The pick unpacked

Ensuring that a manuscript is vetted by experts is an important part of the editorial process, so we strive to choose the best reviewers to help us do this. How we manage the selection is a nuanced process.

Our search for referees usually starts with the names appearing in a paper's reference list, and those that surface in an independent search of related literature. But we always welcome suggestions from the authors, and more often than not, one of the suggestions will form part of the panel that assesses the paper. For this reason, we encourage authors to include suggestions and exclusions in their cover letter, but we also offer guidelines in doing so.

As editors, we are tasked with making sure that a paper is technically correct, so for each submission we send out to review, we aim to enlist an expert in each of the main techniques used. For this reason, fulfilling requests that we exclude certain reviewers can be tricky. But navigating peer review is never straightforward, and we understand the instinct to avoid feedback from some parties, particularly if their advice comes across as unprofessional, so we are open to authors' requests for exclusions.

If the list is short — two or three names at most — then we almost always honour the exclusion without question. However, requesting that we exclude every researcher in a given field is unlikely to be met favourably. If you're concerned that too many of your peers will fail to provide impartial feedback, we offer the option of double-blind peer review, which preserves your anonymity as an author, and mitigates any potential bias.

By contrast, suggestions for reviewers are always welcome. But these too can vary in how much they help the process. We aim to choose referees with no known conflicts of interest in reviewing the paper. This means that we're unlikely to enlist a referee who is a good mate — or sworn enemy — of an author of the paper. If in doubt, we tend not to approach referees who have published with one of the authors, so any suggestions that don't fulfil this criterion are likely to be overlooked.

Of course, there are caveats to this rule. Members of consortia are often co-authors by default without having a tangible conflict of interest, and we take this into account when assigning referees to papers on

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high-energy physics and astrophysics, for example. Similarly, in condensed-matter physics, we may judge that sample growers or instrument scientists are not conflicted even if they have published with reviewers and authors recently.

One way that referee suggestions can be helpful is in expanding our pool of referees beyond the usual suspects. Such advice is valuable for two reasons. We aim to promote diversity within the scientific community through our selection of referees, so once we have a selection of candidate reviewers covering each aspect of a paper, we attempt to assemble a panel that is balanced in terms of gender, geography, ethnicity and age. But we also try not to overburden our referees, so we are always grateful for recommendations for experts with whom we might not yet be familiar — talented postdocs and recently hired junior faculty, for example.

We also believe that the peer-review process fulfils a second aim beyond vetting a paper's technical correctness, which is to expose early-career researchers to best

practices in science. We therefore encourage senior scientists to put their younger colleagues forward for reviewing tasks, and we are happy to allow collaboration between researchers at different stages of their careers. One way for early-career researchers to get involved in peer review is through the mentoring scheme (*Nat. Commun.* **12**, 2896; 2021) set up by our sister journal *Nature Communications* and UK-based charity Sense about Science (<https://senseaboutscience.org/>).

Having assembled a balanced and diverse panel of referees, it is then the editors' role to make a decision regarding publication after integrating all the available feedback, and we like to do so with detailed knowledge of the expertise — and biases — of all the referees we consult. For this reason, we recommend that you inform us of why you think a suggested referee is well placed to comment on your work. Equally, if you are asked to review a paper for us and there's a potential conflict we may have missed, we ask that you let us know. And if you do have time to offer suggestions for alternative reviewers, it's best to keep in mind that we'll be looking for someone with similar expertise, as we probably already have other aspects of the paper covered.

We are always grateful for all the help we receive from our referees, and it goes without saying that we couldn't continue to publish high-quality physics research without their input. We are always looking for ways of acknowledging their contribution. This may be on an ad hoc basis, by contacting the editor to help with formal applications or through our reviewer recognition scheme (*Nat. Phys.* **15**, 199; 2019). For more information about the ways we recognize reviewers, visit <https://www.nature.com/nphys/for-reviewers/reviewer-recognition>.

Ultimately, peer review can never be perfect, but with a combination of helpful reviewer suggestions, thoughtful exclusions and a more diverse pool of people giving feedback on papers, we can do the best job that is humanly possible. □

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