

Peer-Reviewing and Submission Dynamics Around Top Software-Engineering Venues: A Juniors' Perspective

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Abstract: In this extended abstract, we summarize our paper with the homonymous title published at the International Conference on Evaluation and Assessment in Software Engineering (EASE) 2022 [AI22].

Keywords: juniors; peer review; bias; challenges; collaboration

Background: Research is an intrinsically challenging process full of obstacles. However, these obstacles may be more dominant for a specific group of researchers (such as junior researchers) compared to others. It is the responsibility of the community to pay close attention to those groups that may be struggling for unfair reasons and provide necessary support. Junior researchers are of high importance to the scientific community, and are defined as young researchers who have recently started their research career [Li19]. Despite their importance, juniors may face impediments when starting their career that hinder their activities and motivation. For instance, collaboration aspects and peer-reviewing models can play a role. Junior researchers without a high reputation (e.g., via their co-authors) may be negatively impacted by reputation biases, and thus could have even more problems with publishing and building their reputation independently. In our study, we investigate what challenges junior researchers perceive when submitting their work to software-engineering venues with a high reputation.

Objective: Only few studies have analyzed the contributions of juniors in the software-engineering community [AI21] and the challenges they face. We aimed to identify and understand what kinds of challenges junior researchers experience when aiming to publish their research and getting involved into the community. For this purpose, we conducted an online survey with a focus on two common types of challenges: peer-reviewing models (double-blind and single-blind) and collaboration.

Method: We designed and conducted an exploratory web-based survey with which we targeted active software-engineering researchers, aiming to identify the community's awareness of juniors' challenges. In general, we structured our survey around four research

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questions concerning the community’s opinion on the fairness of reviewing models (double-blind versus single-blind) and the importance of collaborations. We translated each of our research questions into several survey questions, which we arranged according to the survey’s homogeneous flow. Mostly, we relied on close-ended questions, sometimes followed by open-ended ones. We used mailing lists for software-engineering researchers and Twitter as channels to distribute the survey. To empirically evaluate our results and answer our research questions, we used descriptive statistics and visualizations to analyze the responses.

Results: A total of 52 respondents completed our survey, with the majority having publishing experience reflected by the number of papers they have published. Regarding the academic position or role, 34 responses out of 52 stemmed from PhD students. The results indicate that the majority of our participants favors double-blind reviewing with more than half of them (67.2 %) voting in favor of it, believing that single-blind reviewing favors seniors and negatively impacts juniors. However, our participants indicate that reviewing models do not affect their submission decisions. When looking at juniors, they seem to hesitate to submit to highly prestigious venues and believe that collaborations with seniors raises their papers’ chances of getting accepted. Finally, our participants agree that the chances of getting papers accepted are not equal for juniors and seniors, with a lack of experience and academic writing skills posing the strongest barriers for junior researchers. Also, our participants agree that supervision and work-group problems pose strong barriers.

Conclusion: Our findings indicate a high level of awareness inside the software-engineering community regarding the challenges junior researchers face. Our study is only a first step in accomplishing a comprehensive analysis of our community and the challenges certain groups of researchers face. Our findings can be used to define these challenges and start contributing to their solutions. Moreover, we provide insights into diversity and inclusion aspects inside the software-engineering research community.

Data Availability: We share our questionnaire and anonymized raw data in a publicly available repository.⁶

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