



The Abdus Salam  
International Centre  
for Theoretical Physics



# Workshop on Empowering Connectivity: Bridging Space and Earth with DTN

## Description:

Delay Tolerant Networking (DTN) is a network architecture designed to ensure reliable data delivery in environments with intermittent or unreliable connectivity, using store-and-forward techniques for robust communication.

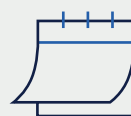
## MORE INFORMATION:

While primarily developed for space missions, DTN has several potential benefits for scientists from developing countries, especially in remote areas. DTN's store-and-forward architecture allows data to be transmitted even when direct communication links are disrupted or intermittent. Scientists in developing countries can use DTN to ensure reliable communication for research, data exchange, and collaboration. Developing countries often have diverse communication technologies and DTN's interoperability simplifies communication across different systems.

## TOPICS:

- Introduction to DTN
- Space Applications of DTN
- DTN Protocols and Algorithms
- Store-and-Forward Mechanism
- Security and Authentication
- DTN in Developing Countries
- Ethical Considerations and Policy Implications
- Practical Implementation and Deployment

The workshop will include a strong laboratory component, where participants will set up DTN nodes and gateways using open-source software. Participants will also share experiences from DTN deployments in challenging environments and discuss best practices and optimization techniques.



**22 - 26 September 2025**



**Trieste, Italy**



**Deadline:  
15 July 2025**

## DIRECTORS:

M.-S. Alouini (KAUST, Saudi Arabia)  
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## LOCAL ORGANISER:

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## FURTHER INFORMATION:

E-mail: [smr4102@ictp.it](mailto:smr4102@ictp.it)

Web: <https://indico.ictp.it/event/10867>

Female scientists are encouraged to apply.

## GRANTS:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee.



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