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Code and papers: computing publication patterns in the LHC era

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Publications in scholarly journals establish the body of knowledge deriving from scientific research; they also play a fundamental role in the career path of scientists and in the evaluation criteria of funding agencies.

This presentation reviews the evolution of computing-oriented publications in HEP following the start of operation of LHC. Quantitative analyses are illustrated, which document the production of scholarly papers on computing-related topics by HEP experiments and core tools projects (including distributed computing R&D), and the citations they receive. Several scientometric indicators are analyzed to characterize the role of computing in HEP literature. Distinctive features of scholarly publication production in the software-oriented and hardware-oriented experimental HEP communities are highlighted. Current patterns and trends are compared to the situation in previous generations' HEP experiments at LEP, Tevatron and B-factories.

The results of this scientometric analysis document objectively the contribution of computing to HEP scientific production and technology transfer to other fields. They also provide elements for discussion about how to more effectively promote the role played by computing-oriented research in high energy physics.

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