of fixed and mobile antennas like MSAT-120 Antenna (mounted over Vehicles), and a AFSAT-AD Antenna in H.Q as HUB. Finally NMS software will manage whole network parameters like bandwidth, output power,… & control the Auto-deploy Antennas orientation remotely.

شبکه ماهواره ای سیار (شمس)