PNSQC Reviewer Guidance

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Introduction

First, PNSQC would like to take this opportunity to thank you for your participation. Reviewers are key to ensuring the quality of our conference and we would not be the same without you. We hope you find this *PNSQC Reviewer Guidance* document useful during the peer review process.

We understand that reviewing a PNSQC conference paper, presentation, poster, tutorial, or workshop is a non-trivial task. Reviewers are typically asked to read and review more than one submission - some of which can be quite lengthy. Although we do try to set reasonable timelines and encourage everyone to stick to them, sometimes time can be an issue. Ultimately, we encourage you to do the best you can and don't be afraid to reach out if you need assistance from your Track Chair. We deeply appreciate your efforts and we are here to help you wherever we can.

This document contains advice from the PNSQC Board on best practices for the review process.   Many of us have been authors and/or reviewers or have served as track chairs. As former participants in the process, we've distilled our knowledge and experience into guidance for all reviewers - both seasoned veterans and first timers.

Guidance has been divided into 2 sections:

1. Section A: High-Level Guidance from the PNSQC Board
2. Section B: Additional Guidance through the Six "Principles", namely:

    1. Review the paper / item under review
    2. Review to like
    3. Don't demand too much
    4. Write useful review comments
    5. Note little things, but don't make them all that your review is about
    6. Things to avoid

A Final Note: This Guidance Document is exactly what it claims to be - guidance. These are not hard and fast rules, but rather suggestions made based on learnings from the many combined years that we have participated in the conference. Ultimately, it is up to you - the reviewer - to decide how you want to navigate the review process and what works best

for you and your assigned presenters.

A. High-Level Guidance from PNSQC Board

We have found that certain stylistic elements can heavily influence the success of a paper, presentation, poster, or workshop. To help you in the review process, we have defined these attributes and, in some cases, provided sample feedback that can be modified to help you pass constructive feedback to the author.

1. **Suitability of Reviewer**. As a reviewer, if you realize that any of the following conditions apply to you, please immediately bring it to the attention of the Track Chair or Program Chair, in case re-assignment is needed:
   a. Reviewer does not feel qualified to review an item assigned.
   b. Reviewer sees a conflict of interest in doing the review (e.g. one or more of the authors are co-workers, personal friends or family members).
   c. Reviewer feels that he/she cannot be objective about an item under review for any reason.
2. **Overall Coherence**. The material under review should flow logically from one section to the next so that the reader can understand the entirety of the paper. A valid comment to an author with a problem in this area would be something like: "This paragraph doesn't seem to make sense here, because…"
3. **Use of Examples**. Whenever reasonable, an author should give examples for concepts that they introduce. Good examples can help demonstrate and clarify the idea that is being presented. A good comment for this kind of situation would be: "This idea would benefit from an example that clarifies your point, because... "
4. **Use of Data.** Real data should be provided whenever it is available and applicable. Hard data from experiments or research that supports the author's hypothesis will lend credibility to the work. Feedback for this kind of issue could take the form: "This paragraph could benefit from the use of data or references to relevant data to support your argument, because…"
5. **Use of Graphs or Graphics**. Graphs and drawings are a great tool to demonstrate particular concepts and to make the paper more understandable for the reader. A good comment for an author needing to utilize some sort of visualization tool would be: "Including a graph or chart would help the reader visualize the trend or pattern that you are describing here… "
6. **Clear Introduction and Conclusion**. Papers should have a clear introduction that sets the stage for the information that is to be presented. Conversely, it is also necessary to have a conclusion that ties the introduction and abstract together and sums up the key points of the paper.
7. **Use of References**. When appropriate, papers should reference other similar works, tools, or authors that reinforce the presented content. This can be through the exploration of a similar concept, experimental results, philosophical exposition, or any other supportive documentation. As part of this process, the

author should describe how the cited material reinforces, differs, or relates to their content. A potentially useful comment for a piece that required a reference could be something like: "This seems to be a known concept in the software quality field. A citation that supports your work and expands on the history of the concept could be quite useful if you explain how it relates to your paper…"

8. **Grammar and Spelling**. It is not the reviewer's job to proofread submissions. However, sentences that are grammatically incorrect, contain poor spelling, run-on sentences, or other writing defects can be pointed out but are not required to be corrected. Be courteous and professional, especially when English is not the first language of the author. It is very appropriate to suggest that an author find a third party to proofread the paper.

9. **Title**. The title should be short, memorable, and to the point. PNSQC recommends titles that are fewer than 10 words, with a subtitle explanation if necessary.

B. Additional Guidance Through Six "Principles"

Principle 1. Review the submission

This may sound obvious, but it's harder to do than it seems. Typical violators of this principle are the reviewers that say "the author should have done this instead." Your review should not be about what could have been done; rather it needs to be a critique of what the author actually did. If you feel the author should have done something else, accept the paper and discuss it with them at the conference.

The review process is difficult for an important reason: the authors are often too close to their work, and thus have problems describing precisely what they did, why it's of interest, and why it's important. As a reviewer, you need to read to understand these same things: what the authors did, why it's interesting, and why it's relevant or important to the field of software quality. You can then work with the author to clarify any parts of the paper that don't communicate those necessary elements. Another important consideration is whether the *contribution* to the field of software quality is significant enough. Even though the paper was accepted for conference, it may not be written in a manner that properly emphasizes the potential impact to the software industry. If possible, work with the author to clarify and call out that potential.   If you think the paper is poorly written, or the contribution is poorly described, state that, and help the author to resolve those issues.

Principle 2. Review to like

When you review an item, try to find reasons to like it. If you're following the first principle (Read the paper), you should spot what is good about the work and highlight that in your review. It is perfectly acceptable for you to dislike the approach

taken, but then you must try to discover what about the paper makes it good. Clearly, not every submission will be a candidate for the "Best Presentation" award at PNSQC, but almost all papers have a worthy idea that the author is promoting. It is part of your job to find that idea and help the author present it in the best way possible.

Often, in early reviews, the concept behind a submission has not been fully fleshed out by the author. The temptation is to reject the draft with the recommendation that it be resubmitted when the work is complete. However, this is a key moment in the review process. It is an opportunity to step through the author's logic to verify that it's sound and that the idea behind the paper is good. If logical or conceptual flaws are detected early, you can point them out to the author, who can correct them before a lot of time is spent defending or supporting the flaws. As you write your review comments, do so with the mindset of "how to improve this paper" rather than "here's a list of things that are wrong with this paper."

Principle 3. Don't demand too much

The item under review is a conference submission and, as such, there are page limits and other constraints. Don't write a review saying "the authors should include the following", where "the following" would push the paper well past the page limits. If there is something so critical that it must be included and the paper is pushing the page limit, suggest something to remove/reduce so that the authors can stay within the required constraints..

Likewise, don't demand any additional work that can't be done in the time between the return of the review and the final submission deadline. While analysis can sometimes be redone, it's unlikely that another experiment can be run, significant code can be written, or new analysis can be performed.

Principle 4. Write useful review comments

Your written commentary is really the important part of your review, and you should write comments that help both the authors **and** the PNSQC Program Committee.

In particular, you may want to cover the following in your written comments:

a. Highlight the contribution of the paper, both what the authors perceive it to be and what you perceive it to be, as well as how relevant / significant it is.

b. State your recommendations and why.

c. State ways to improve the paper, but don't ask for too much (see both the previous and next sections). The first forces you to reread the paper, while the

second helps you to write useful, constructive review comments.

Principle 5. Note little things, but don't make them all that your review is about

"The authors should include the following references."

"The grammar and the sentence structure need to be improved."

"The figures are poor quality and without captions."

No paper is perfect. There will be details that are wrong, often of the above variety, but sometimes the problems will be larger ("the author gives the wrong formula for X"). These are not reasons to eject a paper from the conference. (Although if you CANNOT read a paper because the grammar or sentence structures are terrible, you should immediately notify your track chair.) Again, focus on the contribution to the field of software quality and base your recommendations on the contribution and not the details of the writing or writing techniques.

Please be especially sensitive about grammar and writing style if English is not the first language of the author. This is the same advice as Section A, Bullet 8.

Principle 6. Things to avoid

Here's a list of miscellaneous things to watch out for in your reviews, especially for papers:

a. Do not say "the authors should add additional references on X" without actually listing those references or at least suggestions on where to look for them. If you're enough of an expert to make the judgment, then you should be enough of an expert to explicitly list those references and state why they should be added. In particular, since there is a page limit for papers, references should be focused on the most relevant work, and not be a complete survey of the topic. So if you think a paper should be cited, give a strong reason as to why, since potentially the authors know of the reference and decided not to list it for their own reasons. Your argument to include the reference should be strong enough to convince an author who may have decided to not include it.

NEVER reject a paper because it omitted references! If you decide that a paper should be considered for removal from the conference and, in summarizing your reasons, you mention the lack of references, you have just rejected the paper partly for missing references. Instead, encourage the author to augment their reference section, as it will strengthen and support the content of the paper.

b. As a more general rule that is related to (a), never reject a paper for something that

can be fixed in 5 minutes or with light effort.

c. Don't be insulting, be positive and professional. PNSQC does not often see an insulting review, but it could happen. Please don't be "that person". As a reviewer, you will find that is more of a challenge to be positive. The authors put a lot of effort into the item under review and may be sensitive to (or even insulted by) overt criticism. So phrase things positively. In general, write your entire review with a tone of professionalism and willingness to help guide the author toward needed improvements. Reviewing from a more positive point of view helps avoid strong overt criticism while emphasizing helpful commentary.

Acknowledgement

Other Information Related to Assisting Reviewers Be Reviewers

PNSQC Specific Information for Reviewers

Again, Thank You for agreeing to be a reviewer. We cannot say it enough times! The paper review team is a key part of our organization and plays an important role in building a "Quality Conference". As a reviewer you will be providing constructive comments to the author to ensure that their paper is technically sound and interesting to the conference audience. You will also be the final authority to assess the paper's readiness and recommend its final acceptance to the program chair.

Roles and Responsibilities of a Paper Reviewer:
As a paper reviewer, you are in a unique position to greatly influence both the authors' and attendee's conference experience by impacting the quality of the content. Also, as a subject matter expert, your opinions and suggestions are valued not only by the author but also by the program committee. We hope you will enjoy this privilege and enrich the overall conference outcome. Here are the logistics of the paper review process.

The following is the list of responsibilities assigned to this role:

- Introduce yourself to the author. Please use the template outlined later in this document.
- Look for any submissions close to the first draft submission date. Some authors may submit their work prior to the due date.
- Be prompt (as much as possible) in providing your feedback. The paper will likely need multiple reviews and you do not want to run out of time.
- When reviewing the first draft, gauge the overall structure of the paper. The paper must have at least a basic framework. The sections like summary/conclusions are trivial and do not require much effort. References should be included as the paper progresses and should not be left for a future draft.
- Update the paper status in the Tracking Tool or directly to the track chair if, for some reason, the tool is not available. The track chair depends on this information to ensure that papers will be ready on time or, if not, to make a decision on allowing the paper to continue in the conference.
- Be sensitive to the author's point of view when making comments. Experience shows that insensitivity leads to a difficult reviewing relationship.
- Arrange for multiple revision-review cycles. Although we have built multiple reviews into the schedule, you and your author may need additional cycles to get the paper to camera ready copy.
- Enjoy your relationship with the author. They care about quality as much as you do, so have fun and enjoy the process of helping to build a great paper!

Getting signed up for the Reviewing Tool (MemberLeap):
To aid in the management of papers, PNSQC uses a conference management tool. The current tool is MemberLeap. When you commit to being a reviewer, the Track Manager will have an account created for you if one does not already exist. Once you are sent your login information, or your account is modified for your reviewer status, you will be able to login and begin looking at the papers assigned to you.

Information on the tool and the process for using it will be communicated to you separately.

Identifying papers that are interesting to you:
Most track chairs will allow you to identify a list of papers that you are interested in reviewing. Once the conference proposals and alternates are chosen by the proposal selection committee, the track chair should send you a list of proposals for the track you will be working with. For most volunteers, we ask that you review 3 papers, so, in looking through the list, you should identify at least 5 papers that you find interesting. That gives your Chair some flexibility in making the review assignments. Hopefully, shortly after you return your preferences, you'll receive the list of papers that you will be responsible for reviewing, along with your Authors names and contact information.

Establishing initial contact with the author:
Once you have your paper assignments, your first task is to build a relationship with the author. You will want to reach out, introduce yourself, thank them for participating in the conference, and make them feel that you are approachable. We provided the following boilerplate document that has historically worked well for the initial contact with the authors. Please use this as the starting point for your introductory email. Feel free to make changes to customize it for yourself.

Subject: PNSQC – Paper ID XXXXX: Congratulations / Introductions / Instructions

Dear Author:

First I would like to congratulate you on having your proposal accepted for the PNSQC 20XX Quality Conference. We are very excited about the content for this year's conference and I very much look forward to having your paper be a part of it.

Background:
I am one of the 2 reviewers that have been assigned to your paper. So that you know a little about me, I have been a volunteer with PNSQC since XXXX and have been reviewing papers for X+ years. <Feel free to say a little about your current job and how long you've been in the industry.>

Reviewing Technique:
<Describe your preferred system for reviewing. The following are some of the things we normally suggest. However, you should work with your author to create a process that you are both comfortable with. >

I prefer to use **Microsoft's Word documents and the Change Tracking feature**, which allows me to make changes, add comments/questions and allows you to easily accept or reject those changes.

I tend to do **stream of consciousness reviewing.** If I don't understand something I will comment - even if it is explained later on in the paper.

I feel strongly about having all **acronyms spelled out** the first time and that uncommon / unclear **terms should be defined**. (A Glossary is a great way to handle this if you have a lot of terminology.)

Another request: **Know your audience**. If you suspect that your audience may not have the background knowledge needed to understand your paper, then provide enough introductory information for them to get the most out of your presentation.

I am **not an editor/grammarian.** I can provide some limited help in that area, but I suggest that you reach out to someone who is skilled at editing or, in the worst case, leverage a tool like ChatGPT to ensure that your grammar is correct and your style is readable.

My primary mission is **to review your paper**, however, I would be happy to look at your presentation as well, if time permits.

Reminder:
The conference proceedings are printed in **black and white**. So please bear this in mind when creating graphs and charts.

Schedule:

Date	Event	Comment
<date>	1st Draft Due	Paper structure, framework, initial technical thoughts in place
<date>	2nd Draft Due	Technical contents with references in place
<date>	Final Draft Due	Technical contents, summary, and references are finalized
<date>	Final camera-ready paper is due!	Gold version delivered. Final edits are in place and the paper is ready to publish.

I should be available during most of the review process. However I will be unavailable during these times: date, date, date. <Let your Author know if you will be out on vacation for any extended period of time.>

My preference is for email, but feel free to call or text me at home: 503.xxx.xxxx or cell: 971.xxx.xxxx.
Leave a message if I am unable to answer your call.   (Let your Author know your preferred contact methods.)

Requests:
1) Let me know if you're going to be unavailable for an extended time during the review period.
2) Your **1ˢᵗ draft is due <Put date here>** (if you can't get it to me by then please let me know). We should have time for 2 to 5 review cycles (typically 3 are needed)
3) Please include your paper # on any email you send.

And last but not least, I am here to help, so please don't hesitate to ask.

Sincerely,

<Your Name Here> 🙂