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Editor, CMS Notes

Earlier this month I was attending a regional undergraduate conference, at Acadia University. The Science Atlantic Math/Stats/CS conference has been running for almost fifty years now, cycling around most of the region's universities on about a ten-year cycle: and I've been involved in most of those years.

For its first decades, what's now Science Atlantic was called "APICS" (the "Atlantic Provinces Interuniversity Committee on the Sciences"), and the math and stats group didn't always share an event with computer science. But it's still recognizably the same event that I first went to, as a first-year undergraduate student on the Dalhousie problem-solving team. I think the late Jon Borwein was driving the minibus. I'm still involved with that contest in most years, though these days I'm helping set the questions. There have been a few changes over the years: most notably, the two-person teams actually work together, collaborating on a single set of answers. Back in the day, each of the two team members would find, or try to find, their own set of solutions. They'd be graded independently, and then, after grading, the two scores would be added together. Around the time of the change, we observed that the students seemed to enjoy the team format more. So much time has passed now, of course, that we don't have a valid comparison, but I think it's still true. Also, it's a nice contrast to the Putnam, which, sticking to a winning formula, has changed very little (except for the creation of the Elizabeth Lowell Putnam Award) since its early days.

One of the things I learned when I came back as a faculty member was how much work goes on behind the scenes to make it all happen! Those contest answers get shuffled into heaps, one grader for each of eight questions (it used to be six) and somehow the grading gets done at odd moments of Friday night and Saturday morning. Then there's a careful adding-up of score and a recheck of any specially close totals, all in time for the prizes to be awarded.

At the end of the day, how important are problem-solving contests? There are whole areas of mathematics — category theory, numerical analysis, algebraic geometry, mathematical statistics — that don't lend themselves to the construction of contest problems. And it's certainly true that many great mathematicians didn't distinguish themselves in such contests, and indeed maybe never took part! Conversely, if you browse the list of Putnam Fellows, you'll see a few household names (to pick a few, Elkies, Milnor, Kaplansky, and Feynman) interspersed with those of people you've probably never heard of. It's not surprising that the Putnam Fellows of the last few years are, for the most part, not yet famous: more intriguingly, the Putnam fellows of (say) the sixties or seventies seem to me somewhat less well known than those of the forties. Maybe the Putnam has changed, after all. Or maybe mathematics has.

But certainly some of the skills learned and honed in problem-solving contests are useful. They provide some excitement and challenge to students who may not be ready for real research. It seems to me that that's enough to ask.
