

# 1<sup>st</sup> ALAIN ASPECT SYMPOSIUM

2022 NOBEL PRIZE IN PHYSICS LAUREATE UNIVERSITY OF SHERBROOKE

SHERBROOKE, QUÉBEC 22<sup>nd</sup> – 24<sup>th</sup> November 2023

Press kit

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# 1. Introduction by Christophe Jurczak

# At the heart of the leading ecosystem for quantum industry

I discovered the "Institut Quantique" at the end of October 2018 - almost the 5<sup>th</sup> anniversary! – after being invited by the student collective Q2 which helped to connect professionals from the fledgling quantum industry with students from University of Sherbrooke's Faculty of Science. It was a great experience, and I took the opportunity to request an interview with Professor Alexandre Blais, the very talented "pope of superconducting qubits", who gave me an overview of the Quantique Institute he had co-founded only recently. He also told me about the new building which was ready to emerge. I was captivated by the energy emanating from both the academic and student bodies. I met many other passionate people and returned to Sherbrooke often.

This very quickly became the ideal ecosystem for Sherbrooke, the one which we use as a model for our presentations and international travels. The university may be modest in size, and not (yet) the most prestigious in Canada, but perhaps that's why it's also a fertile ground for exploring new ideas in an agile way! The first contacts stimulated by the University of Sherbrooke quantum student community are a fine illustration of the relevance of this ecosystem with world-class ambitions, where access to talent will be essential to the industry's success.

When my mentor, Nobel Prize in Physics Laureate 2022 and Chairman of Quantonation's Scientific Committee, Professor Alain Aspect, was approached last year to be offered an Honorary Doctorate from the University of Sherbrooke, we collectively took the opportunity to give this event extra prominence in order to raise the profile of the ecosystem in all its dimensions, around this personality whose research means that, ultimately, everything we do in quantum is possible. With the convergence of a number of announcements by the companies involved, this first "*Alain Aspect Symposium*" on quantum applications will be complemented by a series of on-site visits. The Government of the Province of Quebec will also be announcing a number of major initiatives to promote Quebec's quantum ecosystem in Sherbrooke on Friday November 24<sup>th</sup>.





Christophe Jurczak Partner, Quantonation

Professor Alain Aspect Physics Nobel Prize Laureate 2022

## A few words about the speakers

- The Institut Quantique (IQ) at University of ٠ Sherbrooke (or UdeS), is a world-leading hub for guantum science and technology, specializing in quantum electrodynamics, superconducting guantum computers and guantum materials (including the famous high-temperature superconductors). The University of Sherbrooke is a French-speaking university, which of course adds a special dimension to the visit of the Academymember Alain Aspect. UdeS is one of the first universities in the world to have launched a Bachelor's degree program in guantum information science, ahead of the Master's and PhD programs. to meet the emerging needs of the quantum industry, thanks in particular to the work-study format in which UdeS is an expert. The new IQ building was inaugurated in June 2022, an architectural reference inspired by the shapes of the famous dilution refrigerators used in many guantum computer concepts. The building houses a highly innovative "FabLab", with shared refrigerators and teams working on entrepreneurial projects.
- DistriQ, Quantum Innovation Zone, acts as an accelerator of quantum innovations, catalyzing expertise and infrastructure, connecting and integrating collaborative initiatives and bolstering synergies between the various players in Quebec's quantum ecosystem. Its soon-to-be-inaugurated Innovation Center, Espace Quantique 1 (EQ1), is a vast 4645-square-meter space entirely dedicated to the quantum technology industry. EQ1 will provide startups, companies and other organizations in the ecosystem with private office spaces and shared

workspaces. A world-class 1860 square metre shared laboratory, called DevTeQ, will also be part of the building. Nearly twenty companies and partners will share this unique space, totalling over a hundred highly qualified professionals. This new Innovation Center will give companies access to state-of-the-art laboratory equipment for the development of quantum technologies and accelerate their adoption by industry.

- Next, Nord Quantique, a "spin-off" of IQ co-founded in 2019, is a world leader in error correction for superconducting quantum computers. Quantonation invested in the company in 2019: Nord Quantique is now in the process of raising funds after world firsts on its components. DistriQ is funded by the Quebec government.
- Another highly innovative structure is currently being developed in Sherbrooke on the DISTRIQ/EQ1 premises: the QV Studio (for "Quantum Venture Studio").
- PINQ2 (from the French "digital and quantum Innovation Plateform") is another innovative concept linked to the DISTRIQ ecosystem. It is a non-profit organization funded by the Quebec government to provide a hybrid quantum-classical computing environment for companies in Quebec and beyond. PINQ2 operates a 127-qubit IBM Quantum System One computer at IBM's Bromont plant, which is the first to be deployed outside the USA.
- Also supported by Quantonation, Qubit Pharmaceuticals was attracted by the dynamic of the Sherbrooke ecosystem, and in particular by the research conducted at UdeS on GPCRs, proteins

localized on the surface of cells that play a key role in modern pharmacopoeia. Qubit Pharmaceuticals and UdeS are collaborating on the Quebec government-funded ACUITY program, with Montreal's prestigious MILA, on AI research approaches. Qubit Pharmaceuticals is also working with PINQ2 to use its classical (GPUs) and quantum (IBM) computing facilities.

- Finally, we must mention two crucial entities that will be the subject of visits during the symposium: the Interdisciplinary Technological Innovation Institute (3iT) and the Collaboration MiQro Innovation Center (C2MI). Together with the Institut Quantique (IQ), this trio represents an integrated innovation chain allowing the transition from laboratory demonstrators of semiconductor or quantum devices to small series for prototyping (3iT) and semi-industrial series (C2MI). This ecosystem has attracted over \$1 billion in funding over 10 years. 60% of it from the private sector. C2MI, originally designed for semiconductor packaging and MEMS. is now turning the corner on quantum technology, with new investments to turn it into a foundry for superconductors and other quantum devices in Sherbrooke and Bromont.
- The symposium will begin with a presentation by Professor Aspect, whose work is behind the spectacular developments we are seeing in quantum technology. The event will then focus on quantum and health, in relation to the work of the aforementioned players, and will include visits and meetings with all the stakeholders in this extraordinary ecosystem, which is emerging on the international innovation scene.

# 2. Detailed program of the symposium

## 3 days at Sherbrooke...

Date	Details and times (EST)	Place
Wednesday 22nd November	<ul> <li>9:00 – 10:45: Laboratories Tour M. Aspect (on invitation)</li> <li>11:00 – 12:00: « <i>Fireside chat</i> », led by Alexandre Blais (for students)</li> <li>12:00 – 13:30: Lunch with professors and researchers of the I.Q. for M. Aspect (on invitation)</li> </ul>	Institut quantique (' <i>Quantum</i> <i>Institute</i> ') Auditorium
	Major Conference 14:30 – 15:30: Major conference - Alain Aspect 16:30 – 17:00: University session – Presentation of honorary doctorate 17:15 – 18:00 : Cocktail (on invitation)	Cultural center of the University of Sherbrooke (Main Campus) Balcon Orford
Thursday 23rd November	<ul> <li>8:00 – 13:00: Symposium Alain Aspect at the Institut quantique</li> <li>13:00 – 14:00: Lunch at the Institut quantique</li> <li>14:00 – 18:30: 3iT, IBM Q-One system and C2MI visits.</li> <li>16:30 – 18:30: C2MI trip and visit.</li> <li>19:00: Quantonation event at the OTL Gouverneur (on invitation)</li> </ul>	Institut quantique (' <i>Quantum</i> <i>Institute'</i> ) Auditorium Bromont (PM) OTL Gouverneur - Saguenay
Friday 24th November	AM : Free time 13:00 – 16:00: Québec government announcements about Quantum innovation area of Sherbrooke (DistriQ) (on invitation) 16:00 - 19:00: Symposium closing cocktail	Espace Quantique 1

## Symposium Alain Aspect: 1<sup>st</sup> edition

23<sup>rd</sup> November Program

From 8AM to 2PM

Institut quantique (Quantum Institute) Auditorium Pavillon D9

Time	Sessions	Speakers	
8:00	Welcome coffee		
8:15	Introduction : The Symposium Concept	Prof. A. Blais (Institut quantique) Prof. A Aspect C. Jurczak (Quantonation) Vincent Aimez (Université de Sherbrooke)	
8:30	Quantum-Aided Drug Design: Opportunities & challenges	Alberto Peruzzo (Qubit Pharmaceuticals)	
9:00	Analog Quantum Computing for Drug Classification	Loïc Henriet (Pasqal)	
9:30	Medical applications of quantum computing and tensor networks	Sam Mugel (Multiverse)	
10:00	Pause		
10:20	Fault Tolerant Quantum Computing: How to build applications for emerging QPUs	Julien Camirand Lemeyre (Nord Quantique)	
10:35	The ACUITY Project: Collaboration with PINQ2/Qubit Pharmaceuticals	Marie-Claude Battista (IPS UdeS)	
10:50	The Q4Bio projet	Elica Kyoseva (Wellcome Leap)	
11:05	Good Chemistry: A business spin off example	Dominic Marchand (1Qbit)	
11:20	Pause		
11:40	Quantum Imaging for Healthcare	Mathieu Munsch (Qnami)	
12:10 (PM)	Healthcare Use Case in Quebec: IBM and Cleveland Clinic partnership	Julien Chosson (IBM)	
12:25	Building Quantum Ecosystems around Applications	André König (GCI) S. Jenna (StudioQ) C. Jurczak (Quantonation) Georges-Olivier Reymond (Pasqal) Martin Enault (DistriQ) Moderated by A. Gourevitch (BCG)	
01:00	Closing speech	Prof. Alain Aspect	
01:15	Stand-up lunch		
02:00	Departure for guided tours		

## 3. Symposium speakers

## Vincent AIMEZ



Dr. Vincent Aimez holds degrees in electrical engineering from the Université de Rouen in France, in applied physics from Kingston University in the UK. and in electrical engineering from the University of Sherbrooke. Professor in the Department of Electrical and Computer Engineering, he was, from 2010 to 2015, Director of Scientific Partnerships at the MiQro Innovation Collaboration Center (C2MI), bringing together industrial and academic partners to accelerate the commercialization of micronanotechnologies. He is a founding member of 3IT.nano at the University of Sherbrooke. He also cofounded the CNRS Nanotechnologies nano-systems (LN2) laboratory in 2008. As vice-rector for valorization and partnerships since 2017, he has paved the way for many strategic industrial partnerships, including the establishment of Quebec's first two innovation zones. DistriQ in Sherbrooke and Technum Québec in Bromont.

## Alain ASPECT



Alain Aspect is Professor at the Institut d'Optique-Université Paris-Saclay and at École Polytechnique (Institut Polytechnique de Paris). He is co-recipient of the 2022 Nobel Prize in Physics for his experimental work on Bell inequalities, which probed the foundations of quantum physics. These experiments have profoundly affected our understanding of nature, and closed a debate opened at the beginning of the last century by Einstein, who considered quantum physics to be incomplete. Prof. Aspect's results paved the way for the science of quantum information and the development of quantum technologies, which are at the heart of research at the Institut quantique ('Quantum Institute') at l'University of Sherbrooke. Together with his partners Georges-Olivier Revmond and Christophe Jurczak. Prof. Aspect founded Pasgal, a company dedicated to building quantum computers, in 2019. The company, which employs over 140 people, has offices in France, the Netherlands and Sherbrooke, within the Quantum Innovation Zone.

## Marie-Claude BATTISTA



Marie-Claude Battista holds an academic degree in basic sciences in the field of biomedical sciences and endocrinology (Ph.D. Université de Montréal).

She joined the University of Sherbrooke's Faculty of Medicine and Health Sciences (FMSS) as an associate professor in 2017 (ongoing). In 2019, she obtained a graduate degree in Clinical Epidemiology from McMaster University in Ontario. She currently holds the position of Director of the WFSS Office of Valorization and Partnerships. She supports entrepreneurship, engages the creation of new strategic alliances with external partners, and contributes to the development of WFSS's major infrastructure projects, while positioning research partnerships in an open innovation model. She played a decisive role in the funding (\$27M) of the Acuité Québec drug discovery consortium and sits on the executive committee. She is Deputy Director of the PREVALIS institutional health data platform. She sits on numerous national and international clinical study and research executive committees, data security monitoring committees and research networks.

#### Alexandre BLAIS



Alexandre Blais is Professor of Physics at University of Sherbrooke, where he is Scientific Director of the Institut quantique ('Quantum Institute'). He holds the Chair in Quantum Computer Architectures, and his theoretical research focuses on superconducting guantum circuits for guantum information processing. He is a pioneer in the field of quantum electrodynamics in circuits, now considered one of the most promising methods for the realization of a quantum computer. Professor Blais is a Fellow of the Roval Society of Canada, a Fellow of CIFAR, and a Fellow of the American Physical Society. His research contributions made him laureate of the Steacie Prize of the Natural Sciences and Engineering Research Council of Canada (NSERC), the Herzberg and Brockhouse Medals of the Canadian Association of Physicists, the Urgel-Archambault Prize of the Association francophone pour le savoir, the Rutherford Memorial Medal of the Royal Society of Canada and a Guggenheim Fellowship of the John Simon Guggenheim Memorial Foundation.

## Julien CAMIRAND LEMYRE

## Julien CHOSSON



Co-founder of Nord Quantique, Julien Camirand Lemyre holds a PhD in physics and has nearly 10 years' experience in vertical systems integration for quantum computing. As Chief Technology Officer, Julien brings his vision of technology development in synergy with quantum ecosystems, driving collaboration and innovation in the sector. Building on this vision, the Nord Quantique team has made significant progress towards reducing error rates in quantum computers.



Julien Chosson leads the Quebec and IBM Discovery Accelerator, which aims to use the bits, neurons and aubits representing different computational technologies to solve major societal problems. The Discovery Accelerator aims to achieve major breakthroughs in the fields of sustainability, the environment and climate by leveraging IBM Research's infrastructure, of which Julien is a part, with the mission of accelerating innovation from the lab to the marketplace. Before joining IBM, Julien developed and sold his start-up to one of the giants of the environment and software. The start-up developed cutting-edge computer vision technology that accelerated the implementation of the circular economy in North America by creating a new set of essential data under complex conditions. The development of this company gave him the opportunity to file a patent, and to engage in exchanges with leading researchers in the field of artificial intelligence. Julien holds an MBA and is a graduate of EDHEC Business School in France.

### Martin ENAULT



An inspirational and visionary leader, Martin Enault is recognized as a pioneering builder of new industries. Acting Managing Director of DistriQ, the Quantum Innovation Zone, as well as Chief Entrepreneur-in-Residence at Centech, one of the world's top 10 business incubators, Martin helps entrepreneurs build companies that are solidly structured both financially and in terms of people. Previously, he was COO of Félix & Paul Studios, an EMMY® award-winning immersive entertainment studio, where he collaborated on the world's first virtual reality filming project on the International Space Station. He was COO of C2 Montréal and CEO Asia-Pacific of C2 International until 2018. Cofounder and CEO of Intellitix in 2009, the first company in the world to use RFID technology for access control and payment at major events, he has implemented this technology at the world's biggest festivals. Martin has also been involved in driving change in mental health for 14 years. As Chairman of the Board of Relief, he opens up about how depression and anxiety are part of his life and career.

#### Antoine GOUREVITCH



Antoine Gourevitch heads the Deeptech Mission for the Boston Consulting Group. This mission aims to solve business problems with exponential technologies such as Quantum, Nanotechnology, Biosynthetics, AR/VR, blockchain, next-generation Al, robotics, additive printing... Antoine is a scientist with a background in nuclear physics, AI and robotics, a graduate from Ecole Centrale de Paris in 1991 who learned mechanics at his Alma Mater and went to INSEAD for an MBA in 1997. At BCG, he devoted himself to innovation, participating in the creation of the Internet expertise in 1998, and founding and leading the Data & Digital Platform expertise in 2017. He is the author of the book "Transform or disappear: the Darwinism of IT, and the MOOC on the same subject available via Coursera. Antoine joined BCG in 1995 after three years at Bossard and doing his military service for the French Prime Minister's intelligence service on nuclear issues (Russia, China, Middle East).

## Loïc HENRIET



Loïc Henriet obtained his engineering degree and a PhD from Ecole Polytechnique. He completed his PhD under the supervision of Professor Karyn Le Hur, and studied the non-equilibrium dynamics of interacting spin models. After his PhD, he joined Prof. Darrick Chang's teams at the Institute of Photonic Sciences in Barcelona, where he worked on collective effects in atomic systems and in particular developed a protocol for a subradiant atomic clock. He joined PASQAL in 2019, in the early days of the company. Since then, he has been helping to turn the systems he studied into the leading neutral atom analogue platform for quantum computing.

## Elica KYOSEVA



Dr Elica Kyoseva is the Director of the Quantum for Bio program at Wellcome Leap, a \$50M supported challenge program focused on harnessing the potential of quantum computing for transformative applications in biology and healthcare. The selected 12 teams, which include over 200 researchers with quantum computing and bio/health expertise, are working towards the ultimate goal of Quantum for Bio, which is to demonstrate the promise of quantum computing in solving critical health challenges.

Elica's expertise is in quantum computing for drug discovery. Previously, she was a Fellow at the Massachusetts Institute of Technology, a Marie Curie Fellow at Tel Aviv University, and served as an Entrepreneur in Residence and Advisor at a venture capital firm. Most recently, Elica was a Quantum Computing Scientist at Boehringer Ingelheim, where she developed quantum algorithms for drug discovery and partnered with major quantum players. She earned her PhD in Quantum Optics from Sofia University, Bulgaria.

## André KONIG



André is a published author, speaker and expert on DeepTech with 25 years of Fortune 500, investing and startup experience. He is the CEO of Global Quantum Intelligence, the premier market & business intelligence provider in Quantum Tech, and Chairman of OneQuantum, the leading Quantum Tech community globally with over 15 000 members.

He studied Quantum Computing at MIT (certificates) and holds an MBA in Economics from the University of Chicago Booth School of Business as well as a Masters in Business from ICN School of Management.

He speaks English, German, French, Italian, and has competed in national sailing championships and pursues special forces combat training.

## Sarah JENNA



Sarah Jenna completed a Doctor of Philosophy (PhD) in Cellular and Molecular Biology at Université Aix-Marseille I in 1998 and a professional training program at MIT on opportunities for the sustainable development industry in 2023. She has worked in the academic field for over 20 years, at McGill University, at the Genome Quebec Innovation Centre, and as Canada Research Chair in Integrative Genomics and Cell Signaling at the Université du Québec à Montréal (UQAM). During this period, she helped found two university research centers in drug discovery, Pharmagam and the Réseau Québécois de Recherche sur le Médicament (RQRM). In 2016, she co-founded and led My Intelligent Machines Inc., a startup developing artificial intelligence solutions applied to drug development from a precision medicine perspective. She has also worked as a coach, mentor and instructor in numerous high-tech and life sciences business acceleration programs. including Lab2Market, Techstar, District3 and ACET. In September 2023, she became Managing Director of QV studio (qventurestudio.com), a startup studio dedicated to creating and de-risking startups commercializing developina and quantum technologies emerging from university innovations.

## Christophe JURCZAK



Christophe Jurczak, who obtained his PhD in guantum physics under the supervision of 2022 Nobel Prize in Physics Laureate Alain Aspect, has a brilliant career in the quantum technology sector. His career includes strategic roles in government, energy and defense, as well as major contributions to guantum computing at QC Ware. Today, Christophe is co-founder and managing partner of Quantonation, the first venture capital fund dedicated exclusively to quantum technologies. He firmly believes in empowering innovation in this cutting-edge field, as evidenced by the objective of this first fund dedicated to "deep physics". In addition to his activities at Quantonation, Christophe sits on the boards of several innovative startups, including PASQAL, Qubit Pharmaceuticals. QphoX. HQS Quantum Simulations, WeLinQ and Nord Quantique, plaving a key role in shaping the future of guantum technologies.

## **Dominic MARCHAND**



Dominic is Director of 1QBit Sherbrooke and Director of Special Projects at 1QBit, a Canadian leader in quantum computing and artificial intelligence (AI). The company innovates where industry needs and emerging computing hardware converge. 1QBit adopts a diversified approach in the development of its R&D roadmap, incorporating classical AI and optimization capabilities with quantum technologies. Dominic has played a key role in 1QBit's integration into Quebec's quantum, AI and hardware innovation ecosystems. He studied computer engineering and physics at Université Laval, Universität des Saarlandes and the University of British Columbia before joining the 1QBit team 10 years ago.

## Mathieu MUNSCH



Mathieu Munsch is co-founder and CEO of Qnami. He holds an engineering degree from ENS Grenoble and a PhD in quantum mechanics from Grenoble Alpes University. He worked for ten years as a researcher developing new quantum light sources and lasers. He is the author of more than 15 publications in leading papers such as Nature and the Physical Review. In 2017, Mathieu founded Qnami AG, a pioneer company in the quantum technology industry. Today, Qnami is a leader in the emerging market for quantum sensing and metrology. Mathieu actively supports the creation of a European quantum ecosystem and the training of a new European workforce for quantum applications.

#### Sam MUGEL



Council.

Sam Mugel is CTO and co-founder of Multiverse Computing. He is an expert in quantum computing and guantum machine learning. He holds a PhD from ICFO (Spain) and the University of Southampton (UK). Previously, he was a computational physicist at Cortirio (UK), Technical Director at the Quantum Revolution Fund, and founder and Technical Director of Groundstate Consulting. He is an advisor to the McKinsey Tech Council and the Forbes Tech Council, and a Mentor at the Creative Destruction Lab. Multiverse Computing is a leading quantum software and artificial intelligence company, which develop solutions to solve today's critical industry problems. Its main focus areas are finance, energy and climate change mitigation. Its products are used by Fortune 1000 companies such as Bosch. Bank of Canada. BASF. Crédit-Agricole and Leonardo. This has earned us recognition from CB Insights (2023 AI 100), Gartner (2022 Cool Vendor), as well as a seat on the Forbes Tech Council and the McKinsev Tech

## Alberto PERUZZO



Alberto Peruzzo, 45, is a renowned researcher with a prestigious career in both academia and industry. After receiving the rare distinction of 110/110 cum laude in 2008 for his dissertation as part of his master's degree in computer engineering at the University of Padua, in 2012 he was awarded a doctorate in the Faculty of Science at the University of Bristol with distinction for his pioneering research into quantum photonics. He was also awarded a prestigious Royal Academy of Engineering Research Fellowship for his contribution to the future of quantum computing. In 2013, he co-authored the initial proposal on the Variational Quantum Eigensolver (VQE), which laid the foundations for the development of quantum computing solutions with far-reaching applications in areas such as quantum chemistry and drug discovery. His research into quantum technology has won him international recognition, including the Google Faculty Research Award, a Gold Medal at the Humies Awards, a Vice-Chancellor's Research Fellowship and an Associate Professorship at RMIT University. He joins Qubit Pharmaceuticals in 2023 as Head of R&D in Quantum Computing.

## Georges-Olivier REYMOND



In March 2019, Georges-Olivier Reymond cofounded PASQAL, the first French hardware company dedicated to quantum computing. His aim was to exploit the technology developed over more than ten years at the Institut d'Optique de Palaiseau (France) to build quantum processing units based on neutral atoms ordered in large 2D arrays. Today, this technology is at the very heart of PASQAL. Georges-Olivier holds a PhD in quantum optics on the trapping of single atoms with optical tweezers. After defending his thesis, he turned to industry, where he developed high-tech products based on optical technologies, in fields as diverse as biotechnology, defense and semiconductors.

## 4. About the University of Sherbrooke





## L'Institut quantique ('Quantum Institute')

Created in 2016, the University of Sherbrooke's Institut quantique (IQ) brings together more than 300 scientists specializing in quantum materials, information and engineering with the aim of carrying out fundamental research and developing quantum technologies. From quantum computer architecture and superconductivity to the exploration of new states of matter, our scientists have received international awards and distinctions, and seen their groundbreaking discoveries adopted by the private sector. At the vanguard of scientific progress in a fast-moving scientific field, our research teams are invited to collaborate with colleagues and institutions from all around the globe.

Our partnerships, such as the International Research Lab "Quantum Frontiers" with France's Centre National de Recherche Scientifique (CNRS), the Quantum Systems Accelerator in the USA, and the Centre for Quantum Computation and Communication Technology in Australia, are all research projects in which the expertise and research quality of our scientists are put to good use. Deeply influenced by the University of Sherbrooke's partnership-based research culture and

its role as a link in the innovation chain, over 50% of IQ researchers are developing research projects in collaboration with industry. This network adds to the relevance of our work while stimulating the exchange of ideas between the academic community and our partners.

The Institut Quantique offers a dynamic research environment with an approach centered on the student community, in particular by encouraging the development of projects instigated by them. We train leaders who possess skills and critical thinking, both vital to the creation of knowledge relevant to a changing society.

This way, we see our graduates ready to contribute to the acceleration of discoveries, either by working in academia, in private enterprise or by setting up their own business. In this context, the creation of the Sherbrooke Quantum Innovation area is playing an active role in creating job opportunities for our graduates, while developing a large-scale quantum ecosystem here in Sherbrooke but across Quebec too.



## The Integrated Innovation Chain

In partnership with UdeS, the integrated innovation chain is a driving force in Quebec and Canada to support organizations in the fields of artificial intelligence, quantum technologies, digital technologies and innovative manufacturing. Since 2010, it has benefited from over a billion dollars of investments. In addition to the strategic financial participation of the Québec and Canadian governments, the industrial partners of the integrated innovative chain have contributed over 60% of the investment to develop their innovative technological solutions.

Bridging the gap between university research and the development of new products transferred to industry, the Integrated Innovation Chain takes projects forward projects through the synergy of three leaders: Institut Quantique (IQ), the Institut interdisciplinaire d'innovation technologique (3IT) and the Centre de MiQro Innovation Collaboration Center (C2MI). Partners are able to work in close collaboration with multidisciplinary teams and access to ultra-specialized equipment to suit their needs.



# 5. Attending stakeholders

## Ecosystem





DistriQ is Quebec's Quantum Innovation Area. Covering an 8 km2 zone, it offers a healthy and constantly evolving environment, built around knowledge institutions. Many industrial partners of international stature have confirmed their involvement in the Quantum Innovation Zone. When DistriQ was launched in February 2022, public investments of over \$131 million were announced to support 13 projects. In addition, nearly \$290 million of private investment was announced, including from Pasqal, IBM and Bell Canada. The installation of a new-generation IBM quantum computer in Bromont, the construction of the Institut quantique and Quantum Space 1, the realization of innovation projects in partnership with businesses, the training of the next generation of researchers, the creation of research chairs, and the completion of studies aimed at the implementation of technological innovation, advanced manufacturing and collaborative facilities are the flagship projects that gave the first impetus to Sherbrooke's Quantum Innovation Zone.

The Quantum Space 1 (EQ1) is a flagship project for the Quantum Innovation Area and for all of Quebec. It is a place for companies working in the field of quantum, including a shared laboratory: the DevTeQ. With more than 4,645 m2 (50,000 ft2), Espace Quantique 1 has two purposes: a collaborative office space to multiply exchanges, and a vast world-class laboratory dedicated to the development of quantum technologies. Twenty companies and partners will be established there, 1950 rue Roy in Sherbrooke, totaling more than 150 highly qualified professionals.

The coexistence of all these actors at EQ1 meets the need for collaboration of this ecosystem and the need to have access to specialized laboratory equipment. EQ1 will host the DevTeQ, the quantum technology development laboratory, a shared technology platform open to all members of EQ1 and the Sherbrooke Innovation Zone for R&D and prototype testing.

Nearly twenty companies and organizations working in quantum will take up residence in the offices of Quantum Space 1, currently with more than 80 employees. At the end of 2025, this space could host more than 200 employees in close connection with the Quantum Innovation Area.



The Plateforme D'Innovation Numérique et Quantique (*Digital and Quantum Innovation Platform*), also known as PINQ<sup>2</sup>, is a non-profit organization initiated by University of Sherbrooke and the Ministry of Economy, Innovation, and Energy of Quebec in 2020. In 2022, PINQ<sup>2</sup> was entrusted by the Ministry of Economy, Innovation, and Energy of Quebec with the mission to accelerate the digital transformation of Quebec companies. It received the mandate to operationalize the most powerful computing infrastructure in Quebec, combining simultaneously classical, quantum, and hybrid technologies.

The platform is built on this combination of technologies and is accessible to all Quebec businesses as well as the entire network of academic university and college technology transfer centers (CCTTs). It aims to become a reference in digital transformation with its unique and transparent service, along with its predictive cost approach.

PINQ<sup>2</sup> is recognized by our academic, industrial, and financial partners as an accelerator of innovation and the democratization of digital solutions. It emphasizes interdisciplinary collaboration, equity among projects, security, transparency, and a commitment to delivering results to its clients.



#### Companies



Nord Quantique is a Canadian quantum computing company whose mission is to make the quantum computer matter by developing processors with low error rates. By integrating error correction into the core of its processors, the company solves the main obstacle to the commercial deployment of quantum computers. Developing inside the Quantum Innovation Zone of Sherbrooke, Nord Quantique designs and manufactures quantum machines with an approach focused on the quality and efficiency of its structure.

The reduction of the error rate of quantum processors is a central and necessary problem to achieve relevant computing regimes for industry. Nord Quantique is developing a platform specifically aimed at improving performance by error correction methods. This approach also reduces the physical requirements for building the quantum computer. In addition, the richness of Nord Quantique's architecture offers application solutions in the fields of molecule simulation. During the conference, Nord Quantique will present its recent advances towards low error rate quantum computers, application opportunities in the quantum simulation sector and its approach to the ecosystem to build applications on its emerging architecture.



Created as a spin-off from the Quantum Institute of the University of Sherbrooke, Nord Quantique is one of the founding companies of the Sherbrooke quantum ecosystem.

Nord Quantique drives multiple synergies within the Innovation Area, both through the deployment of its technological activities and the establishment of key partnerships. Thereby. Nord Quantique manufactures its quantum systems within the 3iT infrastructures and characterizes them in the collaborative spaces of the Quantum Institute. Finally, Nord Quantique co-finances, with the MEIE and the University of Sherbrooke, a research chair on the quantum control of extensible systems. This effort comes in addition to six other partnership projects involving different axes of the development of quantum computers, from advanced manufacturing of quantum systems to error correction and societal issues related to the deployment of quantum technologies.



PASQAL is a leading French company in quantum computing. It manufactures quantum processors by using networks of neutral atoms ordered in 2D and 3D. Its goal is to offer a concrete quantum advantage to its customers and solve practical problems through this technology. PASQAL was founded in 2019 by Georges-Olivier Reymond, Christophe Jurczak, Professor Dr. Alain Aspect, laureate of the 2022 Nobel Prize in Physics, Dr. Antoine Browaeys, and Dr. Thierry Lahaye. PASQAL has obtained more than €140 million in funding to date.

Thanks to its technological advances, PASQAL is now a pioneer of quantum computing applied to the real world. The company considers Sherbrooke, and more broadly Quebec, as a very attractive place for the development of quantum applications to industry. Building on the University's reputation and remarkable expertise in the quantum field, PASQAL aims to play a leading role inside the Quantum Innovation Area. Its objective is to stimulate the development of an active ecosystem, encouraging the establishment of industrial research centers specializing in quantum applications. This movement also aims to incite the growth of startups and SMEs, giving rise to new business initiatives.

To promote the development of algorithms, PASQAL has established a research chair dedicated to quantum computing based on neutral atoms at the University. A first research project has been launched in this direction. The main objective of the strategy is to provide quantum computing capabilities on an industrial scale, which is behind PASQAL's decision to set up a factory for the North American market. As the largest private industrial project within Quantum Space 1, PASQAL is fully in line with this dynamic.







Qubit Pharmaceuticals is a deeptech company founded in 2020, specializing in the discovery of new medicinecandidates through accelerated molecular simulation and modelling by HPC and quantum hybrid computing. Result of the research work of 5 internationally renowned scientists\*, and based both in Paris and Boston, Qubit Pharmaceuticals, is today led by CEO Robert Marino. The company takes profit from its own Atlas software platform, which can use the computing power of supercomputers and, tomorrow, quantum computers to accelerate the development of more efficient and safer medicine-candidates, dividing by 2 the time needed to screen and select a candidate of interest and optimize it, and dividing by more than 10 the necessary investments. By creating digital twins of physical molecules, Atlas performs in a few hours calculations which require the equivalent of several years through conventional ways. Qubit Pharmaceuticals aims to develop a portfolio of 10 medicine-candidates in the fields of oncology and inflammatory diseases. The company was selected to participate in the French Tech 2030 program and selected among the top 20 French startups of the French Tech Health20 program.

Qubit Pharmaceuticals joined the Consortium Acuité Québec in 2023, led by the Pharmacology Institute of Sherbrooke, to innovate in drug design. Qubit Pharmaceuticals will now have access within this ecosystem to the computing power of the Digital and Quantum Innovation Platform (PINQ2) from the university, while its teams will collaborate with IPS researchers who have expertise in structural biology, medicinal chemistry, and pharmacology of G-protein-coupled receptors. These receptors are of major importance in pharmacology. Nearly a third of the

drugs approved by the US FDA target these receptors. Qubit Pharmaceuticals brings its expertise in the development of advanced simulation software combining computational chemistry, artificial intelligence, molecular design, and hybrid computing. The objective of the Acuity consortium is to support the acceleration of the discovery and development of new drugs.

\* Louis Lagardère (Sorbonne Université et CNRS), Matthieu Montes (CNAM), Jean-Philip Piquemal (Sorbonne Université et CNRS), Jay Ponder (Washington University in St Louis), Pengyu Ren (University of Texas at Austin)

# QUANTONATION

Quantonation Ventures, the first venture capital fund exclusively dedicated to quantum technologies, established itself as a leader in the development of innovations renewing sectors in difficulty such as molecular design, high performance computing, cybersecurity, drug discovery, and ultra-accurate forecasting. With 100 million euros under management through an initial fund, Quantonation A, Quantonation is specialized in start-up investments (pre-priming to series B) in quantum computing, communication, detection and deep physics.

Quantonation's approach goes beyond financing and seeks to turn these advanced technologies into products ready for commercialization. The investments aim to disrupt the traditional computing paradigm, enable breakthroughs in medical treatments and improve human innovation through sustainable energy consumption.

Since its creation in 2018, Quantonation has experienced fast growth, marked by key milestones such as the creation of the Quantum & QuantX Lab, and significant growth in assets under management to 100 million euros. The team has expertise in science, entrepreneurship and business development, and is dedicated to guide startups in the complex landscape of quantum technology. Now, Quantonation has invested in 27 pioneering companies, making it one of the most influential players in quantum technology investment.

Quantonation has established an important partnership with the Sherbrooke ecosystem, notably through the Quantum Sutdio initiative in collaboration with DistriQ and ACET. This partnership comes from a strategic approach to strengthen innovation in quantum technology, combining Quantonation's investment knowledge with Sherbrooke's rich academic and technological resources. The Quantum Studio in Sherbrooke is a central hub for innovative quantum projects, through an ecosystem supporting the growth and development of quantum startups.

This synergy, strengthened by the University of Sherbrooke and Espace Quantique 1, results in a complete quantum center. These entities offer an ideal mix of academic excellence, advanced infrastructures and a vast talent pool,

essential to the development of quantum technologies. Since Quantonation's first investment with Nord Quantique, the region has become a focal point for many of portfolio companies, benefiting from its facilities and world-class quantum expertise.

Quantonation has invested in Nord Quantique, a spin-off of the University of Sherbrooke's Institut quantique and portfolio companies such as Pasqal, to consolidate the Quantum Innovation Zone, alongside other startups keen to collaborate on quantum computing (hardware and software), detection and communications. This collaboration highlights Quantonation's desire to foster innovation in quantum technologies in order to transform these startups into world leaders. Investments and involvement in the Sherbrooke ecosystem are a key aspect of Quantonation's overall strategy to advance quantum technology and its commercial applications.



## University of Sherbrooke Map



## Integrated Innovation Chain - Information Sheet





## INTEGRATED INNOVATION CHAIN YOUR PLACE TO INNOVATE

The Integrated Innovation Chain supports organizations in the areas of artificial intelligence, quantum technologies, and digital and innovative manufacturing.

As a bridge between university research and the development of new products transferred to industry, the Chain allows projects to develop through the synergy of its three specialized facilities: the Institut quantique, the Interdisciplinary Institute for Technological Innovation, and the MiQro Innovation Collaboration Center.



#### INSTITUT QUANTIQUE (IQ) 🥝

Bringing together experts in quantum materials, quantum information. and quantum engineering, IQ conducts highquality fundamental research and is developing the quantum technologies of the future.



#### INTERDISCIPLINARY INSTITUTE FOR TECHNOLOGICAL INNOVATION (3IT) Ø

3IT is a technology innovation community focused on impactful partnership research in the areas of digital and quantum infrastructure, health technologies, renewable energy, robotics, and the relationship between technology and society.



## MIQRO INNOVATION COLLABORATIVE CENTER (C2MI) Ø

This world-class centre has more than 400 pieces of equipment, enabling advanced microelectronic projects to be carried out and transferred to industry.





#### Distinction

 Over the past 10 years, the Integrated Innovation hain has received more than \$1 billion in investments, 60% of which came from private partners.

#### Areas for the Future

- Digital and quantum
   Aeronautics and
   manufacturing
- erospace
   Transportation
   Health and life sciences
   Security and defense
- Environment and energy

ironinent and energy

#### EXAMPLES OF PROJECTS FROM THE INTEGRATED INNOVATION CHAIN

#### SB QUANTUM 🥝

#### Design of quantum sensors

This company is developing a diamond-based quantum magnetometer to enable navigation in complex environments.

#### NORD QUANTIQUE 🥝

#### Development of tomorrow's quantum computer

This business is developing quantum processors based on second-generation technology to solve the problems of today's quantum processors and unlock the full potential of quantum computing applications.

## TELEDYNE DALSA <br/> Development of an infrared camera with Teledyne DALSA

This affordable, high-performance tool is used for night vision adapted to automotive navigation, environmental-change studies, heavy-equipment energy efficiency measurement, and forest-fire detection.

#### Impact in Numbers

- More than 2,200 people working in research and development to serve the industry
- 250 industrial partners, mostly SMEs

2,200 quality jobs created or maintained in Quebec

200 highly qualified people trained in industrial settings each year

NSERC/IBM CANADA INDUSTRIAL RESEARCH CHAIR IN HIGH-PERFORMANCE HETEROGENEOUS INTEGRATION 6

#### Development of photonic technologies

Assembly of complex and large chips linked together by connections with very high data-transfer capacities in more flexible configurations than a simple stack of chips. The results will be rapidly transferred to industry to directly contribute to accelerating the evolution of high-performance computing and networking.

#### BORÉAS TECHNOLOGIES Development of integrated circuits for haptic applications

This technology facilitates human interaction with technological devices (phones, computers, smart watches and cars). It allows human beings to feel by touch any communication made by an electronic device.



#### HAVE A PROJECT IN MIND? CONTACT US TO MAKE IT HAPPEN! @ Business Partnership Group 819-821-7230 infopartenariats@USherbrooke.ca

USherbrooke.ca/partenariats/en



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## **Press Releases**

- DistriQ, Quantum Innovation Zone, inaugurates Espace Quantique 1
- PASQAL and Investissement Québec launch a \$90 Million Quantum Computing Initiative
- **QV Studio**, the first venture studio with a focus on Quantum Technologies, launches with participation of Quantonation in the thriving ecosystem of Sherbrooke (Canada)



#### PRESS RELEASE

#### DistriQ, Quantum Innovation Zone, inaugurates Espace Quantique 1

(Sherbrooke, November 28, 2023) — Today marks another milestone for Sherbrooke's Quantum Innovation Zone, with the inauguration of Espace Quantique 1 (EQ1) and its Quantum Technology Development Laboratory (DeVTeQ). Both an innovation centre and an international showcase, EQ1 is intended to serve as a gateway to the Sherbrooke and Quebec ecosystem, and indeed to Canada and North America. This announcement follows PINQ<sup>2\*</sup>s unveiling of the computer IBM Quantum System One last September.

Located at 1950 rue Roy in Sherbrooke, Espace Quantique 1 (EQ1) is a vast 50,000 sq. ft. space entirely dedicated to the quantum technology industry. EQ1 provides startups, companies and other organizations in the ecosystem with private office space and shared workspaces. A 20,000 sq. ft. world-class shared laboratory, called the DevTeQ, is also part of the building. Some fifteen companies and partners will share this unique space, totalling over one hundred highly qualified professionals. This new Innovation Center gives companies access to state-of-the-art laboratory equipment for the development of quantum technologies and accelerates their adoption by industry.

This initiative is supported by the Quebec government to the tune of over \$28.77 million, for a total investment of \$40.8 million. Espace Quantique 1 will further structure the development of this field of expertise, facilitating the transition from research to commercialization and job creation. In addition, Desjardins is contributing \$1 million.

"We're delighted to be able to bring all these quantum companies together under one roof, fostering a collaborative atmosphere conducive to innovation and partnerships. We're here to support them and make it easier for them to set up in the Zone, and we're ready to welcome all quantum companies," emphasizes Martin Enault, General Manager of DistriQ, Quantum Innovation Zone.

The Zone continues to contribute to the growth of the city of Sherbrooke and to position Quebec as a competitive player on the international scene in quantum science and technology, notably with the announcement of an investment of more than \$90 million over five years by the company PASQAL, resulting in the creation of more than \$0 jobs.

"The Gouvernement du Québec strong financial support through Investissement Québec and its unique vision for DistriQ, Quantum Innovation Zone, were decisive factors in our decision to unhesitatingly deploy our ambitious industrial strategy on a global scale. Espace Quantique 1 represents an opportunity for companies operating in this field. It brings together the key players in the value chain, from research to industrial applications. This close collaboration promises to lead to major innovations in the future, by identifying access routes to uses with high economic value," emphasizes Raphaël de Thoury, CEO, PASQAL Canada.

ABOUT DISTRIQ, QUANTUM INNOVATION ZONE

DistriQ, Sherbrooke's Quantum Innovation Zone, is a non-profit organization (NPO) that brings quantum technologies to life by supporting all stages of innovation, from university research to commercialization of quantum technologies. DistriQ supports the development of Sherbrooke's collaborative ecosystem, by bringing together quantum players, offering research infrastructure and building bridges with major companies that are potential users of quantum technologies.



With the financial support of



O Desjardins

#### PASQAL and Investissement Québec launch a \$90 Million Quantum Computing Initiative

The French leader in quantum computing, PASQAL, is proud to be part of the inauguration of Espace Quantique 1 in the center of the DistriQ Quantum Innovation Zone in Sherbrooke, showcasing its unique approach to developing neutral atom quantum computers.

Sherbrooke, Quebec, November 27, 2023 - PASQAL, a leader in the development of neutral-atom quantum computers, announces today the launch of a \$90 million quantum technology initiative over five years in Sherbrooke, Quebec. The project aims to conduct manufacturing and commercialization activities for quantum computers, as well as research and development in collaboration with academic and industrial partners in quantum computing within DistriQ, a quantum innovation zone. The goal of this innovation zone is to establish Sherbrooke as an internationally renowned quantum hub. The Government of Quebec is providing a \$15 million loan in connection with this investment project for the establishment of PASQAL SAS's subsidiary in the quantum innovation zone, DISTRIQ, based in Sherbrooke. Moreover, the project is expected to create 53 permanent iobs over the course of five vears.

#### Inauguration of Espace Quantique 1: A New Era for Quantum Computing

On November 24, during an official ceremony, the Premier of Quebec, François Legault, officially announced the opening of Espace Quantique 1 alongside the Minister of Economy, Innovation, and Energy, and the Minister responsible for Regional Economic Development and the Minister for the Metropolis and the Montreal Region, Mr. Pierre Fitzgibbon. The CEO of PASQAL, Georges-Olivier Reymond, Chief Technical Officer Loïc Henriet, co-founders Christophe Jurczak and Nobel Prize laureate Alain Aspect, were also present.

#### Strategic Collaboration between PASQAL and Investissement Québec

PASQAL will play a key role in this initiative, not only as a major partner of DistriQ within Espace Quantique 1, but also in the production, development of technological laboratories, training, and funding for new ventures in the quantum field. The initiative stands as one of the most ambitious endeavors in North America within the realm of quantum computing.

#### An Ambitious Initiative for the Future of Quantum in North America

PASQAL's presence in Sherbrooke represents a major step in the evolution of quantum computing. "Thanks to this unprecedented collaboration between the private and public sectors, we are creating an environment leading to major technological advancements, especially in terms of sustainable development," emphasizes Georges-Olivier Reymond, CEO of PASQAL. "We aim to actively participate to the creation of a dynamic ecosystem that will serve as a catalyst for innovation in the quantum industry, thus attracting talents and companies from all over the word."

#### Investments in Infrastructure and Innovation: The Factory and Espace Quantique 1

In 2024, PASQAL will open a facility at the heart of DistriQ, within Espace Quantique 1, aimed at manufacturing neutral atom quantum computers and the next generation of machines. Quantum Space 1 will also provide a collaborative space of nearly 5,000 square meters dedicated to quantum innovation. Equipped with advanced quantum computers, it will be utilized, among other purposes, by PASQAL as an R&D center, for prototype testing, and for business activities in Canada. DistriQ also focuses on training talent. In this context, PASQAL announced a contribution of \$500,000 to the creation of a research chair within the Department of Electrical and Computer Engineering at the University of Sherbrooke, which will also benefit from federal and/or local grants.

#### Support for Startups: The DistriQ Ecosystem and Its Partners

Quantonation, and the Quebec fund Quantacet will collaborate to fund QV Studio, that will support the transition to commercial quantum applications, creating a unique ecosystem within DistriQ for sector startups. This fund aims to invest in around fifteen Quebec-based or foreign companies, especially at the pre-seed or seed stage, that are active within the DistriQ innovation zone. It will foster the development of a strong and internationally competitive Quebec ecosystem in this future-oriented sector."

Christophe Jurczak, CEO of Quantonation and co-founder of PASQAL, states: "Espace Quantique 1 will become a leading center of innovation, facilitating the transition of quantum startups from concept to commercialization and forming a dynamic community around quantum technologies."

#### About PASQAL

PASQAL builds quantum computers from ordered neutral atoms in 2D and 3D arrays to bring a practical quantum advantage to its customers and address real-world problems. PASQAL was founded in 2019, out of the Institut d'Optique, by Georges-Olivier Reymond, Christophe Jurczak, Professor Dr. Alain Aspect, Nobel Prize Laureate Physics, 2022, Dr. Antoine Browaeys, and Dr. Thierry Lahaye. PASQAL has secured more than €140 million in financing to date. For more information about PASQAL, visit our <u>website</u> or follow us on our <u>social media</u> channels.



#### QV Studio, the first venture studio with a focus on Quantum Technologies, launches with participation of Quantonation in the thriving ecosystem of Sherbrooke (Canada)

Paris, France and Sherbrooke, Canada – 24<sup>th</sup> November 2023 – QV Studio is launched thanks to an investment of the Québec Ministry of Economy, Innovation and Energy and participations from Quantonation and Quantacet.

Quantonation has been present in the Sherbrooke ecosystem since 2018 when a collective of students invited Christophe Jurczak, Quantonation managing partner, to share his views on the then emerging startup scene. Since then Quantonation has invested in Nord Quantique, a spinoff from University of Sherbrooke developing an extremely hardware efficient approach to error correction for Fault Tolerant Quantum Computing based on superconducting technologies, with world premieres already disclosed and more breakthroughs to be announced. Two Quantonation portfolio companies – PASQAL and Qubit Pharmaceuticals – have been attracted by the deep scientific expertise and innovative approach to ecosystem building. The first Alain Aspect symposium on the Applications of Quantum Science, focused this year on "Quantum & Healthcare", has happened in Sherbrooke on 22-23<sup>rd</sup> of November 2023.

QV Studio will take place in DistriQ, the Quantum Innovation Zone. It will be hosted in Espace quantique 1 which is offering over 50,000 sq. ft. of flexible office space, conference rooms, coworking spaces, open space and technical expert services through its specialized and shared laboratory (DevTeQ).

"With this unique and ambitious program, robust and credible companies with high added value will see the light of day. The professional services and investment provided by QV Studio, Quantonation and Quantacet will play a decisive role in the growth and success of these startups, in particular by facilitating their future fundraising and the establishment of partnerships essential to their success" underlined Dr. Sarah Jenna , General Manager of QV Studio.

Dr. Christophe Jurczak, founding partner at Quantonation said: "Since the creation of Quantonation, the team has been very eager to build relationships with leading quantum ecosystems worldwide to identify the most promising science and the teams that will ultimately lead to the creation and growth of the leading players in the quantum industry. With QC Studio we are cementing our years-long collaboration with the quantum innovation stakeholders in Sherbrooke and Québec, and we are looking forward to working together to build successful companies".

Joseph Maillard, COO at Quantonation, will join QV Studio's Board.

#### About QV Studio

QV Studio is a non-profit organization funded by the Ministry of Economy, Innovation and Energy of the Province of Québec (Canada) in partnership with Quantonation and Quantacet. QV Studio aims to accelerate the creation of startups derived from university innovations in quantum fields and to support these startups with a comprehensive program including dilutive and non-dilutive financing, technological and commercial expertise, as well as cutting-edge research and development infrastructure of point.

For more information and news: www.qventurestudio.com

Contact: Simon Faucher - sfaucher@zonefrancherp.com

#### About Quantonation

Quantonation is the first early-stage VC fund dedicated to deep physics and quantum technologies. Field such as high-performance computation, medical imaging, or ultra-precise sensing are now driven by innovation based on these disruptive technologies. Quantonation aims at supporting their transition into commercially available products. Quantonation is headquartered in Paris, France, and in Boston, USA, with investments all over the world.

For more information and news: www.quantonation.com

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