
WG: Interplay of particle physics with neighbouring fields

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WG: Interplay of particle physics with neighbouring fields

Three meetings held ([1st](#), [2nd](#), [3rd](#)):

General view:

- A **diverse and prosperous exchange** with neighbouring fields is essential for the **growth and further development** of particle physics

Includes:

- Exchange of ideas, methods, technologies
- Expertise exchange, person-power
- Collaboration over scientific disciplines

Neighbouring fields (NON-exhaustive)

- **Methodological neighbours:** *interplay of methods, tools, techniques*

statistics

computer science

accelerator technology

etc.

- **Subject neighbours:** *research field similarities, interplay of research questions*

nuclear physics

mathematics

etc.

astroparticle physics

cosmology

- **Spin-off neighbours:** *applications of particle physics*

medical physics

instrumentation

industry

etc.

Types of interplay

- **Knowledge exchange:** *Exchange of ideas, methods, technologies*
 - Learning from/teaching neighbouring fields through e.g. papers, outreach
 - Adjacent to **WG: Communicating the importance of particle physics**
- **People exchange:** *Expertise exchange, person-power*
 - Changing career path between fields
 - Training inside/outside particle physics, moving out/in
 - Alumni network?
 - Adjacent to **WG: Career prospects and ECR leadership**
- **Cross-disciplinary collaboration:** *Collaboration over scientific disciplines*
 - Exchange/collaboration with neighbouring subjects with aligned science goals
 - Adjacent to **WGs: Future experiments (colliders & beyond)**

White paper - guiding questions

- **Motivation:** From the ECR perspective, what are the major benefits of interplay with neighbouring fields?
 - Benefits for particle physics
 - Benefits for neighboring fields
- **Main body:** How can ECRs support and enable a rich and prosperous exchange with neighbouring fields?
 - People exchange
 - Knowledge exchange
 - Cross-disciplinary collaboration
- **Bonus:** What is needed from seniors for next couple of years?
- **Other:** *all input welcome!*

White paper - draft statements to be expanded

- A **diverse and prosperous exchange** with neighbouring fields is essential for the **growth and further development** of particle physics.

To achieve this we should **support**...

- ... **experts** who move between disciplines
 - ... the import and export of **ideas, tools and technologies**
 - ... **cross-disciplinary collaboration** between neighbouring fields with overlapping research questions
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- **Other:** *all input welcome!*

Next WG meeting

First white-paper WG meeting

- This afternoon, 15:00-16:00 ([zoom-link](#))
- Summary of morning's discussions
- White paper discussion
 - Establish text skeleton
 - Define tasks and designated responsible contributors
 - Set internal deadlines

Everyone welcome!

Thanks

Questions?

Comments!

Anything we missed?