WORLD ELECTRONICS FORUM 2022

PROGRAMME

Sustainable Electronics and Digital innovation addressing global challenges

Grenoble, France

céa · Inria · Hewlett Packard Enterprise · NANOELEC. · Schneider Electric

AN EVENT · GRENOBLE winner 2022 · EUROPEAN GREEN CAPITAL · An initiative of the European Commission

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Welcome buffet

Welcome addresses

The World Electronics Forum will be opened by political figures, the Deputy Executive Director of CEA's Technological Research Division, Jean-Philippe Bourgoin, the Chairman and CEO of INRIA, Bruno Sportisse, and a video message from Gary Shapiro, President and CEO of the Consumer Technology Association (CTA).

Session 1: Cutting-edge digital trends, regulation and cybersecurity driving innovation to shape industry and provide standardized solutions to worldwide issues

The purpose of this session will be to highlight the major current trends in digital and electronic innovations and technologies, in light of the crises and sustainability issues, which will radically transform areas such as healthcare, transportation, industry, agriculture, security, finance, entertainment, food, smart home, smart city, etc. Particular attention will be paid to questions of regulation, security testing, cybersecurity, and certification of digital and electronic products.
Contributors to this session are from Schneider Electric, the China Electronic Chamber of Commerce (CECC), the International Electrotechnical Commission (IEC), Hewlett Packard Enterprise, SEMI and ATOS.

Welcome address by VIPs

Round table 2: Impact of electronic and digital innovation and standards on the economy of emerging countries

Developing countries are facing very specific problems related to health, education, energy, agriculture, finance, etc. Digital and electronic innovations have a significant potential to contribute to efficient solutions, and more generally to the economic growth of these countries.

This session, which will directly involve representatives from the countries concerned, will present policies on digital innovation and examples of solutions already implemented. It will be the subject of discussions including the conditions for rapid deployment of innovative digital and electronic solutions.

Contributors to this round table are from the Republic of the Congo, the Communications & Manufacturing Association of India, Orange Africa and Middle East, Schneider Electric, and Hewlett Packard Enterprise.

October 6th

Welcome address by VIPs

Afternoon

Round table 3: «X-as-a-service» - sustainable digital and electronic innovations for global climate challenges

Digital and electronic technologies contribute to the fight against climate problems by offering new services that can significantly reduce the ecological footprint of industrial and human activities, and in particular infrastructures. This session will address technologies in the field of smart cities, mobility, security, energy, industry, etc.

Beyond the services provided, technologies must reduce their own energy consumption and become sustainable. Examples of innovative electronic technologies that optimize the use of resources, reduce their energy consumption and their environmental impact will be presented.

Contributors to this round table are EVA (Electric Visionary Aircrafts), Hewlett Packard Enterprise, Tokyo Institute of Technology, STMICROELECTRONICS and the Consumer Technology Association.
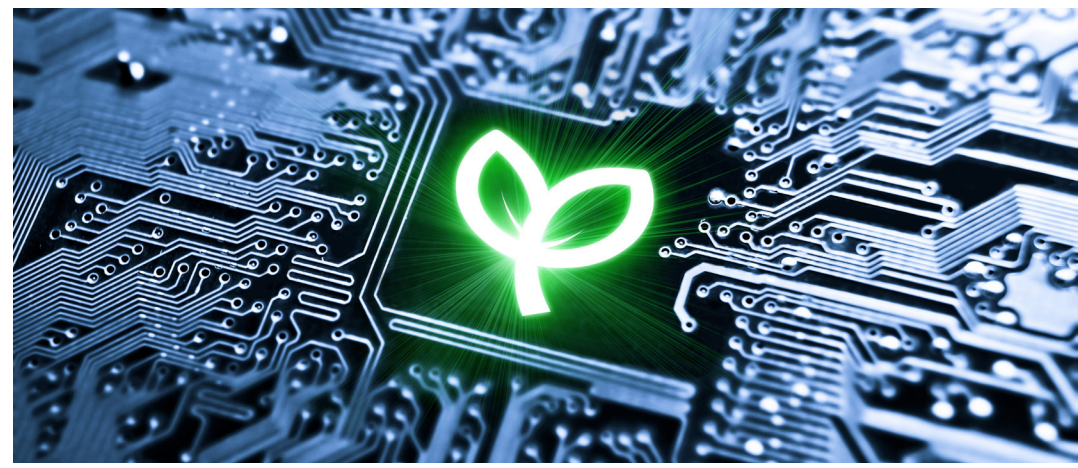
Round table 4: European digital and microelectronics strategy

The European Commission and key players from research and industry will contribute to this session in which the European Commission's digital strategy and regulation including microelectronics will be presented.

This session will focus on the European strategy and in particular the European Chip Acts[1], which aims to strengthen Europe's competitiveness and resilience in semiconductor technologies and applications while enabling the region's digital and green transition.

Contributors to this round table are from the European Commission, SEMI, SOITEC, and European Research and Technology Organizations including CEA-Leti, IMEC and the Fraunhofer's microelectronics group.

Round table 5: Towards 6G communications

With 9 billion connected humans, five times as many communicating objects and an unprecedented variety of applications that will pervade every aspect of human life around the world by 2030, the challenge of being ever better connected, securely and seamlessly at any time, on any device and via any network, and with limited environmental impact, becomes even more prevalent.

To improve access capacities, it is envisaged to jointly and massively exploit satellite, air and ground platforms. At the same time, a reinforcement of the computing and intelligence capacities within the components will be necessary to improve throughput and latency performances, while limiting energy consumption.

This session will focus on the roadmaps towards 6G worldwide. It will address the technological hurdles that need to be overcome, and present key projects and collaborations to make 6G a reality in 2030.

Contributors to this round table are from the European Commission, CEA-Leti, NOKIA, NTT DOCOMO, the Technology Innovation Institute (TII) and ETRI.

[1] Reference: https://ec.europa.eu/commission/presscorner/detail/en/IP_22_729

Gala dinner at the Château du Touvet

Gala dinner at the Château du Touvet with French gastronomic cuisine & classical music performed by a quartet of very talented young musicians.

Site tours

A choice of visits of remarkable sites is proposed to the attendees among the following ones:

Y.SPOT: CEA showroom on innovations and technologies for tomorrow's industry
https://yspot.fr/en/home/

Y.SPOT is where research and business come together. It is uniquely designed to support open, collaborative and innovation with particular attention paid to the societal impact. Y.SPOT is staffed by innovation experts that use proven methods to help companies of all types and sizes from startups and SMEs to major corporations, innovate from the minute they step into our dedicated innovation spaces.

With first a visit of Y.SPOT PARTNERS, our newest building, attendees will be able to discover a shared space between key partners in the Grenoble ecosystem including HP, Village by CA and CEA.

During the visit of Y.SPOT LABS, the CEA's open innovation center, attendees will have the opportunity to discover the Showroom, over 400 sqm exhibiting more than 100 cutting-edge innovations from CEA and its partners on new energy, micro-electronics, digital technologies and medicine of the future.

Clinatec: Experimental hospital - A unique medical model dedicated to the creation of innovative biomedical devices, all the way through from their conception to their application to patients.

https://www.clinatec.fr/en/

The Clinatec biomedical research center is a research technological center of the French Alternative Energies and Atomic Energy Commission (CEA) at Grenoble. Clinatec combines medical research and technological innovation at the same place to translate new solutions to patients. R&D is conducted by CEA, in a strong collaboration with Grenoble-Alpes University hospital (CHUGA), Grenoble-Alpes University, and the Clinatec Endowment Fund. Clinatec's mission is to accelerate the development and clinical validation of innovative medical devices based on medical needs, by using state-of-the-art technologies. Clinatec develops new treatments, diagnostics, and research methods for applications in indications such as neurodegenerative diseases and in spinal cord injury. A multidisciplinary team of clinical practitioners, biologists, mathematicians, and engineers in microtechnology, nanotechnology, and signal processing has been constituted at Clinatec to drive innovation in micro and nanosystems for healthcare. The platform's unique approach—bringing together a broad range of know-how at a single location—fosters the emergence of novel solutions and accelerates proof-of-concept testing and transfer of new technologies to manufacturers. The ultimate goal is to offer new solutions to as many patients as possible. Clinatec possesses a broad range of equipment and leverages the know-how and advances of CEA at the MINATEC campus. Current research at Clinatec includes near-infrared neuromodulation to stop neurodegeneration in Parkinson's disease, and a brain-computer interface to help paraplegics and tetraplegics walk again. Both projects are at the clinical trial phase, and are supported by industry and the European Innovation Council.

Schneider Electric – intenCITY: A new smart office park consuming just 37 kWh/m² each year — nearly 10 times less energy than the average European building.
https://www.se.com/be/fr/download/document/SEF_IntenCity_flyer_EN/

IntenCity is Schneider Electric's new flagship building located in the Scientific Polygon (Presqu'île) of Grenoble. It is part of a vast reorganization of Schneider Electric's Grenoble facilities begun in 2016 to regroup 5,000 workers currently spread across 13 different sites to four major buildings.

Soitec, Bernin site: Low power ultra-efficient substrates for microelectronics
https://www.soitec.com/en/

Soitec is a world leader in the production of innovative semiconductor materials. The company leverages its unique technologies to serve the electronics markets. In meeting the technical and economic challenges of mainstream electronics, Soitec is helping to speed up the mobile and digital revolutions. Its products are used to manufacture chips that go into smartphones (we are in 100% of phones worldwide), tablets, computers, IT servers and data centers as well as electronic components in cars, connected devices, and industrial and medical equipment.

With more than 3,500 patents, the company pursues a strategy of disruptive innovation to provide its customers with products that combine performance, energy efficiency and competitiveness.

Soitec's technologies, projects and industrial capacity make it one of the crown jewels of France's industrial sector.

Soitec is headquartered in Bernin France. The company was founded 30 years ago in Grenoble's high-tech ecosystem (spin off from CEA) and has manufacturing facilities, R&D centers and sales offices in Europe, the United States and Asia. Soitec is listed on the Euronext, Tech 40 Paris.


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Inria Grenoble research center: Experimental Platform for Innovation - Autonomous vehicule safety in complex environments (embedded AI)

The Inria-Grenoble Chroma team will present the latest evolutions of its embedded perception-and-navigation system, and its applications, demonstrated on a experimental Renault Zoe vehicle.

The system, developed in the scope of IRT Nanoelec and implemented on GPU for real-time performances, is based on an innovative approach to generate, fuse, filter and exploit enriched Bayesian dynamic occupancy grids, offering original guarantees and functionalities.
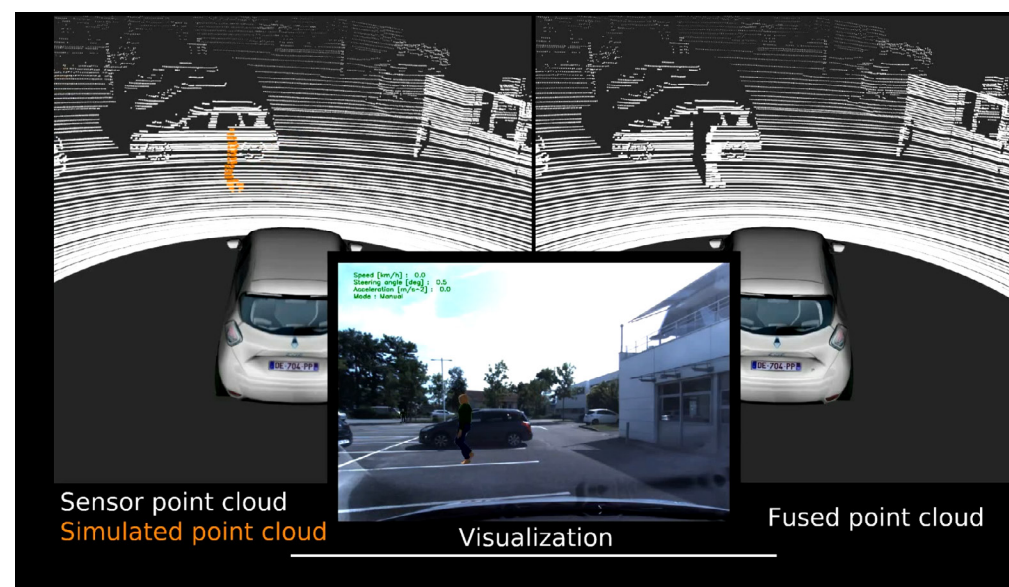
Round table 1: "X-on-chip" - advanced components and strategies, incl. quantum computing chips, implementable electronics for neurodegenerative diseases, brain inspired concepts and AR/VR systems.

The X-on-Chip paradigm will be at the heart of the reinvention of automotive, aerospace, computing and telecommunications, consumer electronics, industry, healthcare, etc.

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This session will be devoted to the presentation of disruptive innovations based on cutting-edge electronic components and technological breakthroughs.

More precisely, some innovations in the following domains will be highlighted:

- Bio-inspired AI chips enabling learning from a very limited volume of noisy data
- Silicon based quantum computing chips
- Implementable electronics for neurodegenerative diseases
- Brain inspired concepts and augmented reality and virtual reality
- Safety-critical embedded systems

Contributors to this round table are from Clinatec, META, CEA-Leti, ITRI and INRIA.

Round table 2: Academic collaborations, skills and digital inclusion

Finding digital talent is one of the biggest challenges facing companies and organizations today. The march of automation, the ubiquitous communication, the increasing number of connected machines are transforming the role of people at work and in everyday life at an increasing rate. Different skills are needed and roles are changing. Universities and schools have to address this challenge head-on in a coordinated manner, and act early on to attract bright minds to these disciplines while enabling people to develop and continue to learn throughout their lives, as well as give citizens the tools to fit into our digital environment. This session will address these questions and highlight academics, education and digital inclusion stakeholders who are addressing these challenges around the world.

Contributors to this round table are from Grenoble Alpes University, the Communications & Manufacturing Association of India, ORANGE, the Chad presidency, the European Commission and SEMI.

Round table 3: Country presentations and new developments, incl. by WEF organizations

During this session, WEF organizations will present the status and specific strategies of their respective countries.

Contributors to this round table are from ACSIEL (France), CMAI & TEMA (India), CIAJ (Japan), Ministry of Digital Transition, Innovation and Modernization of Administration (Mauritania), and CTA/CES (USA).

Conclusions and Take-away

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Venue

The WEF 2022 will take place at National Institute for Research in Digital Science and Technology (INRIA, https://www.inria.fr/en) of Grenoble – Rhône-Alpes, located at the heart of the French Alps.

Accommodation& Transports

In order to facilitate the event organisation and to make your stay more pleasant, rooms have been pre-booked in the following two hotels, located near the Grenoble Central Station:

Hotel NOVOTEL GRENOBLE CENTRE
Address: 7, Place Robert Schuman,
38000 Grenoble
Tel: +33 (0) 476 708 484
Website: https://all.accor.com/hotel/1624/index.en.shtml
Rates range from 145€ per night for a single room with breakfast to 200€ per night for a suite.

Hotel EUROPOLE
Address: 29, Rue Pierre Semard,
38000 Grenoble
Tel: +33 (0) 476 495 152
Website: https://www.hoteleuropole.com/
Rates range from 105€ per night for a single room to 135€ per night for a superior room. Breakfast not included.

Please note that, unless otherwise specified, hotel reservations will be made by the participants themselves, and the costs are at their own expense. However, using the code «WEF2022» when booking the hotel will allow them to benefit from a special rate. In addition, during the WEF period on October 6 and 7, and unless otherwise specified, bus transportation to and from the WEF venue will be organized to and from these two hotels only.
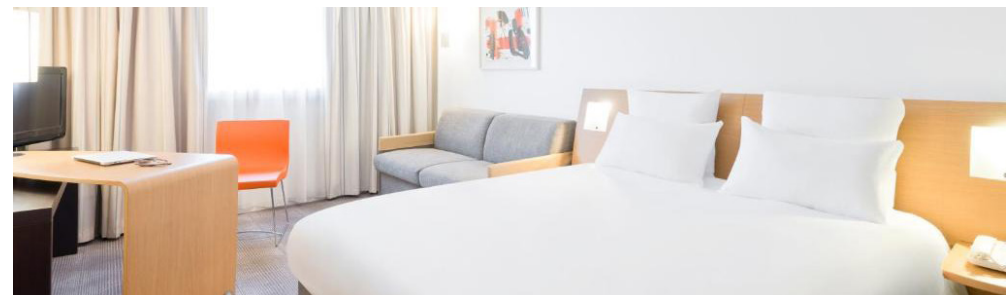
Please find below other hotels that might be of interest (no rooms have been pre-booked in these hotels):

Le Hüb by Privilodges
Address: 25 Av. Doyen Louis Weil,
38000 Grenoble
Tel: +33 (0) 486 801 986
Website: www.lehub-privilodges.com
Different options, from 90€ to 177€ according to the number of beds inside the apartment. Breakfast not included.

Aparthotel Adagio Grenoble Centre
Address: 6 Rue Auguste Génin,
38000 Grenoble
Tel: +33 (0) 476 392 000
Website: https://www.adagio-city.com/fr/hotel-B2R8-aparthotel-adagio-grenoble/index.shtml?x_ocdn=1
Rates range from 79€ per night for a single room to 149€ per night for a superior room. Breakfast not included.

Sightseeing & animations

Besides the forum, and if you are planning to stay in Grenoble for the weekend, you will find all the useful information on what to visit on the Grenoble Tourism website: https://www.grenoble-tourisme.com/en/discover/, from which you can download brochures and maps: https://www.grenoble-tourisme.com/en/download-our-brochures/

Must-sees include a visit to the "Bastille fort", accessible by a pedestrian walkway for sports lovers or by the famous "bubbles" ("cable car").

We also recommend the following animation on Saturday, October 9, which may be of interest to you: the descent from the Alpine mountain pastures (https://www.la-descente-des-alpages.fr/, website only available in French). Traditionally, each year, mountain farmers bring their alpine herds down to the center of Grenoble for a day. Discover the animals, attend the milking, discuss with the breeders, taste the local products. A generous adventure to share with your family...
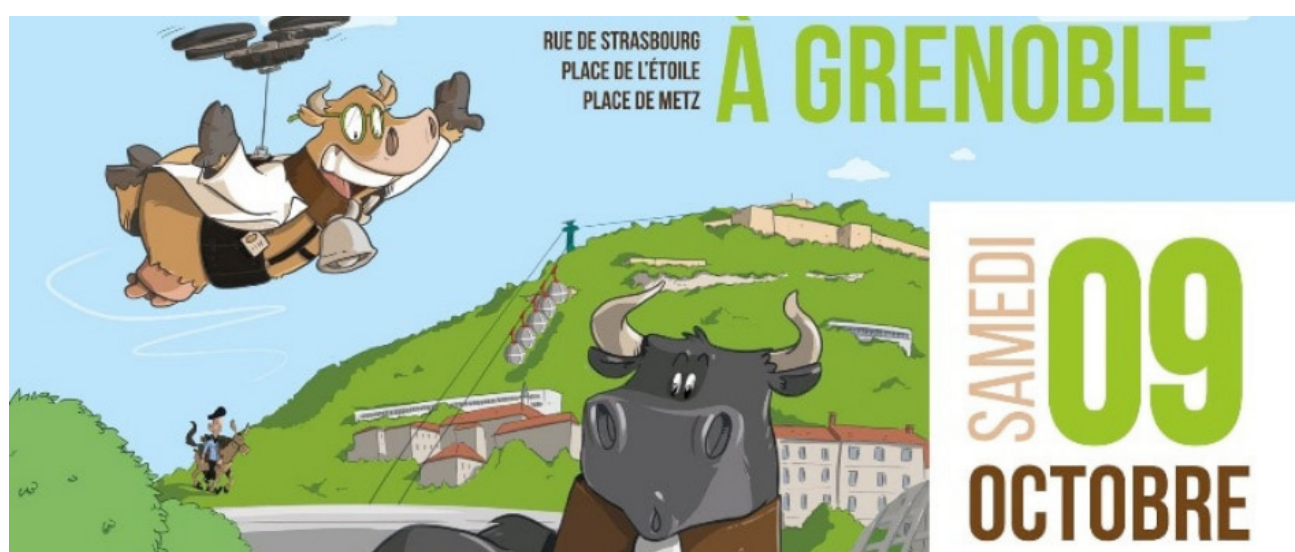
Visas & Invitation letters

It is the participant's responsibility to investigate the visa requirements for France, if necessary.

The European territory of France (mainland France)

Depending on one's nationality, as well as the purpose of travel to France or any of French Overseas Territories, a traveller might need a visa.

•	Please find information on all types of visas with their application guidelines: https://france-visas.gouv.fr/en/web/france-visas/visa-application-guidelines.

•	Please find the list of all the countries that need or do not need a visa to enter France: https://visaguide.world/europe/france-visa/who-needs-a-france-visa/

Invitation letters to WEF 2022

Letters of invitation to attend the WEF 2022 can be requested on-demand by sending an e-mail to Laurent Hérault: laurent.herault@cea.fr
Required information to issue your invitation letter for visa purposes:

•	Your full name

•	Name of organisation

•	Date of birth

•	Place of birth

•	Passport number

•	Country of citizenship (country which issued your passport)

•	Expiry date of your passport

Letters of invitation will be e-mailed as a PDF document.