

December, 2016

NEWSLETTER

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Season greetings

The year has almost ended and it is the usual time to look back and make new plans. NSCF community is no different. I hereby thank all the co-writers of this Newsletter. I am happy that there are so many of you who are interested in reading this Nordic Paper ! This year has been a lot about collaboration. It is interesting that two words– collaboration and co-operation have the same meaning in many languages yet they really are a bit different. As we have discovered there is a lot of collaboration projects among our members and I hope that in coming months I will be able to let you all know about those. Our honourable board members have written what is special in our network.

In this Newsletter our scholars write about their trip . If you would like to visit one of our members this is the time to apply to our annual scholarship! Heureka and Experimentarium are opening their new premises and exhibitions. Also Tekniska Museet has been nominated to be the best museum in Sweden in 2016. Take a visit and enjoy the season!

Pilvi Kolk

Chairman of NSCF,
Science Centre AHHA, Estonia



„AHHA, Behind The Scenes“ exhibition

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Why being a member of NSCF is a good thing?

NSCF Board decided to bring out all the good reasons to be an active member of our Nordic and Baltic network...

The Nordic countries have many things in common and we are not so far away from each other. It is easy to meet and the time from the first meeting to working cooperation is quite short.

We have lots of opportunities to get money from the Nordic Council and other funding measures. Our educational systems are on the same level and we can develop educational programs together.

We can become more visible together because we are so many. To meet people from all the different countries once a year gives you a hint what is going on and what the next development phase is all about.

You become aware of your own institution when you gain insight into the work and organizations of others.

It is easy to find a SC that wants to rent exhibitions from you....

We cooperate with Vitensentret in Gövik, Innlandet

We have had travelling exhibitions in Bodö, Kristiansand, Oslo, Gövik, B, Tromsö.

We have had sessions together with people from Iceland- Lotta Johansson, Navet, Sweden

Heureka, the Finnish Science Centre, is a founding member of NSCF because we value networking, learning from others, and making a greater impact together.

Through the years we have made several collaborations with NSCF members. We have collaborated in co-producing exhibitions and educational programs.

We have toured our exhibitions in all Nordic countries. The communication with Nordic colleagues is exceptionally open and straightforward. For Heureka, NSCF provides a platform for meeting friends and colleagues and making new ones. We see lots of opportunities in working in the NSCF network.

Heli Ainoa, Heureka, Finland

For all science centres it is important to be inspired by what others do to make the best out of their own institution. You can get inspired from new themes for future exhibitions, you can get help to improve the ones you already have and you can buy, borrow or exchange exhibitions or elements of exhibitions to save time and money.

If you are a very big science centre, maybe your closest partners are other major science centres in Europe and big cities around the world but if you are a medium or a small science centre, it might be more beneficial to cooperate with the other NSCF members. The Nordic Science Centres are very different (thanks for that), but they also have a common platform of thoughts that makes cooperation easier.

In Økolariet we also participate in Ecsite but we have a much stronger cooperation with the other NSCF members. As an example we are at the moment trying to make a new developed play available to the rest of the NSCF members, as a result of the interest put forward among others members at the NSCF 2015 annual meeting.

At the annual meetings there are typically 40-50 participants – a number that makes it easy to talk with everybody and discuss matters of mutual interest, a task that is more difficult at meetings with a thousand participants.

Niels Norgaard, Okolariet, Denmark



Annual Conference overview

By Pilvi Kolk, Chairman of NSCF

NSCF Annual Conference took place in Oulu, Finland in a beautiful science centre called “Luuppi”. The conference theme was “Let’s play” and, indeed, we played a lot. As usual for the NSCF conference, we did a lot and saw many places in the city. We visited the Art and History Museum, the Oulu Game Campus and also the Oulu University and City Hall. We had marvelous speakers who programme, design and play games. Playing is the best way to learn new things and science centres are known for their competence in this field. The bravest of us had a chance to climb down from Tietomaa’s tower and the luckiest of us stayed “alive” during the Murder Mystery dinner. Most importantly, we had a lot of opportunities to talk to each other and get to know each other better. Our Nordic and Baltic cooperation was strengthened in a playful manner. Thank you Sampo and Jonna-Marleena for hosting us in Finland!

See you all in Iceland next year!



Short report from the lucky winners!

By Marianne Eik and Petra Hellgren, Umevatoriet, Sweden

This is the year it finally happened! The year Umevatoriet got a scholarship from NSCF and got to travel to the big science centre AHHA in Tartu, Estonia. We were super-excited!

Umevatoriet is a small science centre in the north of Sweden and we work – just like AHHA, with people of all ages. We guide groups and school classes into the fabulous world of science. Umevatoriet's staff has worked for many years with this and we felt lucky to have been given the opportunity to get new ideas from a much bigger science centre.

At AHHA Science Centre we met Kairi Põldsaar who took very good care of us. First we took a tour around the house and we were impressed by the way it was organized with its engineering workshop and large areas for exhibitions.



There are also rooms for the staff to have workshops with the visiting children. (We pretended to be kids ourselves and made our own soap!). The very elegant planetarium with its see-through floor created a feeling of being in space, like in a spaceship. At Umevatoriet we work a lot with

astronomy, so visiting AHHA's planetarium was a good experience for us.

AHHA also has a *Science Theatre* and we attended two of the shows, *Chemistry of Burning* and *Amazing Air*. This was truly amazing! The staff was great at engaging the audience and explaining what happened during the experiments. Such a show is definitely something we would like to do at Umevatoriet.

As they say, it is the small details that make all the difference – everywhere in AHHA one can find fascinating things that catch the visitors' attention and work as a trigger to start interesting discussions among the public, such as large cubes with the elements and so on. AHHA's skilled staff has a playful and professional approach that impressed us. It is obvious that they love their work and that the creativity flows.

Before going home we stopped in Tallinn for a few days and enjoyed visiting the Energy Discovery Centre and some of the other Museums.

When in Tartu we took the opportunity to visit other exciting places such as the Old Observatory, which was a really nice place with a lot of history. They showed us around the building and told us about how they worked. It was exciting to see Struve's Geodetic Arc and the old telescopes, which played a big role in history. They also had a mechanical planetarium, which was beautiful.

We got really inspired when we saw how they worked! All together we had a very nice trip and learned a lot about how other science centres work with our common mission: getting the young generations interested in Science.



NSCF Scholarship!

If you found our this year's scholarship story interesting, you may apply for the NSCF Scholarship too!

For applying: please send a motivational letter (1 A4) describing to which of our member centres you wish to go and why, specify the estimated budget (travel costs and accommodation) and make sure to include a support letter from your own organization's director. The size of the scholarship is 1000€ for one year. This sum could be handed out to a single applicant or divided between multiple applicants. Please note that in the latter case, the amount of funding per person is less than 1000 €.

Deadline: **21 January 2017**



News from members

The new Experimentarium

By Kim Gladstone Herlev, Executive Director, CEO

The new Experimentarium will open its doors to the public on the **26th of January 2016**. The exhibition area will make up 11.500 m² in total divided into three indoor floors and two outdoor areas and more than 95% of the exhibitions will be new. Based on 25 years of experience, we believe that we have developed an innovative exhibition concept that will bring Experimentarium into a new era.

Experimentarium is “the national science centre of Denmark”. It plays an important role in the effort to strengthen the interest for science and technology in the Danish society. The aim is to contribute to increase the demand for the scientific and technical educations and to strengthen young people’s motivation for choosing a scientific or technical career. The effort has to start early on and it never ends. Therefore, Experimentarium is communicating science and technology to everyone.

In the endeavours to strengthen this important effort it has been decided that Experimentarium should be expanded and renewed. The construction of the new Experimentarium was initiated early 2014 based on a



Experimentarium from the outside – the walls are covered with re-circled aluminum from cans and lids from bottles

successful fundraising campaign. The new building will be truly spectacular and will contain unique facilities; an enormous 3.500 m² outdoor exhibition area in two levels on the roof of the building, an additional indoor exhibition floor, a lot of space for special exhibitions. Facilities for conferences, courses and meetings, workshops and labs for schools and families, cafés both inside and outside, restaurant and shop, and an infrastructure that makes it part of the experience to move around in the science centre.

The new Experimentarium is built on the exact same site as the former science center at Tuborg Harbour approximately 5 km north of the city centre and 13 km from the airport.

Experimentarium’s mission. Experimentarium is a private foundation with a non-profit purpose. Our mission is to create an interest for science and technology. We want our guests of all ages to wonder, examine, and explore, and we want to provide the desire to learn more. It is a mission that is only becoming more and more important as society is changing. The future belongs to those interested in science and technology.

Throughout 25 years, we have developed and refined our core competence – creating involving experiences for children at all ages. We are convinced that the senses are the most important learning tools and therefore, the body is the central element of our communication. Experimentarium is an expert in communicating science and technology and we know how to translate incomprehensible scientific material to easily understandable messages.

Basis for transformation: The goal of Experimentarium is to give our visitors experiences that could be basis for transformation. A transforming experience is characterized by creating changes that make people disregard earlier ideas and conceptions. It prepares us to act and maybe change our routines.

News from members

We want to make science and technology relevant for our visitors by revolving around their own lives and interests. We want to touch the emotions, give experiences that can be felt in the body, and allow the visitor to create histories about their experience with science. We want to do that by showing science and technology from new provoking and surprising perspectives.

The concept and content: The new Experimentarium has the city as its mental frame of reference. The city is the frame for everything that can be experienced in Experimentarium and we use the city to create cohesion between exhibitions, activities, and other communicational offers.

Our guests are met by a spectacular science centre building, creating big expectations for what awaits inside. We have a burning desire to meet these expectations and open up with exhibitions and activities on a very high level. Therefore, we have made an ambitious master plan. The plan contains 16 new exhibitions along with new workshops, shows, demonstrations, and other scientific activities. The decoration and interior will also communicate science.

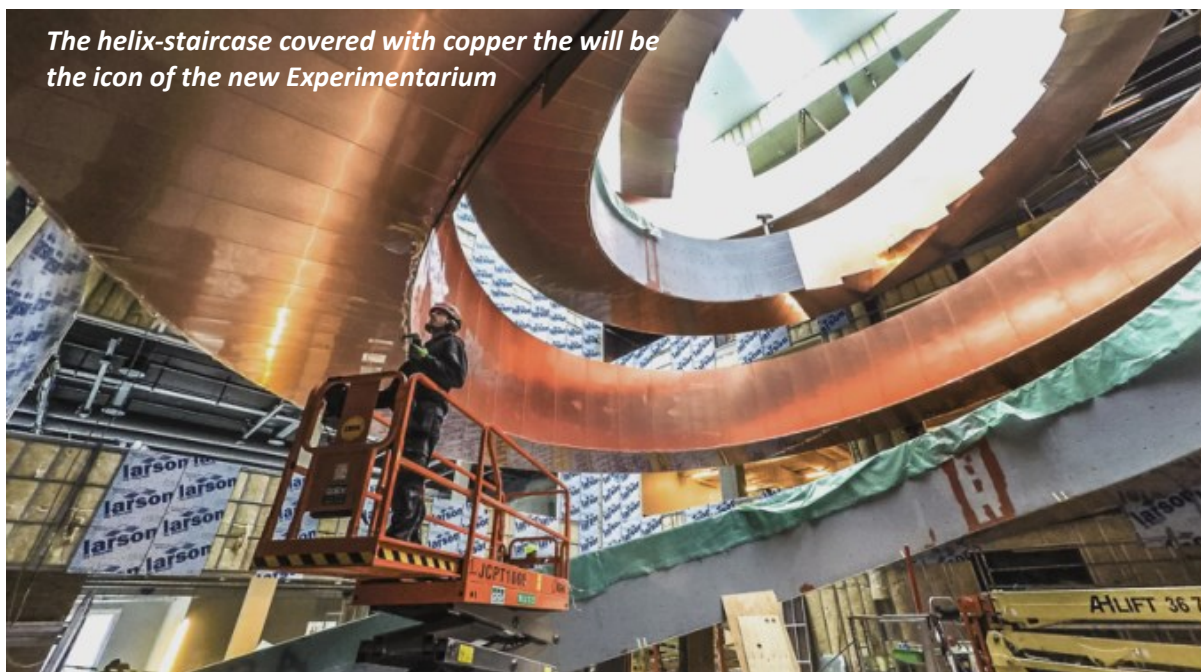
15 of the new exhibitions will open in January 2017 together with the new building. The themes of the

exhibitions are: The Harbour; The Beach; The Factory of Ideas; The House of Inventions; The Energy Zone; The Interactive Cinema; The Maze of Light; The Construction Area; The Tunnel of Senses; The Bubble; The Brain Teaser; Under the Skin; The Yeast Cell; The PULS Square; Cirkus Fysikus; The last exhibition – The Little City – is for children between 1 and 5 and will open a year from now.

In figures

The new Experimentarium will be almost twice the size of the old:

- 8.000 m² permanent indoor exhibition area in three levels
- 625 m² temporary indoor exhibition area
- 1.350 m² for meetings, conferences, educational lessons etc.
- 3.500 m² outdoor exhibition area in two levels
- 16 new exhibitions
- 7 labs for workshops and meetings
- Business area with 8 meeting rooms
- Conference hall for 500 people
- Several additional meeting rooms
- New restaurant and cafés (indoor and outdoor)
- About 500.000 visitors a year, decreasing a bit over the years



The helix-staircase covered with copper the will be the icon of the new Experimentarium

News from members

Universeum Science Café hosted by Carl von Linné

By Mikael Östblom, Project Leader, Research Communication and University Collaboration, Universeum Sweden

On the "International Science Center and Science Museum Day", November 10th, dedicated to the Global goals for sustainable development, Universeum arranged a science café on Goal No. 15: Life on land. The event was arranged in collaboration with University of Gothenburg and Chalmers University of Technology, when the researcher Martin Persson, presented and discussed his research on deforestation and the threats to the rainforest's biodiversity. In addition the world famous researcher Carl Linnaeus (Carl von Linné) acted as a host for the café and gave a historical view of biological diversity research!



Martin Persson from Chalmers' Department of Energy and Environment and the participants, such as students, researchers and other interested in the topic, discussed how the 15th Sustainable Development Goal could help to save the forests. The South American rain forest exhibition at Universeum and its 25-meter high artificial kapok tree served as a link to the Science Café talk. After a short introduction by Martin about the target on stopping deforestation and the causes of rain forest loss, such as timber production, oil palm plantations, pasture clearings and soy cultivation, a lively conversation started with the interested participants.

- I loved the format, to be at Universeum rather than in one of the university buildings. It becomes more relaxed when sitting on tree stumps instead of chairs, said one of the participants.

The global goals were also highlighted during the day by a historical science theatre on goal 15 when a student from Chalmers acted as Carl Linnaeus and told Universeum's visitors how he had organized and systematized biodiversity and how upset he was about today's widespread extinction of species. Linnaeus took part in the science café and acted as a host, and also met other visitors at the exhibitions, including next to the sloth named "Linnaeus's two-toed sloths," whom he gave the scientific name.

How do the visitors react when they suddenly encounter an 18th century researcher at Universeum?

-It's very different, some instantly play along as if it's the actual person, and it often ends in very hilarious replica shifts and it's very fun. Others see it more as an icebreaker to discuss the historical research and contemporary theories, says Chalmers student Erik alias Linneaus.

What's the advantage of the theatre format for communicating scientific knowledge to the visitors?

- I think that a theatre makes the story become more real and it is easier to understand that the researchers whom we can easily raise to the skies were real people having problems and peculiarities as everyone else. Take Galileo, for example. There is a huge difference between reading about how he had to sit most



of his life in house arrest for his discoveries, compared to meet the "same" person standing in front of you complaining about his situation. The idea is to sow a seed of curiosity so that visitors think a step further and perhaps google the researcher

afterwards. Then they hopefully both had fun and become a little wiser.

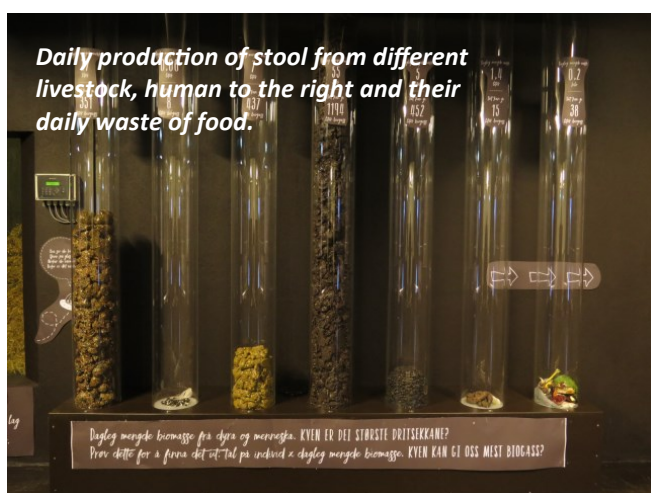
The aim of the science theatre is to arouse curiosity to science through historical storytelling with a humorous twist. The aim is also to show that discoveries made in the past have importance in our daily lives today, and that current research will be important for our future life.

News from members

New research on how to learn more when visiting science centres

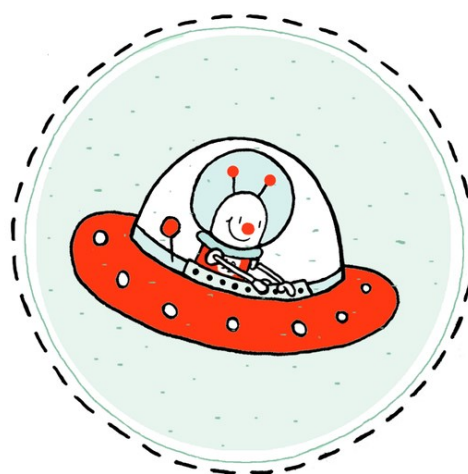
By Anne Jorunn Frøyen, Jærmuseet Vitengarden/Science Farm

In February 2017 Jærmuseet's Vitengarden (Science Farm) will open a new exhibit about making biofuel from manure and food waste. How are fertilizers like manure essential for plant growth whilst the disadvantages are that it can pollute estuary's? And how can farmers, by producing biofuel, both provide renewable energy and help reduce emission of greenhouse gases?



It is our pleasure that we have welcomed master student from NTNU (Norwegian University of Science and Technology) in science education to join the process of planning the exhibition. As an experienced teacher, he has been able to give us some essential advice. He is researching if the students learn more from a visit to the museum, if they have been working with the subject at school prior to the visit or not. Two classes from the same school and grade 10 were invited to the new exhibition and our program about climate changes and renewable energy sources. One of the classes had had lessons on the subject before the visit. Both classes were pre-tested, they joined the same program at the science centre, and were post-tested two weeks later. The master student has not yet finished analyzing the material but it indicates that although everyone learned from the visit and enjoyed it, there was a significant difference. The class that had pre-knowledge learned a lot more. The master student is going to do a second post-test in two months. We look forward to sharing his results, and to the final report.

Learning is a social process. Our master student has documented by film how the pupils interacted in the exhibition. This will be analyzed, and we will use it to improve the experience of the exhibition.



The bacteria guiding the visitors, Super Bacteria

Upcoming events

Open Science Conference 2017, 21-22 March 2017, Berlin, Germany

Dedicated to the Open Science movement, this 4th international conference of the Leibniz Research Alliance Science 2.0 will provide a unique forum where researchers, librarians, practitioners, politicians, and other important stakeholders can discuss and exchange their ideas and experiences. **More information:**

<http://www.open-science-conference.eu/>



World symposium on climate change communication, 22-24 February 2017, Manchester, UK

The symposium will be a truly interdisciplinary event, mobilising scholars, social movements, practitioners and members of governmental agencies, undertaking research and/or executing projects on climate change communication across the world. It will focus on "communicating climate change across society", hence providing a platform for reflections on climate change communication research and practice. **More information:**

https://www.haw-hamburg.de/fileadmin/user_upload/FakLS/07Forschung/FTZ-ALS/Veranstaltungen/PDF/SYMPOSIUM_ON_CLIMATE_CHANGE_COMMUNICATION-3.pdf



Research and Science Communication, 6-7 March 2017, Berlin, Germany

Organised by the European Academy for Taxes, Economics & Law, this seminar will provide information on communicating research in a European and International context efficiently. Its purpose is to help universities or research institutes to increase their visibility and attractiveness. **More information:**

<http://en.euroacad.eu/events/research-and-science-communication-s-1503-mc4/>

Call for proposals: Eusea Annual Conference 2017, 29 - 30 May 2017, Leuven, Belgium

"Beyond HORIZONS – Framing the Future" is the motto of the Eusea Annual Conference at KU Leuven, Belgium. Help frame the future of public engagement in Europe and beyond, discuss upcoming funding policies with stakeholders from the European Commission, and get a glimpse of what's new and upcoming in the fields of science-society dialogues and public engagement strategies even beyond HORIZON 2020. **Submit your proposal** by 2 January 2017

More information:

<http://www.eusea.info/annual-conference/>



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