

2024
GENEVA SCIENCE AND DIPLOMACY
ANTICIPATION SUMMIT

9 - 11 October
Geneva, Switzerland

Programme

(version 04 October 2024)

Use the future to build the present

INTRODUCTION

Under the theme of **“The Great Scientific Acceleration”**, the 2024 Geneva Science and Diplomacy Anticipation Summit will bring together 1,000 scientists, diplomats, policymakers, innovators, executives and citizens from around the world to explore the acceleration of science and its applications to help solve some of humanities biggest global challenges.

The world is experiencing an unprecedented acceleration, driven by science and technology, which themselves are accelerating and mutating rapidly due to increased public and private investment. The adoption of innovation by companies and citizens resulting from this acceleration is outpacing national and international governance, fuelling a need for solutions that focus on the uses of science and bridge science and diplomacy.

As we delve into the transformative power of accelerating scientific advancements, **four key fields of scientific augmentation** emerge, which at the same time constitute **the key pillars of the summit programme**: augmenting data, augmenting humans, augmenting ecosystems as well as augmenting knowledge and diplomacy itself.

The acceleration of science and its uses in diplomacy, business and society will be addressed in the **Opening Plenary** and further unpacked across **thematic highlight sessions**:

- Sessions on Wednesday 9 October: **Human Augmentation**
- Sessions on Thursday 10 October: **Eco Augmentation & Data Augmentation**
- Sessions in the afternoon of Thursday 10 October & Friday 11 October: **Knowledge and Diplomacy Augmentation**

The **Geneva Political Talks on Science and Diplomacy** will launch the new **GESDA Anticipation Gateway initiative** to democratise access to knowledge and uses of emerging science for current authorities, future leaders, as well as citizens from all over the world.

All sessions in the official programme will be live streamed.

Follow the guidance on the [event website](#) to join the live streams (via Sli.do).

| Time | Wednesday 9 October - Augmenting Humans | Location |
|-------------|---|---|
| 11.30-19.00 | Registration | CERN Science Gateway Building Auditorium 2 |
| 12.00-13.00 | Light Lunch | CERN Globe |
| 13.00-14.30 | <p>Opening Plenary</p> <p><i>Moderated by:</i></p> <ul style="list-style-type: none"> • Muriel Siki, Journalist, Switzerland <p>13.00-13.15 Welcome remarks</p> <ul style="list-style-type: none"> • Peter Brabeck-Letmathe, Chairman, Board of Directors, Geneva Science and Diplomacy Anticipator (GESDA) Foundation • Alexandre Fasel, State Secretary, Federal Department of Foreign Affairs, Switzerland • Tatiana Valovaya, Director-General, United Nations Office at Geneva <p>13.15-13.30 Launch of the 2024 GESDA Science Breakthrough Radar®</p> <ul style="list-style-type: none"> • Michael Hengartner, Chair, GESDA Academic Forum <p>13.30-14.30 Building Preparedness in the Age of Acceleration</p> <p>In an era defined by the emergence of novel technologies, socio-economic shifts, and environmental transitions, the landscape of global affairs is evolving at an unprecedented pace.</p> <p>What is the role of anticipation in building preparedness and how can leaders harness the opportunities of emerging technologies in the face of accelerating change?</p> <p><i>Moderated by:</i></p> <ul style="list-style-type: none"> • Alok Jha, Science and Technology Editor, The Economist <p><i>With:</i></p> <ul style="list-style-type: none"> • Markus Gabriel, Director, Center for Science and Thought, University of Bonn • Patricia Gruber, Science and Technology Advisor to the Secretary of State (Antony Blinken), Department of State, USA • Subra Suresh, former Director, U.S. National Science Foundation; Professor at Large, Brown University • Arnaud de la Tour, CEO, Hello Tomorrow • Tatiana Valovaya, Director-General, United Nations Office at Geneva | CERN Science Gateway Auditorium A |
| 14.45-16.15 | <p>Plenary Session <i>Human Augmentation Highlight I</i></p> <p>Unlocking Next Generation Neurotechnology Applications</p> <p>As advancements in neuroscience and brain machine interface technologies accelerate, the potential for groundbreaking applications in healthcare, communication, and beyond is immense.</p> <p>How can academics, biotech companies, and regulatory bodies collaborate to ensure that the benefits of neurotechnologies become widely accessible while safeguarding individual rights?</p> <p><i>Moderated by:</i></p> <ul style="list-style-type: none"> • Lynn Hanessian, Chief Strategist, Edelman <p><i>Presentations by:</i></p> <ul style="list-style-type: none"> • Ariel Garten, Co-Founder and Chief Evangelist Officer, Muse • Friedhelm Hummel, Defitech Chair of Clinical Neuroengineering, Brain Mind Institute, École Polytechnique Fédérale de Lausanne <p><i>With:</i></p> <ul style="list-style-type: none"> • Jennifer French, Executive Director; Founder, Neurotech Network (virtual) • Ioannis Ghikas, Permanent Representative, Permanent Mission of Greece to the UN in Geneva • Amy Kruse, General Partner; Chief Investment Officer, Satori Neuro • Hilal Lashuel, Research, Development & Innovation Advisor to the Chairperson; Executive Director, RDI, Qatar Foundation | CERN Science Gateway Auditorium A |

| Time | Wednesday 9 October - Augmenting Humans | Location |
|--------------|---|--------------------------------------|
| 15.30.-16.00 | <p>Anticipatory Briefing Origins of Life Ancient water systems and deep subsurface microbial ecosystems remain at the frontier of our knowledge.</p> <p>Join this anticipatory briefing to explore the latest research unravelling the mysteries of life deep within the Earth and consider how these findings could influence our understanding of biology, evolution, and the search for extraterrestrial life in the next 5, 10, and 25 years.</p> <p><i>Moderated by:</i></p> <ul style="list-style-type: none">• Laurent Haug, Founder, 200ideas <p><i>With:</i></p> <ul style="list-style-type: none">• Barbara Sherwood Lollar, Professor, University of Toronto | CERN Science Gateway Auditorium C |
| 15.45-18.15 | <p>Live Demo Road to the 2025 World Expo Osaka: Live demo of the Geneva Public Portal to Anticipation Pass by to explore a demo of the Geneva Public Portal to Anticipation, an interactive installation at the intersection of art, science and diplomacy, that empowers visitors to craft their fictional futures based on science trends of the GESDA Science Breakthrough Radar®.</p> <p><i>The interactive installation will run throughout the summit for you to explore at your convenience before featuring as part of the Swiss Pavilion at the 2025 EXPO Osaka-Kansai in collaboration with Presence Switzerland and the EPFL Laboratory for Experimental Museology (eM+).</i></p> | CERN Globe Level 1 |
| 16.15-16.45 | <p>Networking Break</p> | CERN Globe Level 0 |
| 16.45-17.15 | <p>Anticipatory Briefing The Promises of Synthetic Biology Synthetic biology goes beyond reading and editing genes by allowing the writing of whole genomes. This new technology is expected to have a deep impact on life sciences and sustainable agriculture.</p> <p>Join this anticipatory briefing to discover how synthetic biology will develop and be applied in various fields over the next 5, 10, and 25 years.</p> <p><i>Moderated by:</i></p> <ul style="list-style-type: none">• Laurent Haug, Founder, 200ideas <p><i>With:</i></p> <ul style="list-style-type: none">• Junbiao Dai, Deputy Director, Shenzhen Institute of Synthetic Biology | CERN Science Gateway Auditorium C |

| Time | Wednesday 9 October - Augmenting Humans | Location |
|-------------|---|-----------------------------------|
| 16.45-17.30 | <p>Panel Session Rethinking Intellectual Property Rights in the Age of Rapid Scientific Progress As technology accelerates scientific advancements and patent creation, the tension between the human right to benefit from science and technology and the right of creators to protect their work is intensifying.</p> <p>How can we design future protection models that balance innovation, access, and fairness in a rapidly evolving technological landscape?</p> <p><i>Moderated by:</i></p> <ul style="list-style-type: none"> • Jennifer Schenker, Founder and Editor-in-Chief, The Innovator <p><i>With:</i></p> <ul style="list-style-type: none"> • Christine Allan de Lavenne, Intellectual Property Attorney; Human Rights & Innovation Expert, SIDE (virtual) • Ken Natsume, Assistant Director General, World Intellectual Property Organization • James Donovan, Head of Science Policy, OpenAI • Anthony Taubman, Former Director of Intellectual Property, World Trade Organization | CERN Science Gateway Auditorium B |
| 17.30-18.15 | <p>Plenary Session <i>Human Augmentation Highlight II</i> Progressing Pandemic Preparedness From the rise of drug-resistant disease-causing pathogens to the emergence and spread of new infectious diseases, global health security remains of top concern.</p> <p>What role can innovative business models play in enhancing progress on pandemic preparedness?</p> <p><i>Moderated by:</i></p> <ul style="list-style-type: none"> • Suerie Moon, Co-Director, Global Health Centre, Geneva Graduate Institute <p><i>With:</i></p> <ul style="list-style-type: none"> • Jennifer Cohn, Director, Global Access, Global Antibiotic R&D Partnership • Meret Gaugler, Partner-at-Large, Growth Investments, Novo Holdings • Andrin Oswald, Director & Co-Founder, Swiss Vaccines Initiative | CERN Science Gateway Auditorium A |
| 17.45-18.15 | <p>Anticipatory Briefing The Future of Archaeology From the analysis of ancient DNA to the virtual preservation of world heritage sites, new technologies are transforming modern archaeology.</p> <p>Join this anticipatory briefing to learn how these innovations are redefining our understanding of historical narratives over the next 5, 10, and 25 years.</p> <p><i>Moderated by:</i></p> <ul style="list-style-type: none"> • Laurent Haug, Founder, 200ideas <p><i>With:</i></p> <ul style="list-style-type: none"> • Sylvian Fachard, Professor of Classical Archaeology, University of Lausanne | CERN Science Gateway Auditorium C |
| 18.15-19.30 | <p>Welcome Cocktail</p> | CERN Globe Level 1 |

| Time | Thursday 10 October - Augmenting Data & Ecosystems | Location |
|-------------|--|--|
| 08.00-18.30 | Registration | CERN Science Gateway <i>Building Auditorium 2</i> |
| 08.30-09.15 | Morning Coffee | CERN Globe <i>Level 0</i> |
| 09.15-10.30 | <p>Plenary Session <i>Eco Augmentation Highlight I</i> Climate Resilience and Food Security</p> <p>As climate change intensifies and extreme weather events become more frequent, the pressure on global food systems escalates.</p> <p>How are advances in synthetic biology, genetic engineering, and artificial intelligence being deployed to augment ecosystems for climate resilience and food security?</p> <p><i>Presentation by:</i></p> <ul style="list-style-type: none"> • Rose A. Marks, Assistant Professor, Department of Plant Biology, University of Illinois <p><i>Moderated by:</i></p> <ul style="list-style-type: none"> • Chris Luebke, Head of Strategic Foresight Hub, ETH Zurich <p><i>With:</i></p> <ul style="list-style-type: none"> • Nam-Hai Chua, Senior Investigator (Emeritus), Temasek Life Science Laboratory • Aisha Hadejia, Partner, Sahel Consulting Agriculture & Nutrition Limited • Matthias Honegger, Program Director, Climate Interventions, International Center for Future Generations • Rose A. Marks, Assistant Professor, Department of Plant Biology, University of Illinois | CERN Science Gateway <i>Auditorium A</i> |
| 10.00-16.15 | <p>Live Demo Road to the 2025 World Expo Osaka: Live demo of the Geneva Public Portal to Anticipation</p> <p>Pass by to explore a demo of the Geneva Public Portal to Anticipation, an interactive installation at the intersection of art, science and diplomacy, that empowers visitors to craft their fictional futures based on science trends of the GESDA Science Breakthrough Radar®.</p> <p><i>The interactive installation will run throughout the summit for you to explore at your convenience before featuring as part of the Swiss Pavilion at the 2025 EXPO Osaka-Kansai in collaboration with Presence Switzerland and the EPFL Laboratory for Experimental Museology (eM+).</i></p> | CERN Globe <i>Level 1</i> |
| 10.30-11.00 | Networking Break | CERN Globe <i>Level 0</i> |
| 11.00-11.30 | <p>Anticipatory Briefing Food Systems</p> <p>Innovative agricultural technologies and novel food sources will contribute significantly to sustainably feed the global population.</p> <p>Join this anticipatory briefing to discuss the advancements that will drive food sustainability over the next 5, 10, and 25 years.</p> <p><i>Moderated by:</i></p> <ul style="list-style-type: none"> • Laurent Haug, Founder, 200ideas <p><i>With:</i></p> <ul style="list-style-type: none"> • Benedetto Marelli, Associate Professor, Massachusetts Institute of Technology | CERN Science Gateway <i>Auditorium C</i> |

| Time | Thursday 10 October - Augmenting Data & Ecosystems | Location |
|-------------|--|-----------------------------------|
| 11.00-12.00 | <p>Panel Session Governing Space's Next Frontier to Benefit All</p> <p>The expanding public and private access to space blurs the line between exploration and exploitation, requiring international governance to ensure equitable benefits and preservation of these global commons in space and on Earth.</p> <p>How can multilateral actors anticipate opportunities and risks for people, planet and society and unlock the full potential of space exploration?</p> <p><i>Moderated by:</i></p> <ul style="list-style-type: none"> • Alok Jha, Science and Technology Editor, The Economist <p><i>With:</i></p> <ul style="list-style-type: none"> • Lindy Elkins-Tanton, Professor, School of Earth and Space Exploration; Principal Investigator, NASA's Psyche mission • Tanja Masson-Zwaan, Professor and Deputy Director, International Institute of Air and Space Law • Carole Mundell, Director of Science, European Space Agency (virtual) | CERN Science Gateway Auditorium B |
| 12.00-13.30 | <p>Networking Lunch</p> | CERN Globe Level 1 |
| 13.45-14.15 | <p>Anticipatory Briefing The Future of International Relations</p> <p>The future of global relations is being shaped by shifting power dynamics and the rise of informal international organisations.</p> <p>Join this anticipatory briefing to explore how these elements will influence global diplomacy over the next 5, 10, and 25 years.</p> <p><i>Moderated by:</i></p> <ul style="list-style-type: none"> • Laurent Haug, Founder, 200ideas <p><i>With:</i></p> <ul style="list-style-type: none"> • Thomas Biersteker, Professor, Graduate Institute of International and Development Studies | CERN Science Gateway Auditorium C |
| 13.45-14.45 | <p>Plenary Session <i>Eco Augmentation Highlight II</i> Bridging Science and Diplomacy for the Future of Corals</p> <p>As the world's coral reefs face unprecedented threats from climate change, pollution, and other human activities, it is imperative to harness cutting-edge science and international diplomacy to safeguard these vital ecosystems.</p> <p>How are governments, scientists and funders collaborating to protect corals in the Red Sea, Caribbean and Great Barrier Reef, and what lessons can be applied to rehabilitate other reefs worldwide?</p> <p><i>Opening remarks by:</i></p> <ul style="list-style-type: none"> • Alexandre Fasel, State Secretary, Federal Department of Foreign Affairs, Switzerland <p><i>Moderated by:</i></p> <ul style="list-style-type: none"> • Muriel Siki, Journalist, Switzerland <p><i>With:</i></p> <ul style="list-style-type: none"> • Tamaki Bieri, Chief Operation Officer, Coral Gardeners • Emma Camp, Team Leader, Future Reefs Programme, University of Technology Sydney (virtual) • Fanny Douvère, Head, World Heritage Centre's Marine Programme, UNESCO • Kristen Marhaver, Associate Scientist, CARMABI Foundation; Project Director, The Marhaver Lab, CARMABI (virtual) • Anders Meibom, Professor, École Polytechnique Fédérale de Lausanne | CERN Science Gateway Auditorium A |

| Time | Thursday 10 October - Augmenting Data & Ecosystems | Location |
|-------------|---|--------------------------------------|
| 15.00-15.30 | <p>Anticipatory Briefing Made in Space</p> <p>As space exploration advances, the utilization of orbital resources is poised to become a new frontier of economic opportunity.</p> <p>Join this anticipatory briefing to explore the potential developments in exploiting space-based resources over the next 5, 10, and 25 years.</p> <p><i>Moderated by:</i></p> <ul style="list-style-type: none"> • Laurent Haug, Founder, 200ideas <p><i>With:</i></p> <ul style="list-style-type: none"> • Debbie Senesky, Associate Professor of Aeronautics, Stanford University | CERN Science Gateway Auditorium C |
| 15.15-16.15 | <p>Plenary Session <i>Data Augmentation Highlight</i> Harnessing Quantum for All</p> <p>The Open Quantum Institute is accelerating the development of applications of quantum computing for the SDGs.</p> <p>How can academics, industry leaders, and policymakers collaborate best to build capacity globally, leveraging the 2025 UN Year of Quantum Science and Technology, and to activate a market for quantum computing applications for the benefit of humanity?</p> <p><i>Opening Remarks by:</i></p> <ul style="list-style-type: none"> • Sandro Giuliani, CEO, GESDA <p><i>Moderated by:</i></p> <ul style="list-style-type: none"> • Enrica Porcari, Head of IT Department, CERN <p><i>With:</i></p> <ul style="list-style-type: none"> • Graham Alabaster, Chief of Section, UN-Habitat • Anousheh Ansari, CEO, XPRIZE Foundation • Mourad Beji, Chief Software Officer, PASQAL • Lidia Brito, Assistant Director-General for Natural Science, UNESCO (virtual) • Anna Fontcuberta, President-elect, École Polytechnique Fédérale de Lausanne <p><i>Closing remarks by:</i></p> <ul style="list-style-type: none"> • Fabiola Gianotti, Director General, CERN | CERN Science Gateway Auditorium A |
| 16.15-16.45 | <p>Networking Break</p> | CERN Globe Level 0 |
| 16.45-18.00 | <p>Plenary Session <i>Knowledge Augmentation Highlight I</i> Nourishing Science Culture</p> <p>From understanding our place in the cosmos to eradicating fatal diseases, scientific progress is one of humankind's greatest achievements, yet generative AI and social media are changing the very nature of scientific evidence as we know it.</p> <p>In an era of evolving globalisation, connectivity and political polarisation, how can decision-makers ensure that science continues to make progress for the benefit of all?</p> <p><i>Opening remarks by:</i></p> <ul style="list-style-type: none"> • Luciano Floridi, Director, Digital Ethics Center, Yale University (virtual) <p><i>Moderated by:</i></p> <ul style="list-style-type: none"> • Katherine Mathieson, Director, Royal Institution <p><i>With:</i></p> <ul style="list-style-type: none"> • Urs Gasser, Professor for Public Policy, Governance and Innovative Technology, Technical University of Munich • Ayaka Suzuki, Director, Strategic Planning and Monitoring Unit, Executive Office of the Secretary-General, United Nations • Stephen Toope, President and CEO, Canadian Institute for Advanced Research | CERN Science Gateway Auditorium A |

| Time | Thursday 10 October - Augmenting Data & Ecosystems | Location |
|-------------|---|---|
| 17.30-18.00 | <p>Anticipatory Briefing Preparing for Quantum Computing</p> <p>Quantum science is revolutionizing our understanding of the physical world, expanding the boundaries of what's possible in technology and computation.</p> <p>Join this anticipatory briefing to uncover the quantum breakthroughs set to transform our world over the next 5, 10, and 25 years.</p> <p><i>Moderated by:</i></p> <ul style="list-style-type: none">• Laurent Haug, Founder, 200ideas <p><i>With:</i></p> <ul style="list-style-type: none">• Sabrina Maniscalco, Professor of Quantum Information and Logic, University of Helsinki | CERN Science Gateway <i>Auditorium C</i> |
| 18.00-19.30 | Networking Cocktail | CERN Globe <i>Level 1</i> |

| Time | Friday 11 October - Augmenting Knowledge | Location |
|-------------|---|--|
| 08.00-12.00 | Registration | CERN Science Gateway <i>Building Auditorium 2</i> |
| 08.15-08.45 | Morning Coffee | CERN Globe <i>Level 0</i> |
| 08.45-10.15 | <p>Plenary Session GESDA Anticipation Gateway</p> <p>08.45-08.55 Introduction <i>Moderated by:</i></p> <ul style="list-style-type: none"> • Sandro Giuliani, CEO, GESDA • Alexandre Fasel, State Secretary, Federal Department of Foreign Affairs, Switzerland <p>08.55-09.25 Global Curriculum for Anticipatory Leadership <i>Remarks by:</i></p> <ul style="list-style-type: none"> • Enrico Letta, Member of the Board of Directors, GESDA Foundation <p><i>With:</i></p> <ul style="list-style-type: none"> • Rebeca Grynspan, Secretary-General, UN Conference on Trade and Development • William Egbe, Managing Partner, Vibranium Capital Group • Camelia Ilie Cardoza, Dean, Strategy & Institutional Affairs, INCAE Business School • Yusuf Leblebici, President, Sabanci University <p>09.25-09.50 Geneva Public Portal to Anticipation <i>Remarks by:</i></p> <ul style="list-style-type: none"> • Henrietta Fore, Member of the Board of Directors, GESDA Foundation <p><i>With:</i></p> <ul style="list-style-type: none"> • Alexandre Edelmann, Ambassador; Head of Presence Switzerland, Federal Department of Foreign Affairs, Switzerland • Sarah Kenderdine, Professor of Digital Museology, École Polytechnique Fédérale de Lausanne <p>09.50-10.15 GESDA Anticipation Observatory <i>Remarks by:</i></p> <ul style="list-style-type: none"> • Sandro Giuliani, CEO, GESDA <p><i>With:</i></p> <ul style="list-style-type: none"> • Fernando Espinosa, Ambassador; Deputy Permanent Representative, Permanent Mission of Mexico to the UN in Geneva • Matthias Troyer, Technical Fellow; Corporate Vice President, Microsoft Quantum | CERN Science Gateway <i>Auditorium A</i> |
| 10.15-10.45 | Networking Break | CERN Globe <i>Level 0</i> |
| 10.45-11.00 | <p>Remarks by</p> <ul style="list-style-type: none"> • Ignazio Cassis, Federal Councillor; Minister of Foreign Affairs, Federal Department of Foreign Affairs, Switzerland | CERN Science Gateway <i>Auditorium A</i> |

| Time | Friday 11 October - Augmenting Knowledge | Location |
|-------------|--|-----------------------------------|
| 11.00-12.00 | <p>Plenary Session Democratizing Science Literacy: High-Level Political Segment</p> <p><i>Moderated by:</i></p> <ul style="list-style-type: none"> • Alexandre Fasel, State Secretary, Federal Department of Foreign Affairs, Switzerland <p><i>With:</i></p> <ul style="list-style-type: none"> • Ignazio Cassis, Federal Councillor; Minister of Foreign Affairs, Federal Department of Foreign Affairs, Switzerland • Baiba Braže, Minister of Foreign Affairs, Republic of Latvia • Adriana Mira, Vice Minister of Foreign Affairs, El Salvador • Mahaveer Singhvi, Joint Secretary of New, Emerging and Strategic Technologies (NEST), Ministry of External Affairs, Republic of India • Andrzej Szeptycki, Under-Secretary of State, Ministry of Science and Higher Education, Poland | CERN Science Gateway Auditorium A |
| 12.00-12.15 | <p>Closing of the Summit</p> <p><i>Closing Remarks by:</i></p> <ul style="list-style-type: none"> • Peter Brabeck-Letmathe, Chairman, Board of Directors, GESDA • Christina Kitsos, Mayor, City of Geneva, Switzerland | CERN Science Gateway Auditorium A |
| 12.15-13.00 | <p>Press Conference</p> | CERN Science Gateway Auditorium C |
| 12.15-13.30 | <p>Live Demo Road to the 2025 World Expo Osaka: Live demo of the Geneva Public Portal to Anticipation</p> <p>Pass by to explore a demo of the Geneva Public Portal to Anticipation, an interactive installation at the intersection of art, science and diplomacy, that empowers visitors to craft their fictional futures based on science trends of the GESDA Science Breakthrough Radar®.</p> <p><i>The interactive installation will run throughout the summit for you to explore at your convenience before featuring as part of the Swiss Pavilion at the 2025 EXPO Osaka-Kansai in collaboration with Presence Switzerland and the EPFL Laboratory for Experimental Museology (eM+).</i></p> | CERN Globe Level 1 |
| 12.15-13.30 | <p>Farewell Lunch</p> | CERN Globe Level 1 |



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