

Measures to Improve the Quality and Processes of Review, Meta-Review and Decision Making in Sub-conferences of International Conference on Computers in Education (ICCE)

- *These measures shall be implemented from ICCE 2019 onwards. An exception is that the PC Member Exclusion List (formerly known as “blacklist”) will be consolidated and updated in ICCE 2019 and then take effect (i.e., making use of the list to exclude individuals from being invited to the PC) in ICCE 2020.*

Executive Summary of the proposed measures:

- Develop a **reviewer guide** for PC members and additional reviewers.
- Improve meta-review process (more details in Appendix A)
 - Develop a **meta-reviewer guide** for meta-reviewers.
 - All the sub-conference executive chairs and co-chairs are also meta-reviewers. Individual sub-conferences may invite 1-3 additional meta-reviewers (at the same time the PC members are recruited) whom will be explicitly credited in the sub-conference PC members’ lists.
 - The meta-reviewers must read all the assigned papers.
- Develop a **Standard Operating Procedure (SOP) for managing the selections of co-chairs & PC members, review, meta-review and decision making processes** – for sub-conference chairs & co-chairs (*more details in Appendix A*)
- Prevent a single reviewer from being assigned too many papers to review. (*details in Appendix B*)
- Maintain a **master PC Member Exclusion List (PEL)** across all sub-conferences. Former reviewers, sub-conference (co-)chairs and additional meta-reviewers who are listed in PEL will not be re-invited to serve in any IPC role in the next three years.
- Present **Best Reviewer Award(s)** every year.
 - Unlike the Best Paper Awards which we only award one winner per category to ensure its prestige, we will present 1-3 Best Review Award per sub-conference as an incentive.
 - Consider presenting **Best Meta-Reviewer Award(s)** in the future.
- Every year, to prevent misunderstanding, the IPC Coordination Chair must explain to the sub-conference chairs and co-chairs that the “25% full paper acceptance rate” does not mean that the submitted full papers which do not make it to the top-25% will straightaway be rejected.
 - These papers may be considered for acceptance as short or poster papers if they meet the respective benchmarks of these paper categories.

- Invite the sub-conference chairs for ICCE'19 to attend the **IPC meeting** held during ICCE'18 (if they are attending the conference). Brief them on the new policies, SOP and guidelines.

Appendix A: Detailed recommendations on the proposed SOP

- A **checklist** will be issued to the sub-conference chairs and co-chairs to make sure that they are aware of all the important tasks/rules that they must execute or follow.
- In principle, each meta-reviewer shall be assigned no more than 6 papers to handle.
- The meta-review process shall be running in parallel with the four-week review process. **Meta-reviewers shall read all the assigned papers** during the period, rather than wait until all the reviewer comments are submitted.
- **At least one established or middle-career researcher** with good academic standing shall be assigned to review each full paper or short paper.
- When all the reviewer comments are submitted for a given paper, the meta-reviewer may consider **deleting at most one** low-quality review. Giving the authors three reviews with at least a low-quality one can do more harm to our conference's reputation as compared to giving them only two better-quality reviews.
- Decision making (acceptance as full, short or poster paper; or rejection) should not be based solely on reviewer comments or scores. The chairs, co-chairs and meta-reviewers must be able to make their own judgments (with the aid of reviewer comments) after reading the papers.

Appendix B: Proposed measures to prevent excessive papers being assigned to an individual reviewer

- The number of papers to be assigned to each PC member shall be **capped at 5** (an existing rule in the conference handbook)
 - all sub-conference chairs shall be reminded of this rule in the guidelines document
- The number of papers to be assigned to each additional reviewer (who are graduate students) shall be **capped at 3** (another existing rule).
- A scholar is only allowed to be involved in one sub-conference as a chair, a co-chair or a meta-reviewer within the same year. At the same time, (s)he is allowed to be involved in one more sub-conference as a PC member.
- A scholar (with doctoral degree) who is not a chair, a co-chair or a meta-reviewer in any sub-conference is allowed to be **involved in up to three sub-conferences as a PC member in the same year**.
- A graduate student is allowed to be **involved in only one sub-conference as an additional reviewer in the same year**.

In case a reviewer receives multiple invitations from different sub-conferences, (s)he shall pick one sub-conference to join and decline other invitations.

Standard Operating Procedure (SOP) of Review and Decision Making Process for ICCE Main Conference Paper Submissions

- The IPC maintains a PC Member Exclusion List (PEL) of former reviewers who may not be invited to be reviewers or any other IPC position (including sub-conference chairs or co-chairs) in the next three years.
- The IPC must keep this PEL **confidential**. In each year, only the current Conference Chair, IPC Coordination Chair and Co-Chair(s) have the access to the latest version of the list. The APSCE HQ shall archive all versions of PEL.

By Mid-December (in the year before the conference)	<ul style="list-style-type: none"> • The new sub-conference chair (S-C Chair) of each sub-conference submits a list of candidates of sub-conference co-chairs and additional meta-reviewers (if any) after consulting the current SIG chair to the IPC Coordination Chair (IPC Chair). • The IPC Chair compares the candidate lists against the PEL and advice the respective S-C Chairs not to invite those who are “PEL-ed” in the last three years. <i>(This step will only be implemented from ICCE 2020 onwards, i.e., starting from December 2019. We are going to disseminate guidelines to both the meta-reviewers and reviewers of ICCE 2019 and that should serve as a warning to those who are not delivering quality reviews or meta-reviews, or who are not submitting their reviews without excusing themselves via email prior to the review deadline.)</i> <i>(Do keep this process confidential as much as possible. For example, if one candidate from sub-conference Cx is to be removed from the invitation list, the IPC Chair shall only inform the affected S-C Chair but no other chairs.)</i> • (To reinforce the rule: Each scholar is only allowed to be involved in one S-C as a chair, a co-chair or a meta-reviewer in the same year.) After filtering out PEL-ed scholars or students, the IPC Chair compares all the S-C candidates’ lists to see if there is any potential violation of this rule. If so, the IPC Chair will negotiate with the affected S-C chairs to decide which S-Cs may invite or should give up specific candidates (only one S-C per candidate). • The S-C chair may need to recommend alternative candidates of S-C co-chairs after the last two steps. • The S-C chair proceeds to invite the remaining candidates after the above-stated filtering process. • This SOP and the new meta-reviewer guide will be attached in the co-chair and meta-reviewer invitation emails to make sure that invitees are aware of and are committed to follow the rules.
By early January	<ul style="list-style-type: none"> • The S-C chairs submit their lists of candidates of IPC members and additional reviewers after consulting the co-chairs to the IPC Coordination Chair (IPC Chair). • The IPC Chair compares the candidate lists against PEL and advice the respective S-C Chairs not to invite those who are “PEL-ed” in the last three years.

	<p><i>(This step will only be implemented from ICCE 2020 onwards.)</i></p> <ul style="list-style-type: none"> • <i>(To reinforce the rules: (1) A scholar who is involved in a S-C as the chair, a co-chair or a meta-reviewer may join only one more S-C as a PC member. (2) A scholar (with doctoral degree) who is not a chair, a co-chair or a meta-reviewer in any sub-conference is allowed to be involved in up to three sub-conferences as a PC member in the same year. (3) A graduate student is allowed to be involved in only one sub-conference as an additional reviewer in the same year.)</i> After filtering out PEL-ed scholars or students, the IPC chair compiles the list of PC member candidates who are nominated by more than one S-C, or any potential violation of the above-stated rules. The IPC chair then negotiates with the affected S-C chairs to decide which S-Cs may invite or should give up specific candidates. • The new reviewer guide will be attached to the PC member/additional reviewer invitation emails to make sure that invitees are aware of and are committed to follow the rules.
March	<p><i>(To reinforce the rules: A scholar who is involved in two S-Cs as PC members shall be assigned up to three papers per S-C. A scholar who is involved in three S-Cs as PC members shall be assigned up to two papers per S-C. The total number of papers assigned to each individual involved in more than one S-C is capped at 6.)</i></p> <ul style="list-style-type: none"> • The IPC Chair compiles the list of scholars involved in multiple S-Cs from the confirmed lists of PC members in all S-Cs, informs affected S-Cs on their PC members who are also involved in other S-Cs, and the cap of the papers they are allowed to assign to individual PC members in the list. <ul style="list-style-type: none"> ○ Individuals who are involved in two (2) S-Cs as PC members shall be assigned no more than three (3) papers per S-C. ○ Individuals who are involved in three (3) S-Cs as PC members shall be assigned no more than two (2) papers per S-C. • After the IPC Chair have subscribed the confirmed PC members and additional reviewers to EasyChair, the latter will be asked to log on to EasyChair to indicate their expertise.
Late May	<ul style="list-style-type: none"> • Instructed by the IPC Chair, the S-C Chairs work together with their Co-Chairs in assigning meta-reviewers and reviewers for individual submitted papers. <ul style="list-style-type: none"> ○ In principle, each meta-reviewer shall be assigned no more than 6 papers. The assignment shall be made at the same time when the first-level review assignment is taking place, NOT after the review period. <ul style="list-style-type: none"> ▪ In case a sub-conference receives a huge number of submissions, the S-C Chair may consider inviting additional meta-reviewers (who are established researchers within the sub-conference PC) to share the meta-review workload. The additional meta-reviewers will NOT be assigned papers to do first-level review. The invitations shall be made during the reviewer assignment stage. ▪ The meta-reviewer guide will be attached to the additional meta-reviewer invitation emails (if applicable) to make sure that invitees are aware of and are committed to follow the rules. ○ There are several existing or new guidelines on reviewer assignments that the S-C chairs and co-chairs shall adhere to, <ul style="list-style-type: none"> ▪ The numbers of papers to be assigned to each PC member shall be capped at 5 (except for individuals who are involved in more than one S-C – the cap is 6). The number of papers to be assigned to each additional reviewer should be capped at 3. <ul style="list-style-type: none"> • In principle, only short or poster papers can be assigned to additional reviewers. This is because it is more demanding on

	<p>the reviewers' competencies and academic literacies to evaluate full papers and therefore we strongly recommend assigning such papers to PhD-qualified reviewers only.</p> <ul style="list-style-type: none"> ▪ The reviewers to be assigned to each submitted full paper MUST consist of at least one researcher with strong academic standing (e.g., an established researcher, or a middle-career researcher with a strong publication record). <ul style="list-style-type: none"> • The reviewer guide shall be re-sent to the PC member and additional reviewer invitation emails to remind them on our intention and measures to safeguard the review quality.
June	<p>The meta-reviewers read all the assigned papers thoroughly during the review period, and make a preliminary judgment on the quality of the papers.</p> <p>The meta-reviewers go through the reviews as and when they are submitted, in order to flag low-quality reviews (if any) to the S-C chair to take necessary actions earlier rather than waiting till the review deadline.</p>
July	<ul style="list-style-type: none"> • One week before the review deadline, the meta-reviewers shall begin checking the submitted reviews on the papers assigned to them. In case a particular paper receives two or more low-quality reviews, the meta-reviewer shall alert the S-C Chair to prepare for inviting an additional reviewer; or the meta-reviewer may consider serving as an additional reviewer to submit a quality review before writing the meta-review. • Upon the review deadline, the S-C Chair may invite additional reviewers to review papers with inadequate reviews (at least 3 reviews per full/short paper, and at least 2 reviews per poster paper), and papers with two or more low-quality reviews. • The meta-reviewers peruse the reviewer comments and write meta-reviews for papers with complete set of reviews. <ul style="list-style-type: none"> ○ In the meantime, each meta-reviewer compiles the following lists pertaining to the papers handle by him/her and submit them to the S-C Chair. <ul style="list-style-type: none"> ▪ the list of reviewers who submitted low-quality reviews ▪ the list of reviewers who did not submit their reviews (and did not inform the sub-conference that they could not carry out the review tasks before the deadline) ▪ 1-2 highest quality review(s), if any (which are potential candidates for Best Reviewer Awards) <ul style="list-style-type: none"> • The meta-reviewer may refer to the tips for writing quality reviews in the reviewers' guide as criteria for selecting candidates of Best Reviewer Awards. ○ For each paper that still contains one or more low-quality reviews, the meta-reviewer in-charge may recommend to the S-C Chair to delete <u>at most</u> one low-quality review – the decision should be made by the S-C Chair. <ul style="list-style-type: none"> ▪ The deleted review will NOT be referred to in the meta-review and in decision making. • After all the meta-reviewers have completed their meta-reviews and recommendations of acceptance/rejection, the S-C Chair shall involve all the meta-reviewers in an email discussion and make decisions on full paper acceptance – given the 25% full paper acceptance rate, the decision making in full paper acceptance must be rigorous. <ul style="list-style-type: none"> ○ The decisions on the acceptance/rejection of submitted short and poster papers can be made by a smaller group of chair/co-chairs/meta-reviewers to reduce administrative burden and to mitigate the time pressure.

By Mid-August	<ul style="list-style-type: none"> • The S-C Chairs consolidate the lists of reviewers who submitted low-quality reviews or failed to submit reviews from the meta-reviewers, and send them to the IPC Coordination Chair. • The S-C Chair and the co-chairs discuss and select 1-2 highest-quality reviews from the meta-reviewers' recommendations as nominees of Best Reviewer Award(s) and submit the list to the IPC Coordination Chair. <ul style="list-style-type: none"> ○ Before the final decision is made, the S-C chair shall go through other reviews (for different papers) submitted by the potential winners to verify that all those reviews are of good quality (if not the best) as well. ○ Avoidance of conflict-of-interest (similar to the selections of best paper award nominees) shall be observed.
Mid-August to End September	<ul style="list-style-type: none"> • The IPC Coordination Chair and Co-Chair(s) negotiate for the division of their roles in the following tasks (they may also consider involving other IPC Standing Committee member(s) who is(are) familiar with the processes, e.g., a former IPC Chair, to share the workload), <ul style="list-style-type: none"> ○ Vet the lists of reviewers who submitted low-quality reviews or did not submit reviews by checking the paper submission system, and update the PEL <ul style="list-style-type: none"> ▪ The person in-charge should make the judgment on the quality of each review, and decide whether to add the reviewer in question to PEL – as some meta-reviewers might be over-demanding and end up recommending inclusion of too many reviewers to PEL. <ul style="list-style-type: none"> • If a reviewer submits multiple reviews with inconsistent qualities (a mixture of high- and low-quality ones), the person in-charge can be more lenient with the reviewer by not adding him/her to PEL. ▪ The PEL shall be kept confidential! ○ Endorsement of Best Reviewer Award nominees <ul style="list-style-type: none"> ▪ At least two IPC Standing Committee members are appointed to handle this. They will go through all the nominated reviews as well as skim through the reviewed papers to verify that the reviews are indeed of high quality. They will then recommend to the IPC Coordination Chair to endorse the nominees as winners. • Best Reviewer Awards will be announced by October on the conference website, as the winners may not be attending ICCE. Winners will also be notified by email. <ul style="list-style-type: none"> ○ Only the winning reviewers' names will be announced. The papers that they reviewed shall not be disclosed, given that ICCE is practicing single-blind review. ○ A certificate will be presented to each winner. The certificates may be presented to the winners who attend ICCE (e.g., at a social event such as the welcome reception). The LOC will mail the certificates via airmail to the winners who do not attend the conference. ○ The full list of Best Reviewer Awardees will be published in the main conference proceedings.

ICCE Reviewer Guidelines

Thank you for agreeing to review for ICCE! Your service will be valuable to the ICCE authors, since the academic quality of the ICCE program is largely depending on the rigor and constructiveness of the reviewers' comments. Please study the reviewer guidelines below that will help you in producing quality reviews.

Reviewing timeline

- <dd/mm>: Start of reviewing process
- <dd/mm>: A reminder to be sent to reviewers
- **<dd/mm>: Review submission deadline**
- <dd/mm>-<dd/mm>: Additional reviews (if applicable; you may be invited to review one more paper but that will be an opt-in invitation)

Conference system access

All reviews must be entered electronically into the EasyChair platform (<URL>). Login instructions are available at the end of this document. Reviewers may visit this site multiple times and revise their reviews as often as necessary before the reviewing deadline. When you are invited to become a reviewer, EasyChair sends you an automated mail with instructions on how to login. Use your email address as the login id; you can change your password from the login screen.

During the review period, you will probably get many emails sent from EasyChair. Please make sure emails from EasyChair are not snagged by your spam filter!

Guidelines on writing quality reviews

*Please note that from ICCE 2019 onwards, the International Program Committee (IPC) will maintain a **“PC Member Exclusion List”** (PEL). By the end of the review period, PC members or additional reviewers (1) who did not submit their reviews (and did not inform the sub-conference Executive Chair on their unavailability before the review deadline) or (2) who submitted low-quality reviews may be added to PEL and **may not be invited to take up any IPC role (chair, co-chair, PC member of any program component) for ICCEs in the next three years.***

Here are some tips for writing quality review for a paper,

- Read the entire paper **thoroughly and meticulously**.
- Whether the paper itself is of high or low quality, **offer constructive comments** to help the authors in improving their paper, and **inspire them in advancing their research** in the future (even if your overall recommendation is to reject the paper).
- Short (e.g., one-paragraph or even one-line), superficial reviews that constitute un-informed opinions are **worse than no review**. Such reviews are frustrating for authors and **hurt the review process**. Put yourself in the authors' position: what level of detailed feedback would you like to see for your own paper?

- Your written review should **begin by summarizing the main ideas** of each paper. While this part of the review may not provide much new information to authors, it is **crucial to the subconference chair**, and it demonstrates to the authors that **you understand their paper**.
- You should then discuss the **strengths and weaknesses** of each paper, addressing the criteria described in the EasyChair review form. In identifying areas of weakness of a paper, **provide specific guidance** on how the authors might address the limitations you have noted. It is also important to also **mention the strengths**, as an informed decision needs by the subconference chair to take both into account.
- Your comments should be **concise, concrete and diplomatic/polite**. Avoid vague criticisms.
- Provide **appropriate** citations if authors are unaware of relevant work (not only your own work).
- Authors might use different theoretical frameworks and methodological approaches in their submissions. Please **be open-minded**.

Confidentiality

By viewing the papers, you agree that the ICCE review process is confidential. Specifically,

- you agree not to use ideas and results from assigned papers in your work, research or grant proposals, unless and until that material is published in any publicly available formats
- you agree not to disseminate assigned papers or the ideas in the submitted papers to anyone
- you agree not to disclose your identity as the reviewer of the assigned papers

ICCE Meta-Reviewer Guidelines

Thank you for agreeing to be a meta-reviewer for ICCE! As the meta-reviewer, you are the “**last line of defense**” for ICCE’s review quality. Your meta-review should be rigorous and constructive to the authors – in particular, **provide a strong, convincing argument to justify your recommendation** of full/short/poster paper acceptance or rejection.

Meta-Reviewing timeline

- <dd/mm>-<dd/mm>: Reviewing process for PC members and additional reviewers
 - In the meantime, the meta-reviewers shall start reading the assigned papers and make preliminary judgment on the paper quality.
- <dd/mm>: Review submission deadline
- <dd/mm>-<dd/mm>: Additional reviews (if applicable; you may be asked to be a reviewer of some of your assigned papers which did not receive adequate numbers of reviews or which received more than one low-quality review)
- **<dd/mm>: Draft meta-review deadline**
- <dd/mm>-<dd/mm>: Discussion among the sub-conference co-chairs and meta-reviewers in determining full, short, poster paper acceptance or rejection
- **<dd/mm>: The deadline for the meta-reviewers to make minor revisions on the meta-reviews by taking into account the final decision on the accepted paper categories (or rejection)**

Conference system access

All meta-reviews must be entered electronically into the EasyChair platform (<URL>). Login instructions are available at the end of this document. Meta-reviewers may visit this site multiple times and revise their reviews as often as necessary before the reviewing deadline.

*Please note that from ICCE 2019 onwards, the International Program Committee (IPC) will maintain a **“PC Member Exclusion List”** (PEL). By the end of the review period, PC members or additional reviewers (1) who did not submit their reviews (and did not inform the sub-conference Executive Chair on their unavailability before the review deadline) or (2) who submitted low-quality reviews may be added to PEL and **may not be invited to take up any IPC role (chair, co-chair, PC member of any program component) for ICCEs in the next three years.***

Meta-reviewers may also be added to the PEL for similar reasons.

Guidelines on writing quality meta-reviews

- Preparation:
 - **Read the entire paper thoroughly and meticulously.** It would be helpful for you to annotate the paper while reading it. Although you may not review the paper, you will have to **judge the reviewers’ reviews for fairness and justification** of their response.
 - Read all the reviews when they are submitted, categorize individual comments (e.g., comments on literature review, on pedagogy/technological design, on research design, on findings, on discussion and conclusion, etc.; and note which reviewer each comment comes from, i.e., Reviewer 1, Reviewer 2 ...), and compare them against your own annotations.

- Writing meta-review:
 - The key objective is to **summarize the reviewers' comments** into one document, **balancing different opinions and adding your own** where necessary.
 - When opinions conflict, examine individual reviewers' expertise to disambiguate, or re-look at the paper to decide which position seems more justifiable.
 - If certain reviewer's recommendation is deemed over-demanding for a conference paper, you may advise the authors that they need not address such recommendations in the paper and instead take them into consideration for future research.
 - Authors might use different theoretical frameworks and methodological approaches in their submissions. Please **be open-minded**.
 - Meta-reviews should be **concise, concrete and diplomatic/polite**. Avoid vague criticisms.
- Make a recommendation on whether to accept or reject the paper, and justify your recommendation.

Additional Task: Recommending Candidate(s) for Best Reviewer Awards

Identify 1-2 most well-written reviews from your assigned papers with "tips for writing quality reviews" in the "ICCE Reviewer Guidelines" as the criteria. Recommend it to the sub-conference Executive Chair as a candidate for Best Reviewer Awards.

Confidentiality

By viewing the papers, you agree that the ICCE meta-review process is confidential. Specifically,

- you agree not to use ideas and results from assigned papers in your work, research or grant proposals, unless and until that material is published in any publicly available formats.
- you agree not to disseminate assigned papers or the ideas in the submitted papers to anyone.
- you agree not to disclose your identity as the meta-reviewer of the assigned papers.