

WG “Explaining PP to Lay Audience”

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“IPPOG Wisdom Collection” convener: Barbora Bruant Gulejova

Preparation for 17th IPPOG meeting, 22-25 May 2019, GSI, Germany

IPPOG Wisdom Collection

Introduction:

We agreed that this WG meeting will be dedicated to the development of the “IPPOG made” project: “IPPOG Wisdom Collection”, which was proposed already at 12th IPPOG meeting at CERN in 2016:

https://indico.cern.ch/event/573645/contributions/2321475/attachments/1345962/2086762/IPPOG_WG_Explaining_PP_Hot_Topics_CERN_2016.pdf (see snapshot from WG report below)



IPPOG collection of PP explanations / stories for laymen

(Barbora)

- IPPOG is a great source of ideas how to explain the complex subjects of PP to the laypeople, students, etc.
- In form of little stories, images, anecdotes, trick how to explain, ideas how to visualise things, analogies...
- All this great materials are worth being:

- 1) Collected
- 2) Shared
- 3) Published
- 4) Offered as a tool!



Little book



CALL for inputs to all IPPOGers! – please, send to Barbora!

Concept:

Idea: Create a book/e-book with the best IPPOG recommended explanations, analogies, metaphors, animations and examples... on how to explain the complex PP issues to lay audience.

Audience: **PP outreach community** (everybody who wants to explain these issues to public or students, politicians...or convince media or decision makers, why it is important and interesting)

Other themes to tackle: include also the arguments to be used for media, decision makers, when they are putting into question the funding of research projects and its relevance. The best stories about the applications of PP in the real life will be also included (this will be provided by other WG on “Outreach of Applications for Society”).

Analogies and their limitations:

Include also limitations of the explanations and analogies – explain when they are not valid anymore and give recognition „suggestion from XY“.

Often our analogies fail miserably (Higgs boson at the party etc. – see page 4 of “[Newsletter No.4](#)”), but this failure can be also used to explain how science works. Everybody has a picture of microscopic world, but try to visualise subatomic world (not so easy)!

Illustration of scientific process: Understand physics - Build model - Refine understanding - Go to better analogy.

Format:

- text, images, animations, videos... (for animations, we might consider to work with swiss company COMSOL specialised in physics animations, who might offer some animations to us as In-Kind Contribution (to be negotiated – dialogue already started by Barbora))
- length of the contribution: 0.5-1 page (TBD)

Proposal from WG: try to get **TED** as a partner for IPPOG (for explanations of different topics)

Proposed working plan:

- 1) WG agrees on topics to be tackled and logical structure of the collection
- 2) Persons will commit to write up particular contributions (deadline – Fall 2019 IPPOG meeting) – serious assignments will be presented at the end of the meeting!
- 3) All committed persons will have produced their inputs by the following Fall 2019 IPPOG meeting.
- 4) These will be collected these and store to common place visible to the group (Barbora)
- 5) Contributions will be peer-reviewed within the WG, especially by conveners and IPPOG chairs
- 6) Compile the collection (Barbora) and iterate with conveners and WG
- 7) Edit the collection and ensure its coherence (Barbora)
- 8) Work on the design and final publication preparation (Barbora)

Topics and structure:

Proposal is based on:

- IPPOG reports since 2016, especially from this WG discussions and all related topics and reported at IPPOG meetings (Physics for everyone...) – see [resume here](#)

- [IPPOG newsletters](#) (see relevant snapshots at last pages of this [resume](#))
- Proposed and agreed structure of the new Resource database

TOPICS: **From 44 to 16**

- 1) **MATTER, PARTICLES AND UNIVERS (KNOWN PHYSICS)**
 PARTICLES AND THEIR INTERACTIONS
 COSMOLOGY
 HIGGS
 ANTIMATTER
 QUARK-GLUON PLASMA
 NEUTRINOS
- 2) **EXPLORING THE UNKNOWN (BEYOND KNOWN PHYSICS)**
 SUPERSYMMETRY
 DARK MATTER
 DARK ENERGY
 EXTRA DIMENSIONS
- 3) **TECHNOLOGIES and EXPERIMENTS**
 ACCELERATORS
 DETECTORS
- 4) **PARTICLE PHYSICS AND SOCIETY**
 WHY FUNDAMENTAL RESEARCH
 INTERNATIONAL COLLABORATION
 APPLICATIONS & SPIN-OFFS
 PEOPLE BEHIND THE SCIENCE

Question to WG: Do we want to follow this logic / structure? Or we start by “basic concepts” and continue with “what’s new” as discussed at 13th IPPOG meeting (see [WG report slides](#) and [report](#) – part 3.3) and outlined in page 4 of “[Newsletter No.2](#)”, in which case is not the same...

First proposal of topics and structure (Barbora): to be worked on by WG!

Please, check here, think about it, propose improvements and don’t hesitate to sign up as volunteer!

https://docs.google.com/document/d/1XG_QaKNUJknL9qOYbPixrgoNMsw40jygu5cjHJCPURQ/edit

One more idea proposed:

We might get inspired by initiative which recently started in Slovak main newspaper, where the scientific community is asked their opinion about different subjects which might be of interest of the general public and are usually leading to biases, stereotypes and wrong beliefs. Maybe IPPOGers can also tackle some questions, which would have actually quite an overlap with “IPPOG Wisdom Collection” and always feature them at the main IPPOG website.

Other subject to discuss:

Periodic table as this year is a year of periodic table. See materials from H-P on this [here](#).