

Light Peer Review at IPAC'23

Nicolas DELERUE

IJCLab (CNRS and Université Paris-Saclay)

Jacow meeting
28th November 2023

- **Light Peer Review (LPR) motivations:**
 - Improve academic standing of accelerator research at Universities and strengthen the position of accelerator scientists in funding discussions and project applications.
 - Train accelerator students and post-doc in the process of peer-reviewing publications.
 - Boost the impact factor of PR-AB and other.
- **LPR at IPAC'23:**
 - Deadline was set 6 weeks ahead of the conference to give more time to reviewers and to the peer-review process.
 - Target of 250 papers.
 - First LPR with indico
 - SPMS code not available
 - Code rewritten in Python (>6000 lines)
 - To be added to Jacow Git repository (work in progress)



Peer Review Acceptance Criteria (from IPAC'20)

- The published work **must not contain clear errors or important factual mistakes**.
- The paper **must include own work**, performed by the authors and not published elsewhere.
- Some aspect or part of the work must be **original** or demonstrate clear progress over other reports of the work.
- The presentation of the results **must be understandable**.
- The paper must be in **good English**.
- Work and related **results by others must be referenced and properly acknowledged**.
- The paper must include **references to literature** that are appropriate.
- Papers are considered **not-correctable** and therefore rejected in following cases:
 - The whole Ansatz is wrong.
 - The work is from somebody else or claiming authorship from somebody else.
 - Requested changes are not implemented in time.



Reminder: Peer Review General Policies for IPAC'23

- Papers will be rejected if a submission or correction deadline is missed.
- Papers are rejected if the review process is not completed by the end of the conference week.
- Each paper shall have two (2) reviewers.
- Single-blind review (where the reviewers are unknown to the authors).
- A reviewer shall not know the identity of the other reviewer assigned to the paper.
- A reviewer shall not contact an author directly concerning their paper.
- Reviewers shall not make any personal remarks, or comments that may betray their identity, when entering the instructions for requested correction/revision of the paper.
- Reviewers must not referee papers of which they are authors or co-authors.
- Only a single cycle of correction(s) by the author(s) is permitted; such cycle shall include the opportunity to respond to correction requests from both reviewers.
- Decisions of the SPB chief shall be final.



LPR organization for IPAC'23

- LPR is managed by the Scientific Publication Board (SPB)
- The SPB acts much like the editorial board of a journal.
- SPB membership: has changed over years:
 - The 16 SPC members + three regional chairs (present, past and future) [19 members] + SPC chair (new at IPAC'23)
- The present chair, or chief, is from the host region.
- The SPB chairs from the other two regions ensure continuity.
- SPB has administrative support from a person expert in the indico peer review module – typically the scientific secretary.
- In the case of disputes, the present/active SPB chair's decision shall be final.

- **Scientific Publication Board (SPB):**
 - Previous rule for SPB membership was:
 - current, past and future SPB chairs
 - 8x2 MC coordinators
 - 19 members
 - SPC chair was not a member of SPB => added
 - No SPB chair nominated for IPAC'24
 - Current SPB chair is also MC8 coordinator
 - IPAC'23 SPB has 18 members
 - Chairs: Frank Zimmerman (chair '22), Peter McIntosh (SPC chair) and Nicolas Delerue (SPB'23)
 - MC1: Oliver Boine-Frankenheim, Jie Gao
 - MC2: Sara Casalbuoni, Mark Boland
 - MC3: Victor Malka, Evgenya Simakov
 - MC4: Mohammad Eshraqi, Yoichi Sato
 - MC5: Sven Reiche, Seunghwan Shin
 - MC6: Adriana Rossi, Jui-Che Huang
 - MC7: Marie Helene Moscatello, Georg Hoffstaetter
 - MC8: (ND) Sandra Biedron

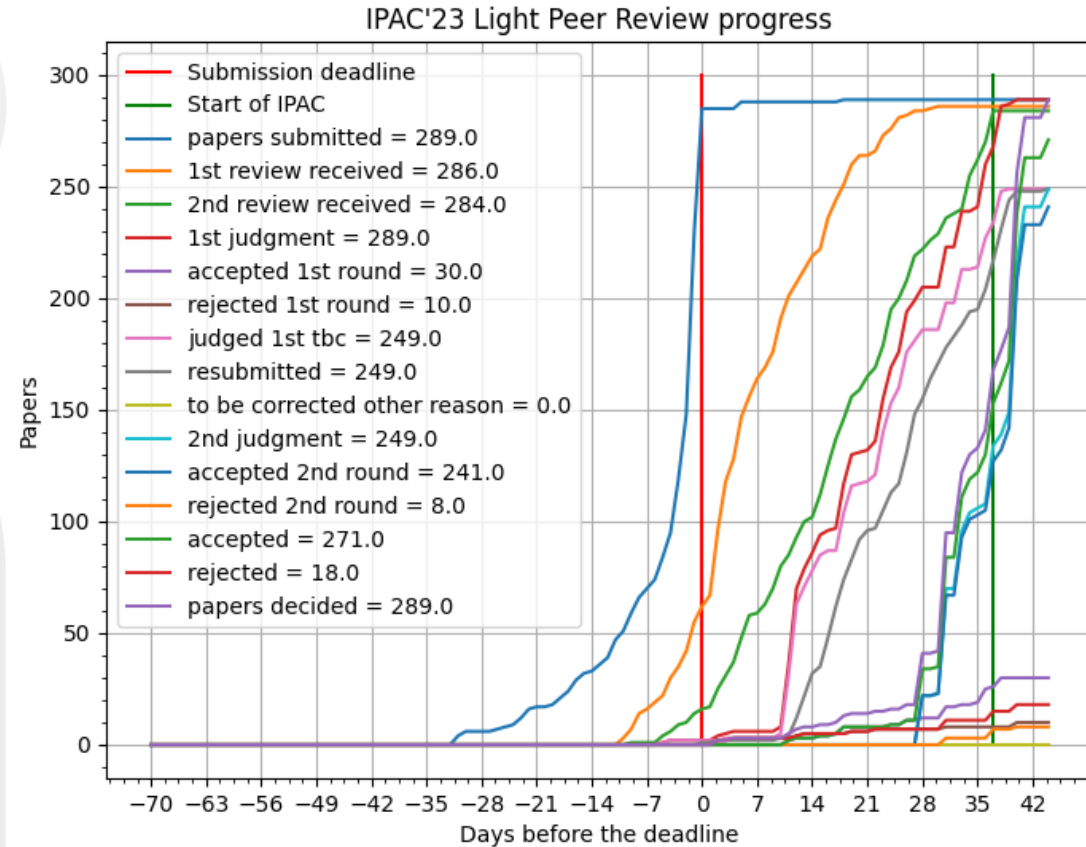


- Processing of a paper:
 - Upon submission a paper is assigned to two referees (see later for paper/referee matching) asking them to review the paper within 10 days.
 - Referees are asked to click on a form to confirm that they will review the paper
 - Reminders are sent to referees if they do not confirm their acceptance or submit the paper by the deadline.
 - Once the two reviews are received they are assessed by the Scientific Publication Board (SPB).
Decision can be:
 - Accept the paper as is
 - Reject the paper (significant flaw that can't be corrected)
 - Ask for corrections => 2nd round.
 - In case of 2nd round the author is asked to correct the paper
 - The same referees are asked to evaluate the paper in the second round.
 - On the second round, the referees can only suggest to accept or reject the paper.
 - Upon receiving the two reviews the SPB decides on the paper.



Timeline

- Mid-march 2023: submission of papers began.
- [Saturday April 1st] IPAC-6 weeks: LPR Submission deadline => More than 100 papers submitted in the 48h before the deadline.
- All but 12 papers had a 1st round decision by the start of conference.
- All papers decided (2nd round) one week after the conference.
- Getting IoP guidance was difficult. Guidance sent to authors at the beginning of June.
- All papers in IoP format collected by mid-July.
- IoP submission platform is not user friendly but manageable.
- Then in the middle of the summer request from IoP for an additional document (Author Declaration Form).
- Collection started in September, completed end of October.
- Publication expected January 2024.

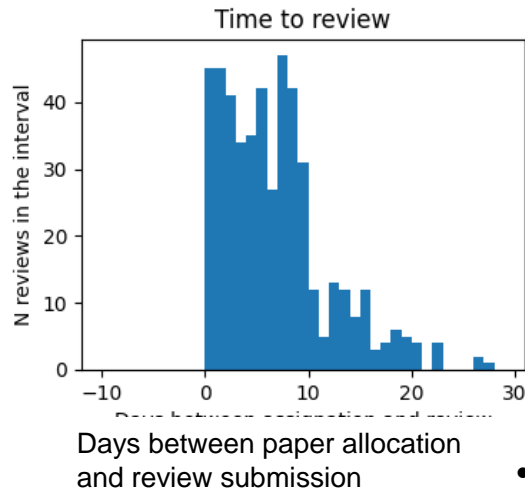


- 288 papers submitted by the deadline + 4 accepted after with valid reasons (several others not accepted)
=> 292 papers processed.
- 2 papers rejected on editorial grounds (non compliant and not corrected).
- 1 paper significantly off-topic (HEP detector).
- 271 papers accepted at the end of the LPR process (93%).
- 1 paper had failed poster police but was able to explain why and apologised (accepted).
- 3 papers withdrawn in the month after the conference.
- 1 paper withdrawn when required to submit the Author Declaration form (ethical compliance).
- 267 papers should be published in January 2024 in the IPAC'23 Peer-reviewed proceedings (91%).
- 605 reviews on 1st round (2,09/paper)
- 273 reviews on 2nd round (1,1/paper)

- Papers submitters:
 - Not registered by 23rd march 2023: 82 out of 284
 - Student 73 out of 202 (36%)
 - Delegate Non-member EPS 113 (56%)
 - Delegate EPS Member 14 (7%)
 - Exhibitor extra pass 2 (1%)
- **Papers with student as submitter or speaker or primary author: 52%**
- Country of submitter: (out of 202 papers) China 18%, Germany 17%, Switzerland 15%, Japan 12%, United States 7%, Italy 9%, France 6%, Taiwan 5%; Other EMEA: 8%, Other Asia: 2%, Other America: 1%
- Region of submitter: EMEA 52%, Asia 32% , Americas: 16%.

- Papers by main classification:
 - MC1: Colliders and other Particle Physics Accelerators: 38 (13%)
 - MC1.A02 8 (3 %) Lepton Circular Colliders
 - MC1.A24 7 (2 %) Accelerators and Storage Rings, Other
 - MC1.A08 6 (2 %) Linear Accelerators
 - MC2: Photon Sources and Electron Accelerators: 54 (19%)
 - MC2.A06 12 (4 %) Free Electron Lasers
 - MC2.T02 8 (3 %) Electron Sources
 - MC2.A24 6 (2 %) Accelerators and Storage Rings, Other
 - MC3: Novel Particle Sources and Acceleration Techniques: 11 (4%)
 - MC4: Hadron Accelerators: 38 (13%)
 - MC4.A08 10 (4 %) Linear Accelerators
 - MC4.T12 9 (3 %) Beam Injection/Extraction and Transport
 - MC5: Beam Dynamics and EM Fields: 38 (13%)
 - MC5.D04 6 (2 %) Beam Coupling Impedance Theory, Simulations, Measurements, Code Developments
 - MC5.D01 6 (2 %) Beam Optics Lattices, Correction Schemes, Transport
 - MC6: Beam Instrumentation, Controls, Feedback and Operational Aspects: 38 (13%)
 - MC6.T03: 17 (6%) T03 Beam Diagnostics and Instrumentation
 - MC6.T04 8 (3 %) Accelerator/Storage Ring Control Systems
 - MC7: Accelerator Technology and Sustainability: 51 (18%)
 - MC7.T14 8 (3 %) Vacuum Technology
 - MC7.T11 6 (2 %) Power Supplies
 - MC8: Applications of Accelerators, Technology Transfer and Industrial Relations and Outreach: 16 (6%)
 - MC8.U01 9 (3 %) Medical Applications
- Notes: several papers misclassified despite sorting work done ahead of SPC2!
- Should main classification and sub-classification be offered as separate menus in indico?

- Opt-in policy does not work:
 - Some reviewer who volunteered at registration never replied to request or declined all assigned papers.
 - Some participants who did not volunteer accepted to review and volunteered to review additional papers.
 - Recommendation: use an opt-out policy (all participants may be queried to review and can decline).
- Review by students?
 - Decision by IPAC'23 SPC1 was not to ask students to review papers.
 - Identifying students requires access to the participants database
 - => not data after 23rd march 2023
 - => participants registered after that date were not asked to review papers.
 - 52% of the papers had a student as main contributor.
 - In many cases the paper was submitted by a student whose professor did not attend the conference.
 - One of the stated goals of the LPR is **“Train accelerator students and post-doc in the process of peer-reviewing publications.”**
 - Shall we consider allowing one of the two reviewer to be a student on a trial basis (with opt-out possibility) at a future IPAC?
- Get faster reviews: 10 days to review was too much. One week is probably sufficient.



- Feedback (both by authors and by reviewers) was very positive.
- Some papers were significantly improved (spelling and/or scientifically).
- Several requests by students who needed to confirm the acceptance of the paper to graduate or thesis reviews.
- PR-AB:
 - One of the stated aim of the LPR is to increase the impact factor of PR-AB and other journals in the community.
 - Too early to measure.
 - Difficult to ask reviewers to identify papers to be forwarded to PR-AB (quality vary a lot from reviewer to reviewer).
 - Publication in LPR is not compatible with publication in PR-AB.

- Better unique identification of participants:
 - Several participants used different spelling for their name as author, as volunteer reviewer or as participants (initial, space, middle name,...). This create confusion!
 - Identify authors and conference participants by a unique id (SPMS database?).
 - The same affiliation appeared with different spelling (CERN, European Organization for Nuclear Research, C.E.R.N.,...)
 - Use a unique id for institutions (SPMS databse?).
- Papers compliance:
 - Some papers were obviously non-compliant with Jacow proceedings rules.
 - **Require LPR to go through the CAT scan? Have a record of that validation.**
- For better referee allocation:
 - Allow queries through an API to the Jacow publication database to find someone's field of expertise (with a unique participant ID).



Outlook

- LPR outcome:
 - Increased paper quality
 - Increase academic standing of our community
- 52% of the paper had a student as main contributor.
 - Important for some thesis.
- LPR submissions come from all regions.
- Work was very intense during the 6 weeks prior to IPAC but also very interesting!

A faint, light gray background graphic of a person's silhouette, composed of a circle for the head and a larger rounded shape for the torso and arms, centered behind the text.

Thank you

- **Paper submission process:**
 - Papers using the Jacow format are significantly shorter (in pages) than those in the IoP format (typically 3 pages become 7 pages).
 - Impossible to fit in 3 pages on the single-column IoP format (I tried hard).
 - Once paper is approved, text can not be changed. Little leverage on the authors to have them try to reduce paper length.
 - **Once paper is approved in Jacow format, ask the author to resubmit immediately in IoP format.**
 - **Add a space in indico for paper submission in IoP format and for submission of the author declaration form.**
 - Several papers were misclassified.
 - Separate main classification and sub-classification as separate menus during submission?
 - Make sure that SPC reclassification are taken into account (feedback to SPC and MC coordinators?).
 - LOC mentioned that due to LPR they had to to assign poster codes very early however, LPR did not use poster codes but database code.
 - **To help LOC, do not ask for LPR papers to use poster codes.**
- **Policy:**
 - Some papers were rejected by more than 10 reviewers.
 - Set a limit on the number of time a paper can be declined to be reviewed before a paper can be rejected as "off-topic/misclassified".
 - Some tracks have very small communities.
 - Decide on a policy for papers with no reviewers available. Fetch reviewers from previous IPACs?
 - Late publication date has some drawbacks for students.
 - Consider cost benefit of publishing in January rather than July.
 - Number of pages for LPR papers of invited orals? 3? 5?

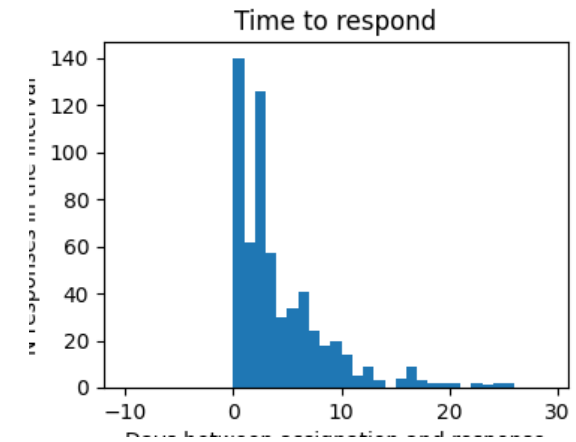
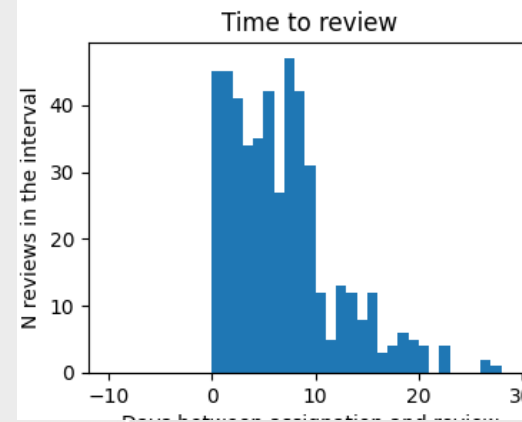
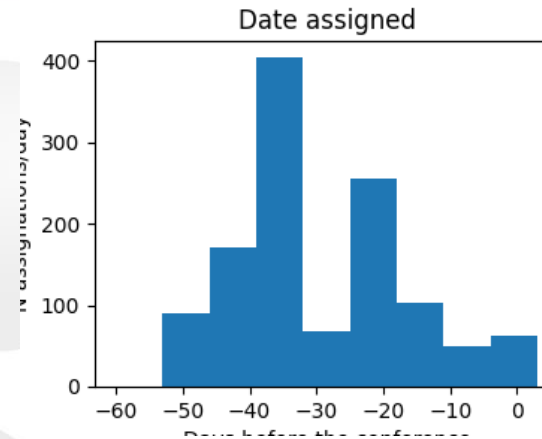
- **Peer review process:**
 - Find a space in the cloud to share data on reviewers/papers matching. This would allow several persons to assign reviewers to papers.
 - In the review form, separate scientific comments from spelling comments (a long list of spelling mistakes does not require a review on the second round).
- **Indico:**
 - Several reviewers posted comments visible by authors and some comments disclosed their identity.
 - **Disable comments on papers**
 - Some SPB members mistakenly validated (judged) papers without waiting for approval from the others. This created some confusion.
 - **Create an “observer” status that can access to all reviewers comments but not “judge” the paper.**
 - Some LOC members has large rights on indico and “judged” paper for which they were only reviewers.
 - No way to prevent reviewers to mark papers “to be corrected” on second round.
 - **Limit the number of rounds in indico?**
 - Withdrawn papers completely disappear from Indico.
 - **Keep a record of papers even when withdrawn.**

- **Jacow:**
 - Several participants used different spelling for their name as author, as volunteer reviewer or as participants (initial, space, middle name,...). This create confusion!
 - Identify authors and conference participants by a unique id (SPMS database?).
 - The same affiliation appeared with different spelling (CERN, European Organization for Nuclear Research, C.E.R.N.,...)
 - Use a unique id for institutions (SPMS databse?).
 - Allow queries through an API to the Jacow publication database to find someone's field of expertise.
 - Some papers were obviously non-compliant with Jacow proceedings rules.
 - **Require LPR to go through the CAT scan? Have a record of that validation.**
- **Scripts/code:**
 - Ensure code is transmitted from one year to the next.
 - Find a space to share the scripts managing the LPR. At the moment most of the scripts (except email functions) are on gitlab at <https://gitlab.in2p3.fr/delerue/ipac-lpr>
- **LOC / IoP contract:**
 - Ensure that the contract specifies that the IoP must transmit indexed data to Clarivate

- **Final algorithm:**

- Search for all speakers, authors and co-authors in a given track (subMC) (including people who did not volunteer as reviewer)
- Limitation to 3 papers for volunteers, 1 for non volunteer; upon review completion, ask if volunteer for more papers
- If no match in the other continents, look for reviewers in the same continent but different country.
- If less than 5 reviewers, look for additional reviewers in same sub-classification in other MC.
- If no reviewer found, look manually in related technologies (other tracks).

- LPR activity started around 15th March (thanks to an email from a colleague who wanted me to check that his paper had been received).
- Peak activity the week after April 1st (more than 400 assignation/week).
- Before 15th April, feedback: IPAC still far in the future.
- After 15th April: busy preparing their own IPAC paper/poster.
- Easter long week-end, easter vacation, ...
- Most reviewer accepted to review within a few days (week-ends not implemented in code).
- Most reviews within the 10 days deadline for review.
 - Time allocated to review the paper should be modulated as function of time remaining to IPAC (no time to implement it in code).
 - Proposal: 10 days before the LPR deadline, 7 days after, -1 days each week.
- Reviewers acceptance:
 - Some reviewer who volunteered at registration never replied to request or declined all assigned papers.
 - Some participants who did not volunteer accepted and volunteered to review additional papers.





Submission time of LPR papers

