

# Dr. Rehan Mahmood

Satellite Systems Advisor | CubeSat Lab Builder | Executive Trainer | Technical Consultant

Islamabad, Pakistan  
linkedin.com/in/rehan-mahmood  
www.rehan-mahmood.com

rehan.mahmood@ist.edu.pk  
+92 322 506 3748  
Portfolio, media, and capability profile

<b>20+ Years</b> Satellite and engineering capability building	<b>USD 1.9M+</b> Proposal support across major programs <b>Oman + Pakistan</b> Regional teaching and lab-building exposure	<b>30+</b> Researchers and technical staff led
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## Executive Profile

Senior satellite systems academic-engineer and advisor with more than 20 years of experience spanning CubeSat programs, satellite communications, engineering education, laboratory establishment, technical management, and executive training. Built and now leads a nationally funded small-satellite laboratory, supports commercial and institutional space initiatives, and combines university-level credibility with hands-on program delivery. Particularly suited for consulting, visiting faculty, lab-building, technical advisory, and capability-development assignments across the Gulf in space systems, small satellites, embedded systems, telemetry, wireless engineering, and mission-focused training.

## Consulting Value Proposition

CubeSat and small-satellite laboratory setup	Satellite communications, link budgets, and frequency coordination
Program design for engineering education and hands-on training	Feasibility studies and technical proposals for space projects
Systems engineering support for mission planning and integration	Executive workshops, summer schools, and technical boot-camps
Institutional capability building for universities and applied R&D centers	Advisory support for curriculum, labs, and space innovation programs

## Selected Advisory and Delivery Highlights

- Established and leads SSTRL at the Institute of Space Technology after securing USD 750k in competitive funding; directs technical operations, staffing, equipment planning, procurement, and program growth.
- Supported major CubeSat and lunar mission initiatives including ICUBE-1, SSS-2A, ICUBE-N, ICUBE-Q, and ICUBE-CSAT across systems engineering, link budgeting, frequency coordination, program design, and leadership.
- Delivered visiting consultancy at Sultan Qaboos University, Oman, including undergraduate teaching and support for CubeSat laboratory establishment.
- Provides commercial and institutional advisory support through Space Systems Pvt. Ltd. on feasibility studies, technical proposals, systems engineering, and satellite-related services.
- Developed hands-on education models, CubeSat summer schools, school outreach initiatives, and executive-style technical workshops for academic and training audiences.

## Professional Experience

**Director and Principal Investigator** **Mar 2020 - Present**  
*Small Satellite Technology & Research Lab, Institute of Space Technology* *Islamabad, Pakistan*

- Built and leads a nationally funded lab platform for satellite engineering, student training, proposal development, and applied research.
- Manage technical teams, equipment roadmaps, procurement, finances, and capability expansion.
- Provide leadership in external collaborations, proposal writing, and strategic program delivery.

**Chief Technology Officer** **2015 - Present**  
*Space Systems Pvt. Ltd.* *Pakistan*

- Lead technical proposals, feasibility studies, frequency coordination, link budgeting, and systems engineering support for small-satellite and satellite-communications work.

- Support service-oriented delivery for CubeSat development and satellite engineering assignments.

**Associate Professor**  
*Institute of Space Technology*

**Dec 2021 - Present**  
*Islamabad, Pakistan*

- Teach and mentor in Satellite Communication, Satellite Engineering, Electronics for Space Applications, Communication Systems, and Spacecraft Engineering.
- Translate research and mission experience into practical training, curriculum design, and guided project delivery.

**Visiting Consultant**  
*Sultan Qaboos University*

**Sep 2024 - Jan 2025**  
*Muscat, Oman*

- Taught Electronics II and Analog & Digital Communications.
- Contributed to CubeSat lab development and local capability building.

## Representative Programs and Missions

ICUBE-1	Pakistan’s first university CubeSat; feasibility, development support, technical management, and related systems work.
SSS-2A	APSCO-backed 3U CubeSat collaboration; link budgeting and frequency coordination support.
ICUBE-N	National CubeSat initiative of Pakistan; program leadership and project direction.
ICUBE-Q	Lunar CubeSat program onboard Chang’e-6; mission-oriented program contribution.
ICUBE-CSAT	Classroom Satellite platform supporting scalable hands-on engineering education and training.

## Education and Credentials

<b>PhD, Satellite Engineering</b> <i>Beihang University</i>	<b>2014 - 2018</b> <i>China</i>
<b>MSc, Satellite Communications</b> <i>University of Surrey</i>	<b>2005 - 2006</b> <i>United Kingdom</i>
Awarded the Cable & Wireless prize for best overall performance in the school.	
<b>BSc, Electrical Engineering</b> <i>University of Engineering and Technology, Taxila</i>	<b>1998 - 2002</b> <i>Pakistan</i>

## Professional Standing

Amateur Radio License | APSCO Space Law Alliance | Pakistan Amateur Radio Society

## Best-Fit Assignment Types

Consulting and advisory work in CubeSat lab establishment, satellite-communications training, executive workshops, systems engineering review, space program design, curriculum modernization, student satellite initiatives, ground-segment orientation, and proposal development for academic, government, and commercial clients.