



# GÉANT Community Programme – Optimising Engagement

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**SIG-NOC meeting, CSC Helsinki**  
7 May 2024

Public

## Agenda

- GÉANT Community Programme update
- SIG-NOC role
  - Innovation Programme
  - TNC 2024 Community Hub

# GÉANT Community Programme

**VISION: A connected, collaborative and harmonised research and education networking community.**

**MISSION: Provide optimal conditions for the R&E networking community to collaborate both face-to-face and virtually.**

## Current portfolio:

- Task Forces
- Special Interest Groups
- Workshops and Trainings
- Collaborative Projects
- Innovation Programme
- Community Award



# GEANT Community Programme Update

## Strategy and GCC Terms of Reference

- Current strategy version from April 2020- to be reviewed every 4 yrs
- Current ToR from 2016!
- Participatory process for revision-input from GCC, SIG/TF Coordinators and SC representatives
- Launch of new versions by end 2024

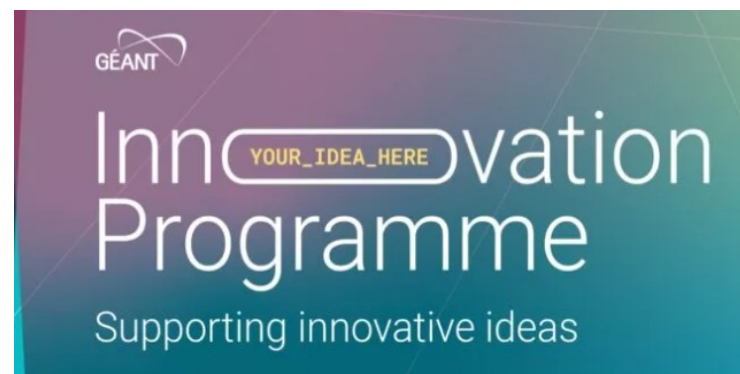
## GCC

- Chair election at GA November meeting
- New members to be appointed post-election

## Innovation Programme

**The GÉANT Innovation Programme is a unique opportunity to enable initial development, establish a proof of concept or testing of new ideas, with lightweight administrative constraints.**

- Launched in 2021, 36 projects awarded to date.
- Annual research project funding of 300K Eur, funded by GEANT members
- Thematic areas aligned with GEANT priorities: networking, cloud, security, trust & identity and education.
- Demonstrate significant scientific or societal and economic impact and create benefit for the GÉANT European Research and Education community. Examples of previous innovation developed within the GÉANT Community include widely adopted services, such as [eduroam](#), [eduVPN](#) and [eduMEET](#).
- Criteria: quality, innovation, potential impact and value for money.



## Innovation Programme 2024

### Innovation Programme 2024:

- 66 Submissions from 20 countries
- 20 focused on Network
- 2 out of 6 awards to Network-related projects

### SIG-NOC:

- Are IP network projects relevant for your work?
- How to promote in your channels?
- What role can you take to better align?

## Innovation Programme-Network Projects (past)

2022

[Federated Learning-Driven Network and Service Management](#)

*Adrián Pekár (Budapest University of Technology and Economics)*

[TCPLS Low-Lat](#)

*Maxime Piraux (UCLouvain)*

[Research and Education Network as a Service for Developing Nations](#)

*Frank Slyne (Trinity College Dublin)*

2023

[Fair-RL-CC: Towards Fair Congestion Control with Reinforcement Learning](#)

*George Parisis (University of Sussex)*

## Innovation Programme-Network Projects 2024

### **Effective Multi-Laser-Beam Transmission for Satellite-Airborne Backhaul Networks**

University of Bradford - UK

To satisfy the requirements of 5G/6G, achieving high-speed/long-distance wireless communications is crucial for efficiently transmitting extensive data traffic in satellite airborne backhaul links. However, current radio frequency and microwave backhaul links face challenges such as limited transmission range and interference with existing terrestrial services. Laser communications could provide a compelling alternative. Lasercom operates in the near infrared band enables Gbps data transmission over long distances. Lasercom also allows for the generation of pencil beams, effectively minimising interference, and crosstalk issues with terrestrial services. In this project, they will explore a novel satellite-airborne backhauling based on multiple laser beams to enhance the flexibility and capacity of future communication networks.

### **Mobile App Network trAffic Nutrition fActs (MANANA)**

Università degli Studi di Napoli Federico II - Dipartimento di Ingegneria Elettrica e delle Tecnologie dell'Informazione - Italy

End-users of mobile applications hardly know which enterprises and countries are involved in their online activities, and the implied rights and risks. Researchers and regulators need actual usage data to verify data sovereignty compliance. MANANA aims at providing the former with understandable characterisations of infrastructure usage, and the latter with a monitoring system of actual mobile apps usage. The user will be enabled to choose among similar apps and report her data exposure (providing visibility to authorities). The app and the collection server will be released as open-source.



# Innovation Programme-Future

## Challenge concept - Your ideas!



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Centers

Research

**Grand Challenges**

Transformative Opportunities

BES Reports Addressed by EFRCs

Science Highlights

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Publications

History

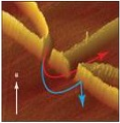
Contact

### Grand Challenges



The 2007 *Basic Energy Sciences Advisory Committee (BESAC)* report, *Directing Matter and Energy: Five Challenges for Science and the Imagination* was the culmination of a series of *BES-sponsored workshops* that began in 2001. Over and over, the recommendations from these workshops described similar themes that in this new era of science, we would design, discover, and synthesize new materials and molecular assemblies through atomic scale control; probe and control photon, phonon, electron, and ion interactions with matter; perform multi-scale modeling that bridges the multiple length and time scales; and use the collective efforts of condensed matter and materials physicists, chemists, biologists, molecular engineers, and those skilled in applied mathematics and computer science. The roadblocks to progress, and the opportunities for truly transformational new understanding were distilled into five inter-related grand challenges. Each Energy Frontier Research Center addresses one or more of these grand challenges.

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**Grand Challenge #1:**  
**How do we control materials processes at the level of electrons?**

*Direct manipulation of the charge, spin, and dynamics of electrons to control and imitate the behavior of physical, chemical and biological systems, such as digital memory and logic using a single electron spin, the pathways of chemical reactions and the strength of chemical bonds, and efficient conversion of the Sun's energy into fuel through artificial photosynthesis.*

- Center for the Advancement of Topological Semimetals (CATS)
- Ultra Materials for a Resilient, Smart Electricity Grid (ULTRA)
- Molten Salts in Extreme Environments (MSEE)
- Programmable Quantum Materials (Pro-QM)
- Center for Alkaline-Based Energy Solutions (CABES)
- Center for Thermal Energy Transport under Irradiation (TETI)
- Institute for Quantum Matter (IQM)
- Center for Novel Pathways to Quantum Coherence in Materials (NPQC)
- Center for High Precision Patterning Science (CHIPPS)
- Center for Hybrid Organic Inorganic Semiconductors for Energy (CHOISE)

**Quick Facts**

Funding Opportunity Announcement (FOA) Number:  
DE-FOA-0003258 Total Estimated Funding: \$100 Million

[2024 Funding Announcement](#) 

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## TNC 2024

Programme: <https://tnc24.geant.org/programme/>  
Community Hub: <https://tnc24.geant.org/communityhub/>  
\*\*Still space for spontaneous demo or session\*\*

SIG Marketplace: Tuesday, 11 June- **Volunteers needed!!!**

### SIG Marketplace (12:45 - 13:45)

Come find out how you can join the GÉANT Community and meet representatives from our Special Interest Groups: Network Operations Centres (NOC), Next Generation Networks (NGN), Cloud Interoperable Software Stacks (CISS), Time and Frequency Networks (TFN). The Network Performing Arts Production Workshop (NPAPW) will also be represented.

# THE COMMUNITY HUB



**DEMONSTRATIONS**



**ROUND TABLES**



**OPPORTUNITY CORNER**



# Thank You

Any questions?

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