# Editorial

# A look into our non-primary formats

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**We discuss the different formats for publishing non-primary research that are currently supported by *Nature Computational Science*.**

At *Nature Computational* Science, in addition to primary research, we also publish a variety of non-primary article types. These formats are not intended to report on a novel empirical research study or original and previously unpublished research findings; instead, their goal is to examine the latest developments of a specific field, highlight noteworthy primary research articles, and express points of view on issues surrounding research, thus offering a high-quality, curated forum to foster discussion and collaboration in computational science. Here, we discuss these different formats in detail and clarify the purpose of each of them.

Review Articles are balanced and authoritative scholarly surveys of recent developments within a research field, written by experts on the topic. Reviews do not focus on the work of just a single laboratory, or the authors' own work, but should comprehensively survey recent work, and potentially relevant conflicts or controversies, in an equal way. Although the discussion should be balanced, the authors can still take a specific viewpoint on the topic. This format can also be used to highlight ongoing challenges and the approaches that have been taken to address them, while emphasizing the opportunities for further advancements in the future.

Perspectives are similar to Reviews in that they discuss recent advances within a given research area. However, Perspectives tend to be narrower in terms of the topic, focusing on a smaller subset or a particular challenge of the field. In addition, the tone of a Perspective is more forward-looking, and should suggest paths forward to overcome challenges and advance the state of research in the field. In a Perspective, the authors can advocate for one side of a research controversy, and they may also focus on the work of one (or a few) groups that have impactful research contributing to that point of view. In this way, Perspectives, while still scholarly surveys, can be more opinionated than Reviews.

On the other hand, a Comment, while similar in tone to a Perspective, is a shorter and more provocative format, and one of our most flexible ones in terms of topic. Comments are used to provide a personal perspective on a matter, but, unlike Perspectives, they are typically written in a more non-technical style. These pieces are used to cover a range of issues related and relevant to computational science research and audience, including scientific, commercial, ethical, legal, societal, or political concerns, and they often introduce new points of view, community guidelines, or propose calls to action for a specific problem.

Correspondences — or 'letters to the Editor' — are one of our shortest non-primary formats, serving as a format for more straightforward comments on issues relevant to the journal's community. For example, Correspondences can be used to announce new initiatives, resources, news, or opinions in different areas within computational science.

Matters Arising is the format that we use for post-publication scientific commentary on published papers from *Nature Computational Science*. The commentary can involve either challenges or clarifications of the published work — which are relevant to the audience and not originally discussed in the corresponding paper — and therefore tends to be more technical in nature. However, it is worth noting that these comments should ideally be based on knowledge contemporaneous with the original paper: any further research developments or substantial empirical studies would be potentially more suitable as a primary research article. Authors of the original *Nature Computational Science* paper are invited to submit a formal response to the Matters Arising — what we call a Reply — that is published alongside the Matters Arising only when it adds to the debate. This format follows a very specific submission process that is detailed here.

We have recently introduced a new non-primary format, called Viewpoint, which entails a collection of short comments from several scientists on a particular topic. The researchers' comments are informal and opinionated, describing their specific point of view based on their research experience and expertise in the field, without referencing any specific literature. The insights from each researcher are meant to be short, so that many points of view can be included in a single piece.

While most of the formats that have been discussed to this point are primarily commissioned by editors, we welcome (and encourage!) submissions of non-primary manuscripts and presubmission enquiries that cover these formats. Other formats, however, are exclusively written or commissioned by the editors, such as Editorials, Research Highlights, Q&As, Research Briefings, News & Views, and News Features.

Editorials, such as this one, are collectively written by the editors and are meant to discuss anything that we would like to share with our readership, from updates on our journal's policy to comments on recent news, research, and issues pertinent to the broad computational science community. Also written by the editors are Research Highlights, which briefly cover and summarize recent published research from other journals that the editorial team thinks will appeal to our readership, and Q&As, which outline interviews performed by editors with notable researchers across different fields.

News & Views are used to report on some of the primary research papers published at *Nature Computational Science* and are exclusively commissioned by the editors. In a News & Views article, the invited author provides more context for the work, briefly discusses the paper and corresponding methodology, and clarifies how it overcomes existing challenges in the field as well as any limitations of the work. A Research Briefing also summarizes the findings of a *Nature Computational Science* study, but is written by the authors of the original paper. Notably, this format allows authors to discuss what happened 'behind the paper' — shedding light on how the study was conceptualized — as well as includes both an expert opinion and an editorial note on the potential significance of the reported research.

Finally, News Features — which are commissioned from scientific writers — encompass both technical and non-technical aspects of any topic of relevance to our readership. They

are written in a journalistic style, accessible to a wide range of non-specialist readers, and are typically used to complement the scientific content of the journal.

We hope that this clarifies the many different manuscript formats for non-primary work at *Nature Computational Science*. It is worth reiterating that we welcome submissions for many of these formats, and we encourage our authors and readers to reach out if they have any proposals of relevance to the computational science community, as well as if any other non-primary formats could be explored in the future to better cover a particular aspect of computational science research.

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