

---

# EuroPhysicsFun

An introduction to EPF:  
a running start

---

# Welcome everyone

# Introduction to EPF

---

- General information
- Some results from last year
- Plans for next year

# General information

---

- The show physics field
- Goals
- Methods
- Participants
- Who we are
- What we can do

# Show physics from the inside

---

- Very diverse
- Performers of many backgrounds
- Each with unique knowledge / skills
- => It pays to communicate

# Show physics from the outside

---

- No central point of contact
- This translates to lost opportunities
- => A central contact point is needed
- Underestimated and underappreciated method of science communication
- => Promotion of the physics show concept is needed

# Community building goals (‘Internal’)

---

- To set up forums for the show physics community
- To stimulate community-building among the physics shows

# Communication goals ('External')

---

- To be a central entry point for other agencies interested in show physics / physics shows
- To convince the world that show physics is a good idea

# An analogy

---



Physics show



EPF



Physics show

# An analogy

---



Physics show



EPF



Physics show

EPF goal: to build the phone wires of the physics show community

# Method

---

- Small organization, recently re-started
- No resources for independent projects
- No aspirations for independent projects
- Therefore: what should our method be?

# What does EPF have?

---

- A universal 'brand'
- A storehouse of experience
- Contacts in many countries
- A chance for bundling resources

# What does EPF *not* have?

---

- The resources to set up projects on its own
- The ambition to duplicate work already done by the physics shows

# Method

---

- EPF projects are a cooperation between the network and a specific physics show
- EPF brings: the name, the blueprint, connections to announce the event
- The show brings: the manpower and resources to do it

# Participants

---

- 27 groups
  - ~250.000 visitors / year in total
  - ~500 show physicists



# The people

---



Kees Herbschleb



Celia Voetmann



Kaido Reivelt



Jelmer Renema

# Results from this year

---

- Internal goals:
  - Show Physics 2008
  - Regional conference
  - Conference visits
  - Communication structures
- External goals
  - Show Physics in the media
  - CERN
- Other
  - New members
  - FP7 proposal

# Show Physics 2008

---



# Internal: Show Physics 2008

---

- Show Physics is the EPF flagship product
- A forum in the most direct sense
- Organized by Kaido Reivelt, Estonian Science Bus 'Suur Vanker'

# Internal: Regional conference

---

- Organized by Science on Tour (Enschede)
- Goal: make specific plans at local level
- Result: common theatrical training with science theater Pandemonia
- Result: agreement on common promotion
- Result: 3 new participants in EPF



# Internal: Communications

---

- Goal: set up electronic communication structures
  - Mailing list
  - Newsletter
  - Website

# Mailing list

---

- Via Google Groups
- Mostly one-way communication (announcements)

# Newsletter

- 700 direct recipients
- Currently only announcements, but this will change

## EuroPhysicsFun

### Late registration for Show Physics 2008

The late registration round for Show Physics 2008, the annual conference of EuroPhysicsFun has been opened. At this moment, there are still a handful of places available.

The conference will take place in Tartu, Estonia, from the 8th to 12th of April 2008. Registration for the conference is open to all persons active in a science show group. For details on registration, contact Kaido Reivelt: [kaidor@fi.tartu.ee](mailto:kaidor@fi.tartu.ee).



# Website

---

- Used to be simple ‘flat’ pages hosted by Wordpress
- During the year we built a new site
- Version 1.0 is now done
  - Centered on participants
  - Many new features, including integrated search function for shows, clickable map

# For the first time: the new EPF website!

## EuroPhysicsFun

*On the frontier of science edutainment*

[Home](#) [About](#) [Participants](#) [Projects](#) [Resources](#)

[Home](#)

[About](#)

- [Contact](#)
- [People](#)
- [News](#)

[Participants](#)

- [Regions](#)
- [Map](#)
- [Find Participant](#)

[Projects](#)

- [Calendar](#)
- [Show Physics 2007](#)
- [Show Physics 2008](#)
- [Newsletter](#)
- [Showphysics.org](#)

[Resources](#)

- [Files](#)
- [Images](#)



### Welcome to EuroPhysicsFun

EuroPhysicsFun (EPF) is a cooperative project between European physics shows, which works towards forming a community of science shows. Currently, EPF represents 27 show physics groups in 14 countries. In total, these groups reach about 250.000 people per year.

### Latest News

The latest 3 news items from [europhysicsfun.wordpress.com](http://europhysicsfun.wordpress.com):

[2008-03-07 14:50] [EuroPhysicsFun at CERN](#)

Four of the physics shows from the EPF network have gotten a writeup in the CERN Bulletin, the CERN magazine. These four physics shows will be presenting their show at CERN during the open days, on the 5th and 6th of April, 2008.

[2008-03-07 14:42] [EuroPhysicsFun in latest issue of EPN](#)

The latest issue of Europhysicsnews, the periodical of the European Physical Society, featured a two-page article about the physics show phenomenon, Show Physics 2008, and EuroPhysicsFun.

[2008-02-15 13:52] [EPF at CERN](#)

Fizika Express, The Aarhus Physics Show, Cirkus Naturligvis and Stichting Rino will be performing shows at the CERN Open Days, on the 5th and 6th of April.

# The new EPF website

## EuroPhysicsFun

*On the frontier of science edutainment*

[Home](#) [About](#) [Participants](#) [Projects](#) [Resources](#)

[Home](#)  
[About](#)

- [Contact](#)
- [People](#)
- [News](#)

[Participants](#)

- [Regions](#)
- [Map](#)

[Projects](#)

- [Calendar](#)
- [Show Physics 2007](#)
- [Show Physics 2008](#)
- [Mailinglist](#)
- [Showphysics.org](#)

[Resources](#)

- [Files](#)
- [Images](#)



### Google Map of participants



Map data ©2008 Tele Atlas, AND, Europa Technologies - [Terms of Use](#)

# External: Show Physics in the media

---

- Goal: spread the concept of physics shows in the general physics community
- Method: write both in-depth articles about show physics and generate media attention

# In-depth article:

---

- Chain Reaction Experiment Group conducted a survey among physics shows
- Goal: to identify methods and practices common among physics shows

# The result: EPN 39/1

**europysicsnews**

**European Physical Society (1968-2008): the early years**  
**Swiss Physical Society celebrates its 100<sup>th</sup> Anniversary**  
**Ptychography & lensless X-ray Imaging**  
**Quantum atom optics with bosons and fermions**  
**Annual Index - Volume 38 - 2007**

**39/1**  
**2008**  
 Volume 39 - number 1  
 Institutional subscription price:  
 99 euro per year



 **European Physical Society**



NEWS FOR NEWS

## SPREAD OF SHOW PHYSICS IN EUROPE »» EVENTS

**K. Susman<sup>1</sup>, J. Bajc<sup>2</sup>, J. J. Ranema<sup>3</sup>, C.T. Harbichlieb<sup>4</sup>, I. Drovansk-Olankić<sup>1</sup> and C.H. Vootmann<sup>1</sup>,**  
<sup>1</sup> Faculty of Education, University of Ljubljana, Kardeljeva ploščad 16 - SI 1000 Ljubljana - Slovenia  
<sup>2</sup> Leiden Institute of Physics, Leiden University - PO. Box 9504 - 2300 RA Leiden - The Netherlands  
<sup>3</sup> Faculty of Mathematics and Physics, University of Ljubljana, Jadranska 19 - SI 1000 Ljubljana - Slovenia  
<sup>4</sup> Institut für Physik und Astronomie, Aarhus University, Ny Munkegade, Byg. 1520 - 8000 Aarhus - Denmark

In recent years, physics shows have come to the forefront of attention as a means of bridging the gap between scientists and the general public. Because of their small-scale nature they offer a possibility to establish valuable intensive communication between the scientific community and the general public. The performers of the shows try to gain the attention of the spectators by performing experiments, which demonstrate interesting physical phenomena explained through the adventurous stories, humour and music. EuroPhysicsFun (EPF) was founded in 2004 to stimulate the exchange of ideas and best practices between show groups [1].

**EuroPhysicsFun network**  
 The EPF network consists of 28 physics shows from 14 countries (Fig. 1). In total, these groups reach about 250,000 people per year. In 2007 the central organisation moved from Aarhus in Denmark to Leiden in the Netherlands. The goal of the network is to stimulate the exchange of ideas and information between the member groups. In this manner the knowledge and experience gained by each particular group are made available to the community.

The main forum where the member groups share their knowledge is the yearly conference *Show Physics*. The most recent of these conferences was held in Leiden in March 2007. Over 15 groups from various European countries, as well as from further abroad, were present.

An important goal of *Show Physics* is to exchange information on demonstrative experiments. This is done by means of theoretical sessions. For these, the groups bring their equipments to the conference, so that they can demonstrate their experiments to each other. At the end of the conference, the experimental scientists are provided with a demonstration in the context of the host city.

The most recent conference was a huge success. A comment which reflects the general atmosphere after the conference was: *"... I show is a lot we can learn from each other and great things can be done if we work together every now and a while. I've heard all of you speaking enthusiastically about this. I hope that this feeling remains [...]"*

The next *Show Physics* conference will be held in Tartu, Estonia, April 8-12 2008. Registration is still open.

Besides organising a yearly conference, the network also functions as a repository for knowledge on show physics. Participants, who have experienced many physics shows firsthand, form a community which is ideally suited to set up new physics shows. Furthermore, the network also seeks to stimulate cooperation between physics shows on a national level. This is done by means of regional meetings, in which the physics shows from one area meet to discuss issues, which are especially relevant to their region.

**Main aims of the shows**  
 To resolve the organisation of show physics groups in Europe and to establish what their respective goals are, we have performed a survey among the participants of the EPF network.

The primary goal of the physics shows is popularisation of physics. Another common goal is to demonstrate that physics can be a lot of fun. An important goal of the shows is to increase the interest of the youngsters to study physics and to choose natural sciences as a subject in secondary school.

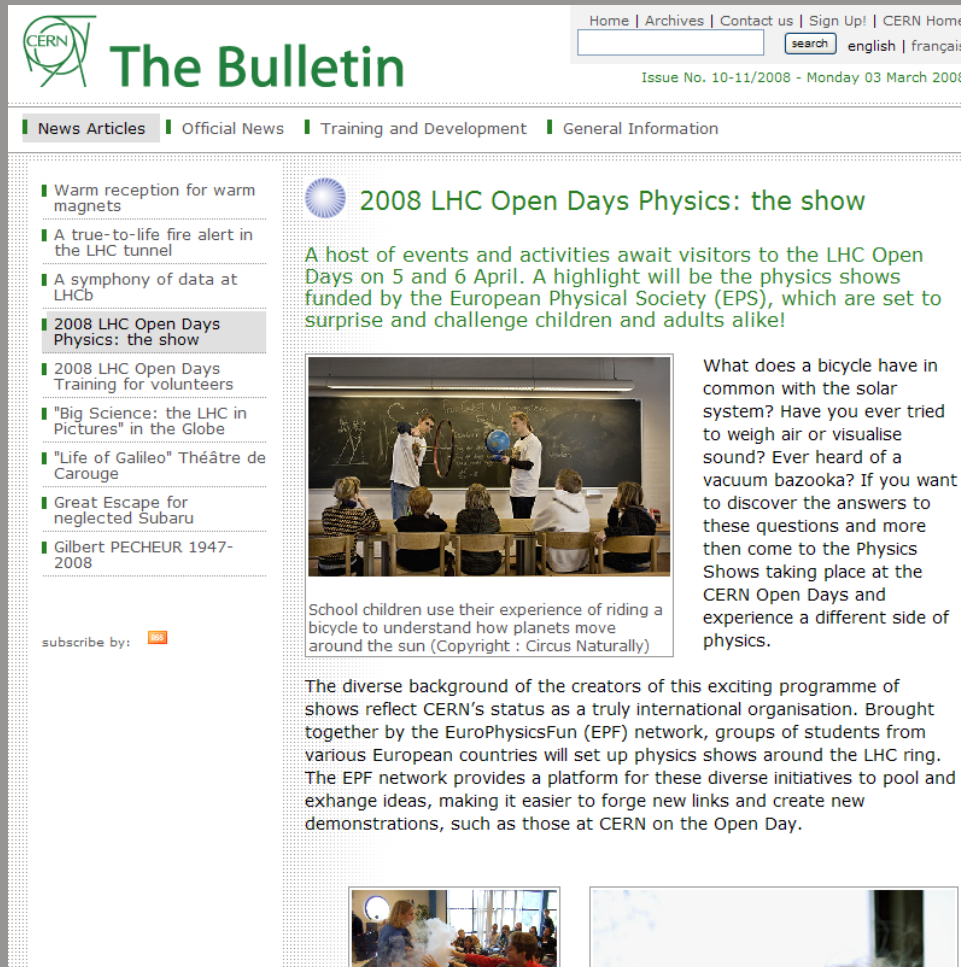
Besides these usual aims, there are many groups which have also other goals, such as increasing enthusiasm for physics and explaining in general, demonstrating and explaining everyday phenomena, and demonstration of the importance of physics to modern technology. Other frequently indicated goals are: popularisation of science and research, demonstration and explanation of special physical phenomena




8 • volume 39 • number 1

europysicsnews

# But also:



The screenshot shows the CERN Bulletin website. At the top left is the CERN logo and the title "The Bulletin". To the right are navigation links: Home, Archives, Contact us, Sign Up!, and CERN Home. Below these is a search bar and language options for English and Français. The issue information is "Issue No. 10-11/2008 - Monday 03 March 2008". A horizontal menu contains "News Articles", "Official News", "Training and Development", and "General Information".

The main article is titled "2008 LHC Open Days Physics: the show" with a blue sun icon. The text reads: "A host of events and activities await visitors to the LHC Open Days on 5 and 6 April. A highlight will be the physics shows funded by the European Physical Society (EPS), which are set to surprise and challenge children and adults alike!"

Below the text is a photograph of school children in a classroom setting. A teacher is pointing at a chalkboard while students look on. The caption below the photo says: "School children use their experience of riding a bicycle to understand how planets move around the sun (Copyright : Circus Naturally)".

To the right of the photo is a text block: "What does a bicycle have in common with the solar system? Have you ever tried to weigh air or visualise sound? Ever heard of a vacuum bazooka? If you want to discover the answers to these questions and more then come to the Physics Shows taking place at the CERN Open Days and experience a different side of physics."

Below the photo and text is another paragraph: "The diverse background of the creators of this exciting programme of shows reflect CERN's status as a truly international organisation. Brought together by the EuroPhysicsFun (EPF) network, groups of students from various European countries will set up physics shows around the LHC ring. The EPF network provides a platform for these diverse initiatives to pool and exchange ideas, making it easier to forge new links and create new demonstrations, such as those at CERN on the Open Day."

At the bottom of the article are two small thumbnail images: one showing a person in a blue shirt and another showing a person in a white shirt.

On the left side of the page, there is a sidebar with a list of news articles:

- Warm reception for warm magnets
- A true-to-life fire alert in the LHC tunnel
- A symphony of data at LHCb
- 2008 LHC Open Days Physics: the show
- 2008 LHC Open Days Training for volunteers
- "Big Science: the LHC in Pictures" in the Globe
- "Life of Galileo" Théâtre de Carouge
- Great Escape for neglected Subaru
- Gilbert PECHEUR 1947-2008

At the bottom of the sidebar is a "subscribe by:" button with a small orange icon.

- CERN Bulletin
- Local newsletters
- And many others...

# External: Conference visits

---

- Goal: to make the physics community aware of physics shows
- Method: to contribute to a physics conference an item relating to physics shows

# External: Conference visits

---

- EPF @ GIREP
- GIREP: int'l physics education conference
- EPF represented by Chain Reaction Exp't (Slovenia)



# External: Conference visits

- EPF @ ICPS
- Informal student conference
- Presented poster, showed experiments



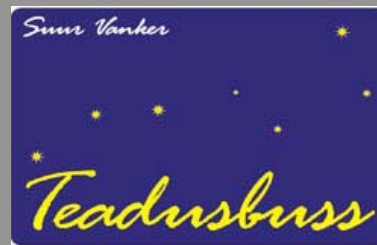
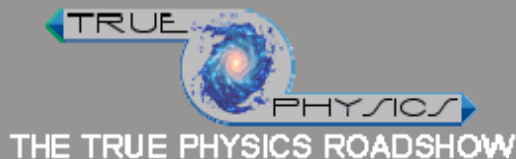
# External: Visit to CERN

---

- 4 physics shows performed at CERN last weekend
- Cirkus Naturligvis, Aarhus Physics Show, Fizika Expres, Rino Foundation
- This needs to be evaluated

# Other: New participants

- True Physics Project (Newport, Ireland)
- Fusion and Plasma Road Show (Copenhagen, DK)
- Science Bus (Tartu, Estonia)
- FRISIC (Fribourg, Switzerland)
- Physics show Gdansk (Gdansk, Poland)



# Other: New participants

---

- Paradox Show (Kharkiv, Ukraine)
- Mobile practicals (Wageningen, Netherlands)
- Stichting Techniekpromotie (Eindhoven, Netherlands)
- TU Delft (Delft, Netherlands)



# Plans for next year

---

- Communication structures
- Conference visits
- Show Physics in the media
- New members
- Show Physics 2009

# Communication structures

---

- Newsletter is getting noticed (keep)
  - Now also with news from the shows
  - May 1<sup>st</sup> next deadline
- Mailing list is barely used (change)
  - Suggestions welcome
- Website (evaluate)
  - Expand with more material

# Conference visits

---

- 1 SC-conference, 1 student conference
  - PCST-10
  - ICPS 2008

(GIREP is in Cyprus)

# PCST-10

---

*Bridges to the future* (June 23-27, 2008), Malmö & Copenhagen



Above giving you the chance to expand your network [...] you will have the opportunity to be involved in communication assignments and dilemmas which by their nature are controversial and with an ethical edge.

# PCST-10

---

- Our abstract: *EuroPhysicsFun - A network of physics shows from all over Europe.* (Celia Voetmann)
- *“For a better understanding of hands-on physics, we would like to show how [...] the groups in the network work by bringing some of the experiments.”*
- Go there and do physics shows, if possible also outside of the talks sessions
- We are looking for people interested in participating

# ICPS 2008

---

- International Conference of Physics Students
- Informal 1 week conference of students from across Europe
- In Krakow, Poland, 6<sup>th</sup>-13<sup>th</sup> of August



# ICPS 2008

---

- Workshops for the students at ICPS
- Teach people experiments
- Encourage people to start shows
- If all goes well, also at ICPS 2009
- We are looking for people interested in participating

# Show physics in the media

---

- Seize opportunities as they come
- Write another article
- There is much more demand for this than you would think

# New members

---

- Not a working goal, more of a ‘thermometer’ of how we’re doing
- New members are always welcome:
  - Automatic notification of EPF events
  - Coverage on the EPF website
  - Participation in common projects
  - To register: contact us

# Other

---

- Find a proper legal form
- Becoming an entry point for international show events (e.g. CERN)

# Announcement

---

- We are looking for someone to organize *Show Physics 2009*

# Why organize *Show Physics 2009*?

---

- You can send more people
- *Show Physics* Footprint
- Deepens your contacts with the physics shows
- Ensures *Show Physics* will continue in future years
- We have a plan

# These activities need you!

---

- Show Physics 2009
- Workshop @ ICPS 2008
- Presentation @ PCST-10
- Regional activities
- New ideas

# And lastly:

---

- Europe is big, so now that we are all together, we would greatly appreciate your feedback
- Wish you all an interesting and productive conference

# Conclusion

---

Thank you for your attention