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LE GOUVERNEMENT DU GRAND-DUCHÉ DE LUXEMBOURG Ministère de l'Éducation nationale. le l'Enfance et de la Jeunessa



Fonds National de la Recherche Luxembourg

CLOSING CEREMONY 1st October 16:00

DE LA VILLE DE LUXEMBOURG



www.fjsl.lu





WELCOME



Carlo Hansen President

DEAR FRIENDS,

Science isn't just facts; it's our tireless pursuit to fathom the world around us. With every revelation, we're reminded of how much more lies ahead, urging us to push the boundaries of our understanding.

As we navigate through the projects and engage in discussions, let's remember that science isn't just about the present; it's a beacon lighting our way into the future. The challenges we face today are the stepping stones for the innovators and scientists of tomorrow. The mysteries that elude us now are the inspiration for the breakthroughs yet to come.

Our pursuit of knowledge is not a solitary endeavor; it's a shared journey that spans across cultures and generations. It's a testament to the unity of mankind and its unsatiable drive for discovery.

In the heart of this expo, let curiosity be our guide. Let's be unafraid to question, challenge, and dream. The answers we seek may not always be readily apparent, but it's in the pursuit itself that we find purpose and meaning.

May LISE 2023 be a testament to our commitment to never cease exploring, never cease asking, and never cease dreaming of a future illuminated by the brilliance of science. Thank you, and welcome to the Luxembourg International Science Expo 2023!

Director

DEAR YOUNG SCIENTISTS,

<u>Greetings to each of you who has embarked on this exciting journey to the Luxembourg</u> International Science Expo, it's an honour to meet such a diverse and passionate group of individuals who share a common love for science, curiosity, and exploration.

This event is more than just a gathering; it celebrates the convergence of science and culture. It's a unique occasion where ideas transcend borders and where knowledge knows no limits.

In a world where connectivity is easier than ever, this expo offers a rare opportunity for face-toface exchange. It's a space to forge connections that could shape the course of your future adventures. Take the time to engage, to listen, and to share. The person next to you might have a perspective that opens new avenues of thought, a thought that could spark your next big idea.

As you walk through these halls, engage in conversations, and participate in the festivities, remember you're not alone. You're a part of a community driven by a shared passion - a passion for science. Your presence here is a testament to your commitment to learning, pushing boundaries, and being a part of something greater than yourself.

So, my fellow participants, let's seize this moment fully. Let's cherish the connections we make, the ideas we exchange, and the memories we create. Thank you for being a part of LISE 2023.







INFO SHEET

GET IN TOUCH WITH YOUR LUX BUDDIES VIA WHATSAPP

to get the latest news and to get <u>out of trouble</u> if necessary!

Mexico, Switzerland, Austria, Italy, Denmark: Daniela Arcone (+352 661 562 732)

Turkey, Nigeria, Tunisia, Bulgaria: Guillaume Trap (+352 621 478 834)

Belgium, Morocco, France: Sousana Eang (+352 621 653 158)

USA, Romania, Portugal, National participants: Luiza Andrade (+352 621 732 902)

CULTURAL NIGHT

Different country delegations are converging in Luxembourg with one objective: sharing!

During our cultural night, you will get the opportunity to meet your fellow participants, showcase elements of your culture and share a bit of your favorite food!

So let's make it an unforgettable evening, come well prepared, and make it lively and interactive!

BEAT SABER COMPETITION

Dance like no one's watching!

Throwing a stream of color-coded boxes at your face and turning your controllers into a pair of mismatched, off-brand lightsabers with which to slice and dice them in time to pumping electronic beats. Honing your skills to turn frantic flailing into precision swings is as satisfying as it is sweaty.

Do not forget to take part in this fun competition and burn the LISE dancefloor!

LISE BOOTH SETUP

It's getting serious! Booth installation is a serious matter! So suit up, make sure your posters and exhibition materials are ready, and contact us if you need specific technical requirements to display the perfect booth!

LISE is a public event attracting a wide array of like-minded people, science professionals, and VIPs! So come well prepared, rise and shine!

! IMPORTANT ! LISE

LISE Participants

Check your whatsapp for any important updates!



HOW TO JOIN THE CONVERSATION?

Enjoy performances by artists such as Racines Carrées, and a inspirational speech by Camilla Hurst, an FJSL alumni currently a PhD student at the University of Cambridge. Follow us on social media and join the scientific conversation with our hashtag #LISE2023

HELPDESK ON WHATSAPP



Scan or upload this QR code using the WhatsApp Camera to join this group

ACTIVITIES

VISIT OF THE SLATE MUSEUM LOCATION: HAUT MARTELANGE



Learn more about the 200 years old Slate Industry in Luxembourg: from the formation and extraction of slate to the finished product and its onward transportation. You will also experience the working conditions of the former Martelinger slate workers, including an exceptional journey into the underground mine. Please make sure to wear sturdy shoes (ideally hiking shoes) and a jacket (constant underground temperature of 9°C)!



STARGAZING IN THE CITY LOCATION: YOUTHHOSTEL LUXEMBOURG

Dr Hervé Lamy, Belgian Royal Institute for Space Aeronomy Dr Julien Meyer, Luxembourg Museum of Natural History Dr Olivier Parisot, Luxembourg Institute of Science & Technology

Enjoy this evening with a blend of astronomy and gastronomy. After presentations of our guests about their repective expertise (meteors, meteorites, and electronically assisted astronomy), you will have the opportunity to further discuss with them during diner. Ultimately, after sunset, you will be guided through the nightsky with the help of various instruments appropriate for stars observation in urban environments (radio detection of meteor showers, moon and planets through refracting telescope, electronically assisted refracting telescope). Even in case of cloudy weather, the meteors detection should be possible!

F.

EXPERIENCE SCIENCE WITH YOUR BODY LOCATION: FORUM CAMPUS GEESSEKNÄPPCHEN

by NAbiletc (Racines Carrées)

LOCATION: LUXEMBOURG CITY

societal impact through their business.

With Daniel Tesch, ULESS

better place for everyone.

"A poetic dance, a dynamic dance, an Olympic dance...". Holder of a Master's degree in "Motricity, Expression, Language and Health", the choreographer Nabil Ouelhadj is particularly sensitive to the question of transmission. The purpose of this workshop is to allow participants to experience, to live a moment of dance in its physical, mental and social dimension. Around the show "It's moving!" ", we offer an artistic, creative and playful moment enhanced by a unique scientific discourse between Art and Science.

DESIGN THINKING WORKSHOP LOCATION: BELVAL

With Koen Cloostermans, Digital Learning Hub

What is the concept behind human-centered innovation? What are the tools of collaborative work to solve complex problems? An engaging workshop to help participants define users needs and/or system needs, build prototypes to communicate-investigate-iterate their research, and embrace serendipity including "blissful mistakes" to break away from conventional thinking.



Es,

VISIT OF THE BLAST FURNACES AND **CITY OF SCIENCES**

LOCATION: BELVAL

A century ago, Luxembourg used to be one the largest steel producing countries in the world due to the South East region and its iron-rich soil. You will discover this glorious past and understand how cast iron/steel were produced while visiting the two last blast furnaces of the country. You will thus climb to a height of 40 meters (to the viewing platform) from where you will enjoy a spectacular view of the Belval distric, which has now become a university hub and technological center: "the City of Sciences". You will then take a tour in this brand new urban area, already renowned for the diversity and quality of its contemporary architecture, which blends in perfectly with the impressive industrial heritage.

Mobisciences only



The Social Business Incubator is a place for social entrepreneurs to gather, to exchange ideas and to work together. Set up by the Ministry of Labour, Employment and the Social and Solidarity Economy, it offers desk space, workshops and community events to entrepreneurs who are strongly committed to achieving a positive

The "Be a Social Entrepreneur" workshop will give you an introduction on how you, as well, could become a business owner whose primary purpose is not accumulating personal wealth, but instead tackling the major problems in today's society. Join us for some deep-hitting discussions on how we can make our world a



LASER GAME LOCATION: ETTELBRUCK

Unleash your inner Photon Ninja: Gear up for an electrifying adventure as you dive into the world of futuristic laser battles.

Whether you're a laser rookie or a seasoned pro, get ready to dominate the arena, outwit opponents, and embrace your inner laser legend! It's time to bring the game to life with lasers, laughs, and limitless excitement!





EXHIBITIONERS

"THE LUXEMBOURGISH LANGUAGE(S)" EXHIBITION

By Zenter fir d'Lëtzebuerger Sprooch (ZLS)

This exhibition invites visitors to engage with language and languages. Its title is purposefully ambiguous, and is meant to mirror the complex language situation in Luxembourg. The exhibition engages, among others, with the following topics: multilingualism, language varieties, historical aspects, language evolution, as well as the role of Luxembourgish in literature and the media. Several modules feature both audiovisual and participatory elements through which visitors can engage with their smartphones.You will also get to know more about Luxembourg, its culture, gastronomy and language(s) via an interactive ZLS quiz during the cultural night!





"MATHS PUZZLES" EXHIBITS

by Prof. Hugo Parlier Department of mathematics, University of Luxembourg

Play the addictive "Quadratis" game consiting of 16 puzzles packaged into an app. Each of them has hundreds, or thousands, or millions, or many billions of attainable possible color configurations!



DIGITAL AND ROBOTICS BOOTH FOR TEENAGERS

by Luxembourg Tech School

Let's empower the digital leaders of tomorrow by deluing into the digital realm via hands-on activities and learning how to apply technology in a real business or creative context!

DIGITAL AND ROBOTICS BOOTH FOR KIDS

by Kids Life Skills

Let's prepare our children for their future by giving them the skills they have to master in an increasingly digital world regardless of the professional path they may choose!



ASTEROID AWARENESS BOOTH

by the Asteroid Foundation

Lets promote worldwide awareness, understanding, and education about asteroid opportunities and risks and the emerging space economy!



"SCIENCE COMICS" EXHIBITION

By University of Luxembourg, DESCOM

This exhibition displays the newly released Volume 3 of the LUX:plorations comics series. These pieces are all made of entertaining and understandable stories around science and research with a connection to Luxembourg. They have been developed by a team of local young researchers and comic artists. Of course the real scientists featured in the comics are the true heroes of the stories; you will get to meet one them, Ms Sahar Niknam, on her hands-on VR booth during the open doors of LISE!



THE CREATIVELO

by Youth4Planet

The CreatiVelo is a Story-Vaccumer and Storyteller. It is a place to exchange ideas, hopes and fears. Tell us your sustainable story for a brighter future. Tell us your inspiring speech. Share with us your fears. Your earthbeat will travel the world with the CreatiVelo for a more sustainable planet.





MODERATOR

OPENING CEREMONY



Natalia Slioutova UPC Head of Secretariat

Opening Ceremony

BIO

Natalia Slioutova, currently working as Head of Secretariat at the Unified Patent Court (UPC), is a former FJSL staff member. From 2017 until 2019, Natalia was part of the amazing staff, who organised the Jonk Fuerscher Contest, the International Activities and also the formerly known as Expo-Sciences.

Since having left the FJSL, Natalia continues to volunteer at the FJSL organised events and has become the go-to person to moderate our ceremonies.

Appart from work, Natalia's hobbies include Art, LARP, Airsoft, and as you can see from her profile picture, is also a big fan of Cosplay. Head over to her instagram page, for more fun pictures.

Link to instagram: https://www.instagram.com/pandanat89/







MODERATOR

CLOSING CEREMONY

Lisa Burke Presenter Closing Ceremony

BIO

Lisa Burke is an experienced broadcaster having spent the bulk of her career presenting live television with Sky News, plus BBC, Channel 4, Fox News, many other Sky channels, RTE (Ireland) and RTL (Luxembourg). Her reporting has covered national and international assignments, documentaries and radio.

In Luxembourg, Lisa created RTL Today which has now become the biggest English news platform in the country. Now, she hosts and produces a weekly radio show (also available with video) and podcast: 'The Lisa Burke Show'.

Lisa is in high demand as a host and moderator, covering TED talks, Luxembourg Space Agency, European Space Agency, finance, health, entrepreneurship, tech, science, European Institution events and many more. She is a public speaking coach, and launched the first Presenting & Debating Society at the University of Luxembourg. Additionally, Lisa is a sought-after voice-over artist.

Whilst living in Abu Dhabi for two years, Lisa wrote for The National newspaper.

Other writing includes children's science books. Lisa has been a science consultant and author with Dorling Kindersley since 2005. She studied Natural Sciences at Cambridge University, gaining a double first. Her specialism was chemistry.

Lisa is on the Cambridge University Communications Working Group. She is also a board member for Angel Aid Cares, a Californian-based foundation raising aid for the care-givers of children with rare disease.

Lisa is a trained classical singer and pianist. She has two daughters.











Camilla Hurst PhD Student University of Cambridge **Opening Ceremony**

BIO

JONK FUERSCHER

Camilla is currently a PhD student at the University of Cambridge. Her research work in 'accelerating climate mitigation' explores the business opportunities across sectors that can accelerate the transition to a zero emissions future.

Her background is in Materials Science, with a Master of Engineering degree from the University of Oxford with First Class Honours. Her Master's thesis explored the role of composite materials in next generation battery technology.

Camilla enjoys communicating science to the public; she represented the South East region at the UK national final of the IOM3 Young Persons' Lecture Competition, after having won both the Oxford and South East regional heats. In 2022, she also won the 'Oxford Medal' for the best Master's research talk at the Department of Materials, University of Oxford.

Camilla grew up in Luxembourg, where she carried out several extracurricular science projects while in high school. These projects targeted various environmental sciences topics, including the effect of materials on bacterial growth in public places. She presented her findings at the Luxembourg 'National Jonk Fuerscher Contest', and subsequently went on to win prizes internationally in China, Europe, and the United States.



ALUMNI

INSPIRATIONAL SPEACH

Our own FJSL Almuni Camilla Hurst, will talk to you about her adventure participating in the National Jonk Fuerscher Contest, the prizes she won and what she is up to now, during ther PhD in Cambridge.

Enjoy this inspisrational speech during our opening ceremony, which will be followed by our cultural evening.

LINE UP

Racines Carrées **Closing Ceremony**

ÇA DÉMÉNAGE! CIE RACINES CARRÉES / NABIL OUELHADJ

YEAHI

The Show «ça déménage»

Research and experimentation of a hip hop dance around a trampoline which becomes a breath and a constraint to the danced movement accompanied by the musicality of the gestures. Unstable, "moving" and lively variation on canvas that gives the public an atypical vision of choreographic expression, bodies projected as if put into orbit, a moving scenography, an organizational hazard.

A dynamic, spontaneous and poetic urban dance which frees itself from any stereotyped aesthetic consideration and which engages and transcends so that Art is a window for all.



Øcieracinescarrees.com

LINE UP

GIAMBA **Opening Ceremony**

Beatboxing Artist

Giamba has been Beatboxing since the age of 12.

Ouer the years he got to perform with Artists like Q-Bert, Bauchklang, Foreign Beggars and loads of Luxembourgish performers and musicians. His main interest lies in playing and creating music, rather than Beatbox battles. Freestyle sessions with rappers or jam sessions with other musicians are the things that get his blood flowing. But he will also hype up the crowd before the main act, or beatbox the "Wilhelmus" for the Dukes entrance at the Fedil's New years reception. All in all he is very versatile with his skill and always keeps an open mind for new experimental projects.

ogiambasrcrm







USA

Mexico

Denmark

France

Portugal

Marroco

Nigeria



PROJECTS



PARTICIPANT NAME

Zeynep Leyla Akin

Hasan Efe Yelken

Pamela Ivie Adudu & Favour Chigozie Akamadu

Titilayo Tiaraoluwa Ajayi

Lissette Irene Torres Avelar, Héctor Gerardo Martínez Fuentes & María Fernanda Hernandez Amaro

Marco Díaz & Josafat Ramírez

Alicia Gambino

Mariam Chiatti & Mohamed Attia

Lorenz Hinterplattner, Markus Bollwein & Jasmin Schalli

Simon Köck, Faruk Alici & Moritz Burtscher

Demira Nedeva

Angelo Sigalotti & Gabrielle Zanutta

Céleste Delquié, Gabriel Misheletti, Lucile Savoldelli & Lola

Lucie Bataille, Gabin Portal-Carles & Marceau Xaille-Ous-

Alexandre Payen, Hugo Adam & Arthur Toma

Inês Cruz & Inês Morais

Dmytro Zatuornytskyi

Rayna Malhotra

Bianca-Mihaela Nemes

Daria Alice Ciobanu

Zoubida Youssefi & Mohammed Bamehdi

Maha Lamrabti & Douae El Masmouhi

Houda Laabassi & Brahim Moumou

Oussama ZaimU

projects

COUNTRY	PROJECT TITLE	PARTIC
Luxembourg	Evaluating the Efficiency of Hydroponic Farming	Kyna Bho
Luxembourg	How Memory Works	Shérine I
Luxembourg	Venom of scorpion can reduce the severity of Rheumatoid Arthritis	Sofia El I
Luxembourg	2020ForAll	Arnit Dey
Luxembourg	Which biodiesels made from the following vegetable oils: olive oil, sesame oil, sunflower oil, canola oil and corn oil combust the best?	David De
Luxembourg	Rainwater Harvesting	Sanaa Bl
Luxembourg	Studified - A software process for verifying student identities online	Avanti S
Luxembourg	Methods for detecting Telomerase in breast cancer diagnosis	Séléna E
Luxembourg	Effect of mould on us and products around us	Alexandı
Luxembourg	Evaluating the effects of acid rain in a controlled environment	Alexande
Luxembourg	Theory of Institutional Evolvement by Conscious Arbitrariness	Daniil Mi
Luxembourg	Machine Learning, an Ally in Breast Cancer Prediction	Federica
Luxembourg	Robot Control Simulation Using Deep Reinforcement Learning	Bartlom
Luxembourg	Impact of Artificial Intelligence on Today's Society	Keuin Fr
Luxembourg	A one-way glimpse into the world of black holes	Sofiia Ch
Luxembourg	Local Positioning System	Krzesimi
Luxembourg	The Beerobot & Beerocket	Gonçalo
Luxembourg	Marbles VR	Maxime
Luxembourg	SipTip	Theodor
Luxembourg	Mask Mission	Rebecca
Luxembourg	Cartographic rocket for Mars missions	Rodion Z
Luxembourg	Autonomous unmanned flying objects – Applications as solutions of contemporary issues	Lio, Bob
Luxembourg	Optimizing the altitude of a water rockets	Noémie

ICIPANT NAME

Bhandari ne El Hafidi El Hafidi Dey DelliZotti I Bhandari I Bhandari I Sharma I El Hafidi Indra Doroshenko Inder Lebedev Murzykaev ica Maestri Imiej Nowak

Chernolutska

mir Hyżyk

lo Fonseca

ne Buck

or Stanica & Gaspar Aruai

ca Kranjec & Giulia Viaggi

n Zaichikov

b & Joé Delli Zotti

e Rappenne

PRACTICAL INFORMATION

#BASICLUX

- ® Moien / Äddi
- Villmols merci
- [®] Gudden Appetit
- Ech heeschen (...)
- Wéi geet et dir?
- Wéi seet een dat op Lëtzebuergesch? Jonk Fuerscher
- Lëtzebuerg

Want to know what these mean? Go ask one of our national participants!

↓↓↓ DRESS CODES: for CLOSING CEREMONY, look stunning, get suited and booted. For SLATE MUSEUM: Hiking shoes and a Warm Jacket

EVENTS END BUT MEMORIES LAST FOREVER...

Make sure to stop by our **PHOTOBOOTH** and create some of your own memories of the 13th Expo-Sciences Luxembourg!

If you share them on your social media profiles, please don't forget to tag us! #LISE2023



@fjs.lux



Fondation Jeunes Scientifiques Luxembourg

Accommodation: Luxembourg City Youth Hostel, address and phone

HISTORY OF THE FONDATION JEUNES SCIENTIFIQUES LUXEMBOURG

1971

first national Jonk Fuerscher contest

1977

established under the form of an association

1992

creation of the foundation

> first edition of the 2009 international Expo-

On a national level: works closely with the Ministry of Education, the National Research Fund, the European Commission, the University of Luxembourg, and the Service National de la Jeunesse, to name a few

On an international level: founding member of MILSET (Mouvement International pour le Loisir Scientifique et Technique) and the Mobisciences programme

TIME ZONE GMT+1

The time zone in Luxembourg is GMT+1. All the information regarding schedules and timings in this booklet is set to GMT+1, so if you find yourself in one of the other 6 timezones that we have participants in, please don't forget to #dothemath.

HELP US CREATE BETTER

Organising events is a learning process - especially virtual ones!

Please take the time to fill out our SURVEY and share your feedback with us, so we can make the upcoming events even more to your liking.

FREE TRANSPORT

Luxembourg has free transport, download the "mobiliy app" and plan your journey around.

Sciences Luxembourg





We wouldn't be able to hold this event if it wasn't for the help of this wonderful group of people. Many thanks to each volunteer of the FJSL.









• Kevin Freitas

- Federica Maestri
- Ozgu Gumustekin
- Krzesimir Hyżyk
- Veneranda López Días
- Anna Molitor
- Lara Moruzzi
- Alex Muller



• Micaela Pereira Da Silva

• Raffaele Nanna

• Syluie-Anne Soares Pereira

• Jim Welter

• Natalia Slioutova

• Lucy Sackett

MEET D THE TEAM

LUIZA VADILO ANDRADE

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DANIELA ARCONE Project Coordinator +352 661 562 732 daniela@fjsl.lu

IMPRESSUM

GRAPHIC CONCEPT Büro Schwarzenberger **TEXTS** Daniela Arcone, Guillaume Trap, Visit Luxembourg, Luxembourg City Museum, National Museum of Natural History, University of Luxembourg, Minett Park Fond de Gras, CHATGPT **PHOTOS** FJSL, Edouard Olszewski ICONS Julie Conrad Design Studio

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GOVERNMENT FUNDING



LE GOUVERNEMENT DU GRAND-DUCHÉ DE LUXEMBOURG Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse



Fonds National de la Recherche Luxembourg

PHILANTHROPISTS





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KACHEN

LET'S MAKE IT HAPPEN











makert

SCHWEIZER JUGEND FORSCH SCIENCE ET JEUNESSE SCIENZA E GIOVENTŮ



social business incubator



