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Average*	none	July**	none
C. Total paid and/or requested circulation sum of B1–B4)			
Average*	114 417	July**	120 639
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Average*	none	July**	none
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I certify that the statements made by me above are correct and complete

Richard Baccante, Treasurer

must bear. Along with the costs, we are also concerned about teaching assistants' English language skills. Consequently, only 10 to 20% of our incoming graduate student classes comprise foreign students: 4 to 8 out of 30 or 40 new grad students per year. A significant number of students have dropped out of chemistry, to the advantage of our computer science program.

We have recently taken steps to select top chemistry students from the PRC who will want to stay in chemistry. We look for students who have been involved with undergraduate research and have published on chemistry-related topics. These two elements usually indicate students who are finishing a master's degree. We also call prospective students and interview them individually to determine their intentions. They are usually (though not always) forthright, and their interest in remaining in chemistry can be ascertained. When possible, we also call the student's adviser for additional information.

Generally, Graduate Record Exam scores are a very poor indicator of a student's future performance. We have found that undergraduate research experiences are the best indicator of both a student's performance and his or her dedication to a chosen science.

Building relationships with departments in the PRC is critical to developing the kind of openness one needs to accurately evaluate students. It's not always obvious how to do that except to take the first step. Careful selection of students and careful mentoring once they are here are the best solutions to this problem.

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Computer Overkill?

What do scientists really need from a computer? I suggest that there are many physicists whose only computer needs are straightforward programming, a good graphics routine, a good text-processing routine, reliable and easily readable e-mail, and, probably, easy access to the Internet. I suspect that many physicists, like myself, are not the least bit interested in the finer points of computing technology or fancy graphics; they find that most of the recent computing innovations offered to—or perhaps pushed at—them are unnecessary.

Journals want us to submit our papers in some special format or another. It is not our job to produce such files; journal staff include, or should include, text-processing experts. Colorful conference posters may be pleasant works of art but it is doubtful if a poster can say much more than several sheets of paper containing good black and white figures with some simple explanatory text and possibly one or two figures that require color. Regrettably, some students imagine that computing is science rather than technology.

Members of the scientific community should make their needs clearly understood both to the computing industry and, equally important, to systems managers who are apt to be carried away by each innovation. Of course, there are individual special needs but, for most of us, the VAX/VMS supplied our needs in an efficient and understandable manner.

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Cheers for Richard Hammond, who challenges the visionary image of a brave new world run by Internet and computer "culture" (see PHYSICS TODAY, February 2001, page 14). It is indeed time to steer clear of quicksilver medicines and instead "channel our finances and our creative energy toward a *real* improvement in education, and not a *virtual* one." How severely the psychedelic vision of an "information-dominated society" has already infected our lives is well illustrated, ironically, by an article in the same issue of PHYSICS TODAY (page 24) where we learn about "a new undergraduate college that will be 'born wireless,' " that is, "students will experiment, and be an experiment, with being hooked to the Internet all the time." Moreover, the students will possess a device that will "continuously transmit and receive information to tell students . . . where to find their friends or professors (and vice versa) . . . and where they can find a parking spot." Who needs that? Who pays the cost? Why?

In that same article, we read of the nightmare vision of a "smart house" in which everything is done by computers, "from adjusting lighting, temperature, and music to transmitting the blood pressure and weight of the house's occupants to a medical clinic." George Orwell's apocalyptic vision 1984 was a nursery story compared with such a horror—

which, unfortunately, is in our grasp.

About nine years ago, I wrote some memoirs, and "saved" them on then-current computer diskettes. Recently a publisher showed interest in the text, but told me that current computers cannot use the old normal-density diskettes. So, with some expense and trouble, I had the text transferred to a single high-density disk. But as it turned out, it was all no use, because the word-processing software, at the time the best available, is now completely obsolete! Funny, not long ago one could read without much trouble Egyptian, Sanskrit, and Aramaic texts that were several thousand years old. Now, we can't even read something nine years old. Where are we heading?

PAUL ROMAN
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Nature Has the Answers

In reviewing John Ziman's book *Real Science: What It Is, and What It Means*, Craig McConnell and Robert H. March (PHYSICS TODAY, May 2001, page 57) explain that the "objectivity" of research resides "not in the individuals who practice it but in the scientific community. . . ."

Acceptance is conferred by the scientific community, *objectivity* from the natural world, against which all scientific ideas are eventually tested. Individuals may be deluded; the community may be ruled for a while by religion or politics; but in the end, Nature settles matters.

CHARLES W. McCUTCHEN
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Galileo's Sentence Restated

In my letter in the August 2001 issue of PHYSICS TODAY (page 74), I stated that Galileo was excommunicated from the Roman Catholic church. I was mistaken. He was never excommunicated, but was summoned to Rome on suspicion of heresy, forced to abjure, and sentenced to life in prison; that sentence was later commuted to house arrest.

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Correction

September 2001, page 50—Eli Rotenberg is affiliated with Lawrence Berkeley National Laboratory, not Lawrence Livermore. ■

Tenured and Tenure-Track Faculty Appointments Canada Research Chairs in Astrophysics Saint Mary's University

The Department of Astronomy and Physics seeks to appoint one tenured and two tenure-track faculty for September, 2002. These three positions have been created to launch a new Institute for Computational Astrophysics (ICA) within the Department. The ICA will promote computational astrophysics in the broadest sense, providing a world-class intellectual environment for the new faculty, PDFs, graduate students, visitors, and the eight existing members of the Department which includes two computational astrophysicists.

The senior appointee, to be awarded a Tier I Canada Research Chair (CRC, <http://www.chairs.gc.ca>), will be an internationally known theoretical or computational astrophysicist and will assume the role of ICA Director. To serve as the ICA's intellectual and administrative leader while maintaining a vigorous research program, the director's teaching load will be only one one-semester course per year and sufficient funds to support a PDF will be provided.

One Tier II CRC and one regular tenure-track faculty appointment are also available. The successful candidates will be rising stars in computational astrophysics who will maintain vigorous, externally fundable research programs and participate in normal departmental activities such as teaching, advising, proposal-writing, etc.

Applicants should send their CV, cover letter, and names and addresses of four references to: ICA Faculty Search; c/o Dr. David Clarke, Department of Astronomy and Physics, Saint Mary's University, Halifax, NS, Canada B3H 3C3. Applications for the senior post will be accepted until March 1, 2002 or until a suitable candidate is found. Applications for the junior posts will be accepted until March 29, 2002. CRC holders need not be Canadian citizens or permanent residents. For the regular appointment, while this advertisement is directed in the first instance to Canadian citizens and permanent residents, all qualified candidates are strongly encouraged to apply.

For more information, contact ddclarke@ap.stmarys.ca, or visit <http://www.ap.stmarys.ca>. Saint Mary's University is committed to the principles of Employment Equity.



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Postdoctoral Opportunities Experimental Physics

The Inertial Confinement Fusion (ICF) Program in the National Ignition Facility (NIF) Directorate at Lawrence Livermore National Laboratory (LLNL) invites applications for postdoctoral positions in experimental physics. The successful candidates will plan and execute laser-produced plasma experiments related to ICF; develop, field and calibrate x-ray and particle diagnostics of implosion performance; analyze data with image processing routines; and present conclusions in scientific journals and at scientific conferences. We are particularly interested in candidates with experience researching and developing advanced x-ray imaging and spectroscopy diagnostics for use in large, complex experiments.

The positions are one-year term appointments, renewable up to two years. A Ph.D., recently completed or soon to be completed, is required, and U.S. citizenship is desired but not required. For consideration, submit a resume, reference source# AJPTA11NF, publication list, statement of research interests, and the names of three professional references to icfpstdocpt@llnl.gov. For information about LLNL's ICF Program, see: <http://www.llnl.gov/nif/icf.html>. For more information about LLNL's Postdoctoral Program, see: <http://www.llnl.gov/postdoc>. LLNL is operated by the University of California for the United States Department of Energy. AAE/EOE.



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