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Publication in scientific journals: the role of HEP computing

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Journal publication plays a fundamental role in scientific research, and has practical effects on researchers' academic career and towards funding agencies. An analysis is presented, also based on the author's experience as a member of the Editorial Board of a major journal in Nuclear Technology, of publications about high energy physics computing in refereed journals.

The statistical distribution of papers associated to various fields of HEP computing (simulation, data reconstruction and analysis, online computing, grid computing etc.) published in representative journals is critically analyzed.

The relative contribution of HEP computing is evaluated with respect to published papers in other domains: articles on computing in other closely related physics disciplines, like nuclear physics, space science and medical physics, and on hardware developments for high energy physics experiments.

The statistical results hint to the fact that, in spite of the significant effort invested in high energy physics computing and its fundamental role in the experiments, this research area is underrepresented in scientific literature. HEP computing seems also to be largely absent from the current debate on Open Access publishing in scientific research.

The implications of the picture emerging from this analysis as a perception of computing in high energy physics as a technical service rather than a scientific research domain are discussed, and recommendations for a more effective presence of HEP computing in scientific literature are proposed.

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