I am delighted and privileged to be appointed the next Head of the MIT Department of Physics. The Department is in excellent shape thanks to Marc Kastner’s leadership and the efforts of our wonderful faculty, staff, students, and friends. I’m delighted that Marc has now become Dean of Science. We thank Marc for his tremendous accomplishments on behalf of the Physics Department and we wish him the very best in his new role. Visit the News & Events section for an interview with Marc on highlights of his nine-year tenure as Department Head. I am also grateful to Tom Greytak, not only for his years of service as Associate Head for Education, but for serving as Interim Head while I am on sabbatical during the Fall 2007 semester.

For those of you whom I’ve not yet had the pleasure of meeting, I’m a theoretical astrophysicist with a passion for understanding how the universe works. As a member of the MIT Kavli Institute for Astrophysics and Space Research, I lead a research program studying the mysteries of dark energy and dark matter. My group investigates the formation of cosmic structure after the big bang, the physics of dark matter both in the early universe and in forming galaxies, and the physical processes governing matter and radiation close to black holes. My research students at the high school and undergraduate level have won national prizes for their work, including First Prize in the Intel Science Talent Search. My former Ph.D. students now hold tenured faculty positions at Harvard, Columbia, U. C.-Berkeley, and other fine universities.

I’m also passionate about education. I enjoy teaching classical mechanics, electromagnetism, quantum mechanics, relativity, and cosmology. Our undergraduates are extraordinary. I’m thrilled to report that the class of 2007 had more physics S. B. degrees than at any time in the last 18 years. Eighteen of these 85 graduates were nominated for Phi Beta Kappa—29% of all nominees Institute-wide! Ten of our alumni have won Nobel Prizes (five since 1997), and many others are pioneers and leaders of industry.

It’s exciting to lead a Department that is full of so many outstanding teachers. This past year, Eric Hudson received the Department’s Buechner Teaching Award for his work in the TEAL active-learning format of freshmen electromagnetism; Alexander van Oudenaarden was awarded the School of Science’s Excellence in Graduate Teaching prize; and emeriti faculty Tony French, John King, and Robert Hulsizer were
co-recipients of the American Physical Society’s Excellence in Physics Education Award. Another especially exciting award received by one of our many distinguished emeriti was the 2006 National Medal of Science to Lester Wolfe Professor of Physics Emeritus Daniel Kleppner. Don’t miss the Faculty Notes section for a complete listing of all our outstanding faculty honors and promotions.

In my twenty-one years on the MIT faculty, I’ve had the privilege to work with and learn from many great physicists who have helped me grow as a scientist, educator, and person. One of the most influential for me and many others was Viki Weisskopf. As Department Head, as Director General of CERN, as a colleague and mentor, Viki played a pivotal role in shaping the MIT Physics Department. David Kaiser tells the story in his wonderful article about Viki in this issue.

The last year has been a great one for our Department. Our administrative and educational offices, junior lab, Center for Theoretical Physics, and theoretical Condensed Matter Physics group have now moved into the beautiful new Green Center for Physics. I’m deeply grateful to Neil Pappalardo for his generous support for the Green Center and other projects. Neil is interviewed in this issue’s Giving to Physics section, and it’s a fascinating story. This fall we will hold a special celebration inaugurating the Green Center. If your travels bring you to Cambridge, I encourage you to come visit our new home. You will be amazed!

As Marc notes in his interview, this year for the first time we were able to offer most of our incoming graduate students a fellowship. I am deeply grateful to George Elbaum for his offer to match every dollar given to Physics for fellowships, and to all those who have provided fellowship funds. These donors are members of the Patrons of Physics Fellows, a society created to recognize the generosity of those friends and alumni who make it possible for the Department to recruit and support the very best graduate students with a full fellowship.

During the last several years I’ve discovered how wonderful it is to reconnect with alumni. Two of the most enjoyable and exciting trips I’ve ever taken have been to Chile through the MIT Alumni Travel Program. You can find my trip report, Southern Skies and Cosmic Questions, in this issue.
As Department Head, I plan to build on our success while addressing the continuing challenges. The Green Center and our Pappalardo Fellowships program will both help us increase the unity of physics at MIT and to recruit new talent. That talent must draw from underrepresented groups more than ever before; we must recruit more women and minority graduate students and faculty members. I know there are strong candidates because many earn MIT S. B. degrees.

My highest priority for fund-raising is to extend the funding of our graduate fellowships to every first-year student. Another priority is to raise private support for faculty start-up packages and the facilities used by our junior faculty, including the Magellan Telescopes. The continued support of our alumni and friends in these endeavors is critical to sustaining our strength.

I look forward to getting to know as many of you as possible. Your comments are always welcome. My email is edbert@mit.edu, and I look forward to hearing from you.

With best regards,

Edmund Bertschinger
Head, Department of Physics