

Old Neural-Network Editors Don't Die, They Just Prune Their Hidden Nodes

THIS issue marks the finishing line of my six-year thirty-six-issue marathon as Editor-in-Chief of the IEEE TRANSACTIONS ON NEURAL NETWORKS (TNN). The baton is passed to my able friend Jacek Zurada. I can think of no one more capable of leading this archival periodical to new heights of quality and prestige.

I am proud of the TNN's evolution during my tenure as Editor-in-Chief. In the latest (1995) available report [1], the TNN ranks sixth highest in citation rate of 138 electrical engineering journals.

Quantity has increased also. In 1991, the TNN had about 600 pages per year. In response to publishing demands, the annual page count is now about 1600.

Maintenance of quality in the presence of escalating quantity is increasingly important in these days of for-profit publishing house journals and "write only" papers. The growth in journal quantity is due largely to the demand for academic curricula vitae lines in promotion and tenure cases. Columnist and commentator George Will noted "This 'publish or perish' pressure is producing a silly proliferation of journals to carry articles almost none of which will ever be subsequently cited in any scholarly journal" (*Washington Post*, April 1997). Everyone agrees that a lot of mediocre papers are published. Few agree, though, which specific papers are mediocre—especially when the paper is theirs. Making such judgements is the task of the Associate Editors and, ultimately, the Editor-in-Chief.

The strict review standards at the TNN have resulted in an average acceptance rate of about 15%.¹ Included in the rejected papers are those authored by TNN Associate Editors as well as IEEE Neural Network Council AdCom (administrative committee) members and officers. (These people also account for numerous high-quality accepted papers!) Rejecting papers for publication—the Editor-in-Chief's responsibility—does not enhance one's popularity. On more than one occasion, disgruntled authors with eggshell egos have fired wide-angle scattergun blasts of furious e-mail protests to the world proclaiming the stupidity of my decision for rejection. Author Norman Cousins expresses such vindictive condemnation of editors with the caustic remark "I think the job of an editor is to put his head in a noose." My retort is a quote from *Capper's Weekly*: "If you ever see an editor who pleases everybody, he will be neither sitting nor standing, and there will be a lot of flowers around him."

Every decision process, including scrutinizing technical paper quality, has its false alarms and false positives. Peer review of submitted papers, used throughout IEEE, is comparable to the often-cited observation concerning democracy as a form

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¹The ratio of papers accepted to papers received. Some authors choose not to respond after receiving a scathing review insufficiently severe to warrant outright rejection.

of government. The method is undeniably the worst that exists—except for all of the others.

Here are some other highlights I consider significant in the development of the TNN in the last six years.

- 1) The TNN was the first of a handful of IEEE periodicals to be published on the web <<http://www.opera.ieee.org/jolly/>> [2]. This was not the result of an IEEE corporate decision, but of innovative and visionary risk taking by a few IEEE Societies—including the IEEE Neural Networks Council.
- 2) The TNN was the first IEEE publication to offer authors of submitted papers the opportunity to electronically post their abstracts and provide links allowing downloading of paper preprints [3] <http://engine.ieee.org/nnc/pubs/tnn/frame_root.html>. This service proves particularly important in a rapidly developing field like neural networks.
- 3) The TNN spawned two other IEEE publications. In 1992, James C. Bezdek was the guest editor of a special issue of the TNN on fuzzy systems. Dr. Bezdek then founded The IEEE TRANSACTIONS ON FUZZY SYSTEMS. The publication premiered in 1993 and is still ably edited by Dr. Bezdek. David B. Fogel edited a special issue of the TNN in January 1994 on evolutionary computation. Dr. Fogel then founded the IEEE TRANSACTIONS ON EVOLUTIONARY COMPUTATION, which premiered this year.

The most rewarding aspect of my tenure as Editor-in-Chief was working from my home with my family. Connie, my bride of nearly 25 years, supervised all the administrative aspects of the TNN in my office. My amazing children, Jeremiah, Joshua, and Marilee, sorted mail, filed manuscripts, and licked envelopes. While we were home-schooling, the TNN served as part of my children's education. They learned numbers from filing manuscript folders, geography from collecting stamps and identifying which outgoing envelopes to mark "air-mail," and, by working together, the art of teamwork. They are now looking forward to free weekends.

Me too.

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