**WSIS 2023**

**Date: 16 March 2023, 11:00-11:45h**

**Place: CICG- rooms 11, 12 (2nd floor)**

**Session proposal submitted by:**

Geneva Science and Diplomacy Anticipator (**GESDA**)

[www.gesda.global](http://www.gesda.global)

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**Session tittle**

**Making the most of quantum computers, inclusively and openly, to reach the SDGs**

**Abstract**

Quantum technologies have the potential to create profound changes to society, changing entire industries. The last decade has seen major breakthroughs, leading to an increase in investment from the private sector. The quantum pursuit is considerably fractured. Scattered technology and policy approaches tend to lead to a focus on a few technologies, in a few countries, in the hands of a few incumbents, all this among geopolitical tensions.

Despite technical progress and encouraging promises, real-world use cases for quantum computers are mostly aspirational, and will remain so if nothing is done to foster their development and use in a timely and open manner. Today, the experimented use cases are naturally those for which there is an immediate economic or geopolitical advantage, not those that will benefit the largest amount of people. There is little understanding of quantum computing impact on the UN’s SDGs and consequent economic opportunities.

Now is the time to anticipate. We must use the upcoming 10 years (i.e. the timeframe by which quantum computers will mature for real-life applications) to prepare humanity for equal and inclusive use of this powerful technological capability, and with a view to prevent the enlargement of the *digital divide*. This is also where multilateral actors enter into play and can considerably contribute.

To evaluate the contours of a **global governance initiative** to address that issue, the **Geneva Science and Diplomacy Anticipator** Foundation **(GESDA)** proposes an **Open Quantum Institute (OQI)**, developed by leaders in science, diplomacy, business and civil society. Acting as an “honest broker” between the R&D, the quantum technology providers and the **UN2030 Agenda**, this initiative anticipates the readiness of all stakeholders to embrace the power of quantum computing once at full maturity.

This session will discuss why **quantum computing** was selected from the GESDA Breakthrough Radar® ([www.radar.gesda.global](http://www.radar.gesda.global)) as a critical emerging technology, and what could be done to ensure **humanity benefits from it**.

**Session objective**

The main objective of the session will be to address the following questions:

1. Why quantum computing is an important emerging technology for the world (technology promise, geopolitical positioning, potential SDGs applications)?
2. What is happening today in the context of scientific and technological breakthroughs and ensuring access for all (digital divide)?
3. What can GESDA do about it (science diplomacy methodology, communities, do tank approach)
4. What can be proposed to respond to these gaps (Open Quantum Institute OQI value proposition)
5. Who are the key players for this solution idea to succeed (science, diplomacy, business, and society)
6. How can we develop common understandings among all stakeholders to ensure global governance of quantum computing?

**Target Audience**

This session is designed for policy-makers, diplomats, scientists and academics, private sector and industry representatives, citizens, youth representatives and any other interested actor.

**Moderator and Speakers**

*Moderator*

-Ambassador Alexandre Fasel, Swiss Special Representative for Science and Diplomacy, and GESDAs Diplomacy Forum Chair

*Speakers*

-Ambassador Francisca Méndez. Permanent Representative of Mexico to the United Nations Office in Geneva (UNOG)

-Ambassador Abdellah Boutadghart. Deputy Permanent Representative of Morocco to the United Nations Office in Geneva (UNOG)

-Ms. Özge Aydogan. Director/Head SDG Lab at the United Nations Office in Geneva

-Ms. Mira Bowens. IBM Research Lead on Governance & SDGs

-Prof. Vincenzo Savona. Center for Quantum Science & Engineering. École Polytechnique Fédérale de Lausanne. EPFL

**Session duration**: 45 minutes

**Run of show**: TBD