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Dr. Haixun Wang

Instacart, Inc.

Dear Dr. Wang and TKDD EiC Search Committee:

In response to the ACM TKDD Call for EiC nominations, I am writing to self-nominate for the Editor-in-Chief position for the ACM TKDD Journal. For the committee members' reference, a CV is attached to this email for you to assess my qualifications.

Presently, I am a Full Professor in the Department of Electrical Engineering and Computer Science, Florida Atlantic University. My research primarily focuses on knowledge discovery and data mining. I am a Fellow of the IEEE, class of 2023, for my contributions to big data analytics and network representation learning, as well as a recipient of the 2023 IEEE ICDM Outstanding Service Award. During my career I have continuously been engaged in various professional services, including international conferences and journals. For example, I am a steering committee member for the Scientific and Statistical Database Management (SSDBM), have served on the editorial board for IEEE Transactions on Knowledge and Data Engineering for over 10 years, and am currently serving as an Associate Editor for the TKDD, since 2018.

In the following, I briefly outline a self-assessment as to why I am qualified to serve as the TKDD EiC:

Research Expertise: As the leader of the TKDD journal, the EiC must have a broad scope of knowledge and leadership, in order for the associate editor body to cover different areas of KDD research. The breadth of the EiC's technical expertise will not only speed up the assignment of submissions to associate editors, but also help void unintentional bias in handling the submissions (e.g., unawareness of emerging research topics). During my career I have published over 300 papers, covering many differing areas of KDD research and its applications in different domains, such as deep learning for crowd counting, recommender systems, graph learning, outlier detection, stream data mining, etc. Many of my papers are focused on fundamental algorithm designs, where technical contributions are essential, while some other papers study the applications of KDD to domain applications, e.g., using machine learning methods to detect potential hospital readmission or using deep learning to help diagnose skin cancer using non-invasive Raman Spectroscopy signals. I have received four Best Paper Awards and three Best Student Paper Awards, justifying my research's technical contributions to the field. I believe that my diverse skills and broad knowledge scope will help me effectively handle TKDD submissions from different areas.

Industrial Experience: Although TKDD is an academic-centered journal, KDD itself has many domain applications, as well as strong industry support. Industrial expertise will help the growth of the journal to not only focus on academic research, but also promote industrial case studies and successes. My industry experience can be dated back to my PhD study in 2000, while I worked as an Intern for Microsoft Research in Beijing, China for six months. During my career I am actively engaged in industrial collaboration, and design algorithms to solve application challenges and to be evaluated in the A/B test for production. For example, I have previously worked with Bidtellect Inc. (now part of Simli.Fi) in order to design online bidding algorithms, which were deployed in their bidding engines after the A/B test. This success led to Bidtellect investing in a research lab at FAU, to study computational advertising algorithms. I also worked with JM Family (South Florida's 2nd largest private company) on two research projects to design solutions that address their technical challenges. My industry experience will help me balance the technical depth and the variety of applications, so TKDD can be interesting to both the academic and industrial audience.

Professional Services: I have been actively involved in numerous professional services, including journals, conferences, research grant review, and other such activities. I previously served as an associate editor of the IEEE Trans. on Knowledge and Data Engineering (2008-2012, 2014-2021) for more than 10 years, and I currently serve as an associate editor to the ACM Trans. on Knowledge Discovery from Data (2018 - date), International Journal of Social Network Analysis and Mining SNAM (2010-date), Journal of Big Data (2013-date), and Network Modeling Analysis in Health Informatics and Bioinformatics Journal (2014-date). I was the Program Committee Co-Chair for the 22nd IEEE International Conference on Data Mining (ICDM-2022), General Co-chair for the 2021 IEEE International Conference on Big Data (IEEE BigData-2021), and Program Committee Co-Chair for the 33rd International Conference on Scientific and Statistical Database Management (SSDBM-2021). Having played numerous different roles in professional society attests that I am not only familiar with the journal management process but can also balance my time between professional services and other workloads.

Future Vision: In the following I outline three main thrusts, which I intend to promote for TKDD under my leadership.

1. **Thrust #1: Improving Review Turnaround Time:** Needless to say, it has become increasingly difficult to find reviewers for most journals, including TKDD. Such difficulty eventually results in long turnaround time, and further jeopardizes authors' interests in submitting their papers to TKDD. My plan to shorten the turnaround time includes four major actions:
    a. *Call for Associate Editor initiative:* I plan to aggressively increase the number of associate editors to about 50 (TKDD currently has about 37 associate editors) through a public call for associate editor initiative, with a special interest in early career researchers who have a solid track record so they can help effectively handle paper review.
    b. *Shared reviewer list between EiC and associate editors:* Currently, TKDD primarily relies on associate editors to handle each paper's review. The associate editors inevitably become the bottleneck, and their delays result in long turnaround time. I will maintain a separate reviewer list, of early career researchers, senior PhD students, postdocs, or first authors publishing at top venues. If a paper's review is delayed noticeably, I will assign reviewers from this list to speed up the review process. While the list will be shared with associate editors, they are not to use reviewers from the list unless they have sent out five review invitations, but the submission still does not have enough number of reviews.
    c. *Quick administrative rejection process:* One of the most effective ways to shorten the turnaround time is to filter out submissions that don't meet the TKDD standards. While an administrative rejection is currently implemented in TKDD, I plan to have a two-phase review process as follows: (1) a small number of associate editors (three or five, including EiC) will form a special pool. Once EiC feels a paper does not meet the standard, it will be forwarded to this pool, so they will provide sketch reviews before the desk rejects the paper. If the associate editors in the pool consider the submission to meet the standard, it will enter the general formal review process; (2) submissions EiC considered sufficient will enter the general formal review process.
    d. *Reviewer appreciation initiatives:* Reviewers have the most difficult job, yet their contribution is overlooked in academic publication. I plan to take a few initiatives to appreciate reviewers, so they can be more active in engaging in TKDD review. Several activities include (1) outstanding reviewer certificates; (2) reviewer acknowledgement through TKDD publicity channels (which will be detailed in the third thrust).

2. **Thrust #2: Improving Journal Impact Factors:** While journal impact factors are not accurate measures of paper quality, they reflect the growth of the journal and the audience's overall feedback towards the journal. During the past years TKDD's impact factors have improved significantly, however, I plan on further improving TKDD's impact factors through the following three channels.

a. *Special issues, invited submissions, and spotlight papers:* Special issues have a focused theme, and tend to have a quicker turnaround time. Together with associate editors, I will identify trending topics, and invite established researchers to serve as guest editors for a series of special issues. In addition, I will also invite researchers with known track records to contribute to "Invited Papers", e.g., extended version of selected KDD papers. Meanwhile, for each TKDD issue, one paper will be highlighted as a "Spotlight Paper" to showcase innovative ideas.
b. *Survey papers, position papers, resource papers:* As computer science research is growing rapidly, it's become increasingly difficult for audiences to comprehend state-of-the-art research in advanced fields. Survey papers, position papers, and resource papers summarize classical methods in a particular field (survey papers), outline emerging topics which haven't drawn much attention (position papers), and share resources with the community (resource papers). These three types of papers are relatively thin in techniques but broad in scope, and therefore can fit a large body of the audience.
c. *TKDD short papers:* Currently, TKDD encourages short submissions (e.g., paper with less than five pages), but the review criteria and process are the same as regular papers (it is the handling editor's decision as to how the review is handled). This likely jeopardizes the paper's acceptance, because reviewers expect a journal paper to have much more in-depth technical contributions and empirical study results. I intend to launch a short paper category with clear review guidelines, in order to emphasize innovative ideas instead of intensive validations and results. This initiative provides a seamless connection between TKDD and top conferences, such as AAAI, IJCAI, KDD, ICLR etc.

3. **Improving Journal Publicity:** Communication and publicity are the key to not only showcase TKDD's publications, bringing pride to the authors, but also draw public attention to attract more submissions. I will work with ACM to focus on the following two publicity channels:
   a. *Create TKDD social media account for publicity*: I will work with my graduate students and one or two associate editors to establish TKDD through social media accounts, which will be used to publish TKDD solicitations, e.g., Call for associate editors, call for special issues, etc. and publish content of each issue, along with the spotlight.
   a. *Aggressively team up with leading conferences in the area*: Conferences in computer science have grown tremendously in the past several years. I will seek to establish mechanisms to team up with leading conferences, especially KDD, to help rapidly publish innovative ideas. This is certainly a non-trivial issue, because such a decision is only possible with support from ACM and ACM SIGKDD. Nevertheless, I believe that a broader network will conferences will help promote TKDD to the next era.

To summarize, I have the motivation, qualifications, and determination to serve TKDD as the EiC. I firmly believe that, if elected, my vision, together with my responsibility, enthusiasm, and excellence, will help advance TKDD to the next stage.

Yours Sincerely,

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