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NEWSLETTER

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The Autumn News

For many science centres and museums the end of September means celebrating the Researchers' Night. This year's RN was special in many ways. Most of us celebrated the 10th anniversary of organizing this amazing event. In Estonia the first ever Science Show International Cup took place. I had the honour of representing NSCF in the board of juries during this three day event. Our member Heureka won the competition!

In this autumn Newsletter you will find two articles from this year's NSCF scholars about their trips to our member organizations. NSCF scholarship is a unique way to travel to science centres and museums and learn how our international colleagues are working. Next year's scholarship will be handed out in the end of January, pay attention to the application process!

NSCF Award for outstanding services for NSCF is given out bi-annually. The first one was awarded to Mr Nils Hornstrup from Experimentarium. He was the founder and one of the first chairmen of NSCF. This year's Award will be given out at the Annual Conference.

Our annual conference is coming closer and we will be hosted by wonderful team of Okolariet in Denmark. The theme of the conference is having fun in science centres. I am more than sure that most of us have been accused of being too much like a Tivoli. Should we be ashamed of being a fun place to spend time with your family? Or should we take the critics seriously? Come and find out yourself in November!

Pilvi Kolk

Chairman of NSCF,
Science Centre AHHAA, Estonia

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Exciting talks and events at the NSCF annual conference 2015 at Økolariet in Denmark

2. -4. Nov.

By Niels Nørgaard, Økolariet

Denmark

Two prominent keynote speakers will address the theme of the conference: "How much fun is acceptable in a serious science centre".

Keynote speaker Prof Per-Edwin Persson

The first keynote speaker Professor Per-Edvin Persson is one of the world's leading experts on science centres and museums. He was Director of Heureka, the Finnish Science Centre, from 1991 until 2013. Under his leadership Heureka developed into one of the major science centres in the world, circulating exhibitions on four continents and in 25 countries. Today Professor Persson does worldwide consulting and coaching for science centres, science museums and non-profit cultural organizations.



Professor Per-Edvin Persson will give his talk at the start of the conference (Monday at 13:15)

Keynote speaker Bart Knols

We are very proud that we have succeeded having the prominent Dutchman Bart Knols as our second keynote speaker. Already as a biology student, Barts Knols fell passionately in love with Africa, its people, and its nature and in 1989 he put his focus on malaria mosquitoes and studied their flight behavior in a plume of human odor inside a small wind tunnel. Bart Knols is fascinated by working in the dark, with insects that feed on his blood and who are responsible for more than a million deaths per year.

Mosquitoes are Barts Knols' passion but he also hates them. Although he admires their beauty he detests what they do to mankind and would like to eliminate them from the surface of the earth. He is contributing to solving the global burden caused by malaria and dengue but he loves doing it in a fun and creative way. Do not miss the opportunity to hear an interesting and a talk that is, for sure, both serious and funny.



Mr. Mosquito making a TED-talk.

“Excuse me there is a mealworm in my cake” is the title of our next exhibition. On the first night at the conference we want to prepare you for a future where insects are an integrated part of your evening dinner. Besides having the opportunity to taste the food of tomorrow we have hired two of the rudest waiters from the famous Danish stand-up Comedy group “Cafe Kølbert” to entertain you during your dinner. You are up to experience some serious fun.



Waiters from Café Kølbert in action

The Vikings are alive at the new visitor and experience centre in Jelling

In the 10th century, at the highest point in the landscape west of Vejle, the kings Gorm the Old and Harald Bluetooth created a monument that is unique in the Nordic countries. The oldest feature are the remains of huge ship-shaped stone settings and two rune stones, which are often called “Denmarks’s Certificate of Baptism”. On the second day of the conference, we will visit the brand new centre build around this setting. A centre that offers unique and super modern sensory experiences. Get inspired as to what to do next at your centre.



From “Home of the Vikings”

NSCF Annual Conference “How much fun is acceptable in a serious science centre”

From 2th to 4th November at Økolariet, Denmark

Register for the conference at okolariet@vejle.dk as soon as possible. Please write your name, the institution you represent and the address for the invoice.

The conference fee is 200 €. The price includes conference facilities, meals, transportation and admission to Royal Jelling and Spinderihallerne.

The conference will be held primarily at Økolariet, Dæmningen 11, 7100 Vejle and also at Torvehallerne A/S, Fiskergade 2-8, 7100 Vejle.

Don’t miss these events !

You still have the opportunities to join the conference in Denmark. Just send an e-mail to okolariet@vejle.dk with your name, your place of work, and the address where we can send the invoice (200 €)

Looking forward to seeing you!

Niels Nørgaard
Økolariet
Denmark

The NSCF Annual Scholarship – Xciters at Experimentarium

By Linda Lindberg

I am new in the science centre world. I have only been working at Molekylverkstan Science centre for a year now. Before that I worked as a science teacher for over 15 years. Every year I met students who, for different reasons, did not find school interesting, stimulating or even meaningful. After meetings, action plans, extra teacher-time, etc., some of the students got their "school motivation" back, but many did not. I often felt like there has to be a different and better way of doing this. But I never got around to figure out what this different, better way, was.

In October 2014 I had the opportunity to attend the Annual explainers' conference at the fantastic science centre Navet. There I listened to the Pecha Kucha "*What can Science centre do for the school weary student?*" with Karina Goyle from Experimentarium, Denmark. I was very impressed by their work.

They let school weary students come to Experimentarium for three days, with a VIP-treatment, to learn an amazing and fascinating experiment. A couple of weeks later the students came back to Experimentarium a second time to prepare a classroom demonstration. The student then went back to school, to his/her own class, or sometimes to a class of younger students, showed his/her experiment and

explained what happened and why. Coming back to school as the expert, as the one who knows the answers, made the student stronger. Many of the students who entered the program started to find school more interesting and meaningful again.

May this be the solution that I had been looking for, for so long? I was fascinated and wanted to learn more about this program. Maybe Molekylverkstan could start up something similar here in, Stenungsund, Sweden? Therefore, I applied, and was granted the NSCF annual scholarship to visit Experimentarium, talk with the explainers and learn more about how they work with these students.

I visited Experimentarium on a warm and sunny day in the beginning of July. Karsten Madsen, project coordinator, met with me and gave me the tour in Experimentarium. At the moment, Experimentarium is building a new science centre, and have therefore moved to a temporary exhibition area. Although it is temporary, it is still a very exciting place. I liked their new exhibition PULS very much. Here families can join up as a team and try out different pulse rising challenges. Lots of fun!

Karsten and I sat down and we talked more in detail about how they have planned and worked with the program for school weary students. They call the program Xciters Digital. Again, I was very impressed by their work. The Xciters project group have put a lot of work in planning and executing the project. They have really thought this through.



Karsten Madsen, Experimentarium

So how does Xciters Digital work?

Xciters Digital is a chance for school weary students to get a positive break from ordinary school. At Experimentarium they are no longer “the students with difficulties”.

On the first day at Experimentarium, the students learn about what makes a movie really good. Working in pairs they also get an experiment that they have to learn to do themselves. Then they film the experiment with a high speed camera and edit the film to make it educational and interesting. At the end of day every pair shows their film to other groups. No feedback is given.

During day two and three the students get to improve their films. They learn how to explain what happens and why and how to do it in an interesting way. A very important part of day two and three is the ability to give and take feedback from each other. Many of the students are not used to, or comfortable with talking in front of others. By filming and editing themselves the students get a chance to train to talk in front of others, although not live.

Parallel to the students’ training, their teachers get to learn about the Xciters method of learning and plan what to do in school until next time. Teachers joining the students at Experimentarium is a requirement for the schools who want to enter the program.

During the days at Experimentarium the students get free lunch, fruit, cookies and tea/coffee. They are allowed in the staff areas and are treated with respect as any other employee. Experimentarium have Pilots, often University students, to teach the Xciters students. These Pilots are often quite young and the Xciters students find them easier to talk to than their ordinary teachers, who are often a bit older. The Pilot becomes a friend as well as a teacher.

After day three the students go back to school for a couple of weeks. Depending on what their teacher has planned for them they can, during this period, improve their film even more, they may show the film to their class or the lower grade students.

Back at Experimentarium, for three more days, the students get a new experiment to learn to do, understand and explain. Then film it with high speed camera and edit it into a fantastic movie. On the last day it is show time. All pairs of students show their films and get feedback from the others. This new film is, of course, much better than the first one. Being the expert of an experiment the students now go back to school to show the film for their class and maybe even do the experiment live.

In the written plan for Xciters there are goals for primary and secondary target groups, detailed description of teaching methods and how to film in slow motion, what role the teachers from participating schools should take, and which learning goals the students should achieve. They also have a target group analysis, evaluation plan and risk analysis. All of this is available on Experimentarium’s website for anyone to use. That is fantastic.

On the website you can also find an Evaluation report on Xciters Digital by Helene Sørensen from Aarhus Universitet. The report shows that the Xciters program has been very successful. All of the goals for the project have been fulfilled. A high percentage of the students participating in the program found it fun, they thought the content was interesting and it boosted their self-confidence.

After being to Experimentarium and, after that, having a warm and sunny vacation (I was not in Sweden!) I am eager to try to start up a version of Xciters here at Molekylverkstan. We are a very small place with only four persons working full time, but I am sure we can find a way of doing this, with a little help from Stenungsund municipality. A program this successful must be tested!

I want to give my thanks to Pilvi Kolk and the Members of the Management Board for giving me the opportunity to do this trip. And thanks to Experimentarium and especially Karsten Madsen for taking the time to show me what Xciters is all about.



News from members

Heureka's new exhibition takes a grip on risk

By Heli Seppälä

Heureka, Finland

*Opening in the beginning of October, the new **To Risk or Not to Risk?** exhibition at Heureka challenges visitors to think about and test the ways in which they take risks. Eye-opening and interactive exhibits demonstrate what is meant by "risk", how people relate to uncertainty, daring and facing risks together.*

Every day, we all face minor and major risks in our lives, whether we are aware of them or not. In each risk situation, we make a decision to act in a certain way. What things affect those decisions? How do we face risks alone or together with others? What is the definition of "risk" in the first place? In the exhibition, visitors will see scientific explanations of risk-taking and the mathematics behind probability calculations, as well as learning about risk-taking and risk protection.

For example, visitors can test how well male and female drivers of various ages do in tests measuring safe driving. It is also interesting to experience the effect of alcohol impairment goggles (simulating 1.5 permilles of blood alcohol concentration, i.e. three times the legal limit for driving) on simple tasks like entering your door code or finding a keyhole. Electric roulette gives people an opportunity to test their own appetite for risk.

The exhibition is a joint production with Universcience in Paris and the Pavilion of Knowledge in Lisbon. Study materials and events for the exhibition have received support from the Henry Fordin Säätiö foundation.

In addition to the new *To Risk or Not to Risk?* exhibition, your ticket gives you admission to the

other current exhibitions at Heureka: Children's Heureka, Heureka Classics, the exhibits Wind in the Bowels, About a Coin, Intelligent City and Under Cover! as well as the planetarium shows.



To Risk or Not to Risk? runs at Heureka from 3 October 2015 to 4 September 2016.

The Secret World of Moths - world premiere in Heureka 18.12.2015

The Secret World of Moths is a magical journey to the unseen world of moths and other wonders of the macroscopic world. Using 3D X-ray tomography we shed light to the hidden world of insects and explore their way of life in a way that has never been done before.

Geographically the film spans from the Arctic Circle to the Equator. Observing these two extreme environments helps us learn about and understand the diversity and complexity of the world of insects and our fragile existence on planet Earth.

Director, cinematography, script: Hannes Vartiainen and Pekka Veikkolainen

Music and sound design: Joonatan Portaankorva

Production: Pohjankonna Ltd. / Hannes Vartiainen and Pekka Veikkolainen in co-operation with Heureka



Photos: Heureka, The risk exhibition

News from members

Researchers Night at Vitensenteret Innlandet

By Karen Stampen

On 25th September over 300 children between the ages of 7 and 15 filled up the Science Centre, Vitensenteret Innlandet, in conjunction with the annual Researchers' Night.



The evening began with a spectacular Science Show adapted to this year's theme, where the youngsters met Mr Spruce, the Farmer, the Forestry Worker, Miss Ovum and Miss Wheat.



Subsequently, the children were escorted into the world of research, where they were given an insight into some of the exciting research projects that are taking place in the Innlandet region.

They met Per Y. Steinsholt and Annbjørg Kristoffersen from Bioforsk and were able to test and hear about the fascinating research being carried out on food plants. From research circles at Gjøvik University they met Anne Kristin Kvitle and Peter Nussbaum from The Norwegian Colour and Visual Computing Laboratory, Terje Ødegården from Simlab and Jonny Nersveen from Universal Design.

The event was very successful and we are already looking forward to next year!



News from members

What kind of empirical study shall schoolchildren from all over the World conduct on the World Science Centre Day on March 14, 2016?

By Asger Høeg, Experimentarium, Denmark

Member of ASTC's Global Committee

Imagine that schoolchildren from New Zealand, Australia, China, Malaysia, India, Europe, USA, Canada and South America, next year on March 14 (The World Science Centre Day) conduct some scientific measurements on the spot of Earth where they live. It could be a detailed measurement of how the weather is: Temperature, atmospheric pressure, CO₂-amount in the air etc. Or it could be a measurement - a very exact one - of Earth's magnetic field on the spot where the schoolchildren live. The results of the schoolchildren's measurements should be useful in real research. And of course it should be rather easy and cheap to conduct the measurements. My question to my FB-friends is: Do you have an idea of what we could suggest the schoolchildren to measure so that the collected data could be used in real research?



I put this question on my Facebook Profile. I received three suggestions:

-Let the schoolchildren measure the length of their shadow.

-Let the schoolchildren conduct a fitness test. The children can help each other to conduct the measurements. The results could be linked to information about the country's sports profile, gender policy and impact from the parents.

-Let the schoolchildren conduct measurements on particle pollution (the amount of aerosols in the air). The University of Leiden is leading a European Project (ISPEX) where citizens in Amsterdam, Copenhagen, Berlin, Rome, Beograd, Barcelona and Athens participate. The project is described here: <http://www.ispex-eu.org/>. To make the measurements, you need an iPhone and a Spectrometer. An App – named ISPEX – has been developed by the University of Leiden and can be downloaded for free. The schoolchildren shall use the ISPEX-App and a Spectrometer to perform the measurements of aerosols in the air. It could be interesting to have that kind of measurements from cities all over the world.

The question is: **Do the Nordic and Baltic science centres have suggestions as to what kind of measurements schoolchildren should conduct next year on The World Science Centre Day? Your ideas are warmly welcome!**

Please contact: [Asger Høeg@experimentarium.dk](mailto:Asger.Høeg@experimentarium.dk)



News from members

Science Show International Cup 2015

By Pilvi Kolk

Photos by Kristina Kravets

AHHAA Science Centre, Estonia



Poland's show

The very first *Science Show International Cup* was held in three different cities around Estonia: Tallinn, Pärnu and Tartu. During those days 12 spectacular shows took place. The contestants were from Poland, Estonia, Finland, USA, Scotland and Ukraine. The Cup included one very special and untraditional science show format – the silent visual show in which no words could be exchanged with the audience and the coordination of experiments is paramount!

The competition was very hard as all the contestants were prepared with amazing experiments and theatrical shows. The jury consisted from two main juries Mr. Priit Ennet, who is the chairman of Estonian Association of Science Journalists and Ms Pilvi Kolk, Board Member of AHHAA and Chairman of NSCF. Every town had local guest juries, one of whom was from a theatre and the other was a science

communication expert. Also, the audience gave their feedback on their favorite performers.

The winner of the competition was announced on the



Ukrainian team in action

Researchers' Night. The winners of the competition were a Finnish team from Heureka. The performers Jessica and Heko did magnificent performances in both categories.

NSCF gave also out a special prize for an outstanding performance for Poland's team. They did the most cheerful shows.

The Science Show International Cup took place for the very first time, hopefully the future the competition will be hosted by another country next year.



*Upper photo: the winning team on fire
Lower photo: the audience and juries*

News from members

The Thirst for Science Festivals is Far from Subsiding

By Helin Haga

Photos: Kristina Kravets

AHHAA Science Centre, Estonia

This year's Researchers' Night Festival (www.researchersnight.ee), starting all over Estonia from 20 September and ending on the 25 September with the European Researchers' Night was a smash hit!

On the 10th year of the science festival, which is the biggest in the Baltics, the ultimate dream was realized – the festival beat all visitor, media coverage and feedback quality records. The festival attracted about 50 000 visitors, was featured in over 300 media spots and was ranked as the number one family outing event of the end of September.

The festival featured over 400 events, which could be enjoyed not only in Estonian but also in English, Russian and Latvian.

Coincidentally, the MMS (the so-called 'Miracle Mineral Supplement') scandal that shook Estonia, reached its peak at the very week of the festival. This enabled the organizers to shed some serious light on the importance of trusting



Teddy Bear Hospital

proven scientific methods over non-science and urged the visitors to ask even the most excruciating of questions from the researchers who performed at the various events.

Among the most popular events were such activities as the drive-in cinema screenings accompanied by comments by researchers and specialists; the Teddy Bear Hospital where about 400 cuddly patients got cured during one day; the science bike shows that managed to stop by most kindergartens and schools in Tartu and the Science Show International Cup 2015, where 12 shows were delivered to full auditoriums in 3 different cities of Estonia.



Autopsy workshop



Mini Maker Faire and Science on wheels



The most remarkable contribution to the festival was the extraordinary participation of schools – a total of 34 primary and secondary schools from almost every county of Estonia. In addition, all the biggest universities of the country offered their students special programmes throughout the week, strengthening their ties with alumnae and alumni (who were the guest lecturers), the local community (including the parents and grandparents) and even the local governments.

Judging by the experience, it is fair to say that the well worked-in format of science festivals as a fun and approachable meeting place for researchers and the public is far from past its glory days. Quite the contrary, it is full of energy for the future!

News from the field

ECSITE Directors Forum in Plzeň

Industrial heritage and corporate social responsibility. The industrial city of Plzeň, hometown of the renowned beer and ŠKODA factory, is a perfect setting to tackle this topic: here stakeholders from the private and public sector are working closely together on a long-term development strategy. One of the many signs of Plzeň's dynamism is its title as 2015 European Capital of Culture. Registration is open for ECSITE full members.



Upcoming events

Association of Science-Technology Centers (ASTC) conference, 17-20 October, Montreal, Canada

The conference will be hosted by the Montreal Science Centre. ASTC 2015 will offer more than 100 concurrent sessions organized around 11 different topic areas, as well as 10 preconference workshops.

More information: <http://www.astc.org/conference/>

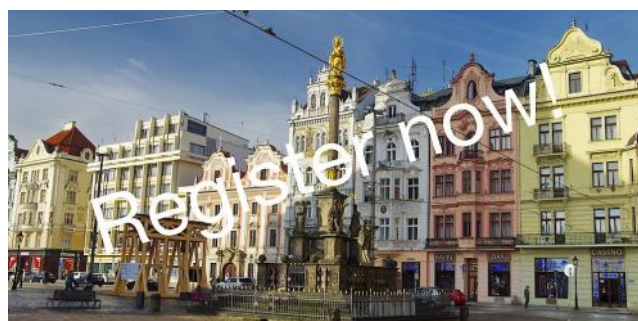


23rd Annual Conference of the Network of European Museum Organisations (NEMO), 5-7 November, Plzeň, Czech Republic

This year's theme is: "Re-visiting the educational Value of Museums – Connecting to Audiences". Next to projects from all over Europe, the conference will invite speakers from all over the world. How do museums in Asia approach education and how do they train museum educators? What are the environment museums in Ibero-America working on when developing their educational profile? What does a "Magnetic Museum" in the US do better than the others? Register by 26 October.

More information:

<http://www.ne-mo.org/index.php?=548>



NSCF Annual Conference in Denmark

2-4.11 in Økolariet

"How much fun is acceptable in a serious science centre?"



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