

TKDE 20(12) (December 2008) EIC Editorial: State of the Transactions

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With this last issue of 2008, the *IEEE Transactions on Knowledge and Data Engineering (TKDE)* has completed its 20 years of publication, and I have completed the second term of my *TKDE* Editor-in-Chief position. Time has flown, and it has been four years since I assumed this position in January 2005! Thanks to the hard work and outstanding efforts of our Associate Editors, reviewers, authors, and support staff from the IEEE Computer Society Publications Office, *TKDE* has further strengthened its “premier” status over the past four years in the field of knowledge and data engineering, including data mining, database systems, and knowledge engineering. Our paper submission rate has continued to increase, and is now far higher than any other journal in data mining, database systems, and knowledge engineering. The journal impact factor exceeded 2.0 in 2006 for the first time, and ranks #3 in all IEEE Computer Society transactions in the most recent 2007 journal impact factors.

I would like to take this opportunity to review some of the major activities that have taken place over the past four years, some of which are based on the changes reported in my previous editorials.

1. Submission Numbers: Continued Growth over the Years

Our annual number of new paper submissions has increased as follows: 347 (in 2004), 480 (in 2005), 588 (in 2006), and 625 (2007). By 26 September 2008 (when this editorial was written), we have received 508 new papers for the current year. These *TKDE* submission numbers are now far higher than any other journal in data mining, database systems, and knowledge engineering. The numbers give the journal a unique luxury of selecting the best-quality papers in knowledge and data engineering for publication.

The number of paper submissions does not tell the whole story. Our authors, as shown by the recently published papers, consist of an excellent spectrum of world-renowned experts, rising stars and relatively new researchers (including PhD students) from the international knowledge and data engineering community.

I have been asked frequently by both *TKDE* authors and researchers from other communities about why and how *TKDE* has been attracting a better submission rate in comparison to its similar journals from sister societies and commercial publishers. While the diligent work and great efforts of our Associate Editors, reviewers, and support staff from the IEEE Computer Society Publications Office have played a vital role, our initiatives on improving our submission-to-decision time, streamlining the journal’s focus areas, and organizing special issues, (as reported in the Volume 18, Number 1 editorial) as well as reducing the backlog of accepted papers and answering potential authors’ and readers’ questions effectively, have also been extremely useful and important.

2. Impact Factor: #3 in All IEEE Computer Society Transactions

While best-quality research contributions in the identified focus areas have been our primary objective for the journal, we have also made efforts to improve the journal impact factor. For example, following the discussions and recommendations from the annual *TKDE* Editorial Board meeting at the IEEE International Conference on Data Mining (ICDM) each year since 2005 (as outlined in the Volume 18, Number 1 editorial), I appointed the first *TKDE* Survey Editor, Professor Chris Clifton from Purdue University in 2007 to specifically promote our survey papers, (as reported in the Volume 19, Number 10 editorial). We published *TKDE* Guidelines for Survey Papers, together with the Associate Editor-in-Chief, Professor Christos Faloutsos from Carnegie Mellon University, in the Volume 19, Number 11 issue.

With our efforts, the journal impact factor has risen considerably over the past 5 years: 1.896 (2007); 2.063 (2006); 1.758 (2005); 1.243 (2004); and 1.223 (2003). The 2007 *TKDE* impact factor of 1.896 ranks number 3 in all IEEE Computer Society transactions, just below the *IEEE Transactions on Pattern Analysis and Machine Intelligence* (3.579) and the *IEEE Transactions on Software Engineering* (2.105).

The IEEE Computer Society transactions, which are all commonly recognized as top journals in their respective fields, solicit, review, and publish articles in rigorous ways. For example, we do not publish tutorials and surveys without critical reviews, which could improve a journal's impact factor without truly research contributions.

3. A Consistently Excellent Editorial Board

In addition to the first Associate Editor-in-Chief, Professor Christos Faloutsos from Carnegie Mellon University, (as reported in the Volume 17, Number 4 editorial) and the first Survey Editor, (as mentioned on the previous page), I have also worked with the Associate Editor-in-Chief closely to constantly look for well-recognized researchers in *TKDE* areas to serve on the Editorial Board.

I have followed the *TKDE* tradition that Associate Editors are carefully selected based on their research expertise and past publication experience with *TKDE*. I have been fortunate in compiling an outstanding Editorial Board continually over the past four years that consists of both top researchers and motivated rising stars and well covers all identified focus areas of the journal, even given the IEEE Computer Society's established policy that Associated Editors (as well as the Editors-in-Chief) are only allowed to serve a maximum of two successive 2-year terms.

As mentioned in the Volume 18, Number 1 editorial, the *TKDE* workload for our Associate Editors is much heavier than similar journals published by sister societies. In 2007, for example, most Associate Editors received around 15 new paper submissions for handling. I owe all my Associate Editors a big Thank You for this heavy workload and their exemplary service to the scientific community.

4. Effective Communication: A Key

Over the past four years, I have been efficient and organized in dealing with authors', readers' and Editorial Board members' questions, inquiries and concerns. I have promptly answered every question I have received, together with the *TKDE* Assistant (for routine questions like turnaround time and formatting issues) and the IEEE Computer Society Publications Office (for problems such as plagiarism and double submission).

I firmly believe that efficient and organized communication is a key to enhance the quality and relevance of our publications and to attract more and better-quality paper submissions.

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