Good afternoon – and thank you for coming!

Spring, the season of hope and renewal, is also the culmination of the academic year. Graduates will leave our school, their second home, one in which they spent some of their most formative years, to embark in a life journey that will be profoundly influenced by the knowledge, skills, culture and mentorship they received here. It is the contribution that all of us have made in their future that we are celebrating, and with a feeling of deep satisfaction and pride, for this year we lived up to our promise of “excellence in all our endeavors.”

Spring is also the time to reflect on the past academic year, on our successes and on our challenges, and to express our appreciation to all who have made a difference. We can all take pride in the progress of our school. Many people are responsible, especially our faculty. But it is also the dedication, work and talent of all of you, who have kept the School once again in the top echelon of engineering.

I strongly believe that we can be what we want to be, because the talent is here – in abundance.

When I was first appointed as dean I summarized my goals for the school as:

- First at USC
- A leader in the nation
- With constantly improving quality
- And excellence in all our endeavors

And in our last Board of Councilors meeting in the Fall, I added that reaching these goals will make it possible for:

Our students to say that they are fortunate to be Viterbi students…

Our alumni to say that they are fortunate to be Viterbi alumni…

And our faculty and staff to say that they are fortunate to be affiliated with the Viterbi School.

I know that a similar ambition drives you as well: the ambition to set the bar as high as we can, go over it – and then reset it higher, yet again.
OPPORTUNITIES AND CHALLENGES
In his remarkable book on Academic Leadership, President Sample states that there is an important difference between “being President” and “doing President.” “Being President” breeds complacency and status quo; “Doing President” is the thirst to always be better.

I will submit that as a school we face a similar challenge: the difference between “being at the top echelon” and “doing the things required for being at the top echelon.”

A look a decade back will show that the school has been “doing the things required for being at the top echelon.” The Viterbi School underwent a tremendous qualitative and quantitative transformation in practically all its components:

Students- Faculty- Academic Departments- Academic Distinctions- Research in Science and Engineering- and Financial Health

However, we are not the only school of engineering that has made great strides forward. Indeed, the competition in quality, talent, resources, and the ability to generate and translate new knowledge, has never been fiercer – not only nationally but also globally.

Moreover, the knowledge domain in engineering has expanded – in some cases migrated – toward interdisciplinary areas. At USC, we are fortunate that we have the right partners in Institutes, such as ISI and ICT, and in a number of strong professional schools and the College, to form flexible and successful interdisciplinary alliances. However, fundamental challenges exist. I can cite three:

- Maintaining the technological leadership in an era of interdisciplinarity;
- Creating the necessary horizontal structures to eliminate departmental and school vertical barriers; and
- Integrating the applied research institutes, such as ISI, closer and better with our school.

Unquestionably, engineering and technology (in their true creative and enabling sense, as opposed to their mechanical and repetitive Dilbert caricature) will be the drivers of the new century – to solve new and daunting challenges that appear in the horizon: from energy, to climate, to health, to sustainability. But I believe that at the Viterbi School we have the resources, the opportunity – and, going one step further, I might say the responsibility – to be at the forefront of these challenges, and to pioneer the disruptive changes needed to make a difference in education and research. The opportunities are there to be grabbed. It’s up to us to set the expectation bar high, and to follow through in this quest.

Let me now review last year, both as it regards successes and challenges. As part of a leading research university we are strong in graduate programs and research – but we are not just a research powerhouse. We strive for a balance in both undergraduate and graduate education and in research.
OUR STUDENTS
The Viterbi School continues to attract and inspire some of the world’s best undergraduates.

Under the leadership of Associate Dean Louise Yates, the academic quality of our incoming class just gets better and better. The growth in quality has been unprecedented for several consecutive years. It will become increasingly challenging to sustain such growth, but we are very pleased with what we have reached and with the challenge ahead.

While it is still early to tell about this fall’s freshman class, we can say some things about the admitted class:

This year, we had yet another increase (10%) in freshman applications. With a decreasing enrollment target of 400 for next Fall, this augurs very well for quality.

The admitted students SAT scores are up (again) by 15 points. So are the numbers of women and underrepresented students. We are now competing head-to-head at the freshman level with the most elite schools in the country – and we are at the forefront at USC in the important metrics of freshman quality.

In retention, the return rate to engineering of freshmen who enrolled in Fall 2006 and returned to engineering in Fall 2007 is at 92%, up from 89% last year. These remarkable gains reflect the strength and quality of our undergraduate program.

Our Freshman Academy Program is becoming an admired model and one of our key tools, along with KIUeL and the Freshman Year Excellence Program, for increasing retention.

Our outstanding undergraduate student quality is reflected this year in multiple awards: Reed Doucette, a senior in Mechanical Engineering, was selected as one of two Californians to receive a 2008 Rhodes Scholarship. Two graduating seniors were designated by their peers as the students most likely to represent the Trojan spirit – Althea Lyman, Biomedical Engineering, was named as Ms. USC and Reed Doucette was named as Mr. USC.

Both the University Valedictorian and Salutatorian for the May, 2008 USC Commencement Ceremony will be Viterbi students. Julianne Gale, Computer Science, will serve as University Valedictorian and Reed Doucette, Mechanical Engineering, will serve as Salutatorian.

MASTER’S AND PROFESSIONAL PROGRAMS
At the graduate level, the current structural model of the school requires a strong professional MS program – one that ideally should be decoupled from the PhD program. Whether one views the MS program as a terminal professional degree (e.g. the equivalent of an MBA or law degree) or as the potential extension of the BS degree (and there are voices in the nation calling for the establishment of a 5-year degree), we must view it as a self-contained degree rather than the anteroom to the PhD (as it used to be). It is part of the charge of the DEE to address how to best decouple the two programs.

It is for this reason that we have created the Office of Master’s and Professional Programs (MAPP), which under Associate Dean Kelly Goulis’s leadership, has energetically moved to reshape the MS program.
MAPP has implemented an aggressive domestic and international recruiting strategy, including over 50 domestic recruiting visits, 3 recruiting trips to the Pacific Rim, and a permanent office in India. For the first time, several new scholarships were provided to top MS students, and we are initiating agreements for partnerships with strong undergraduate domestic feeder schools. These efforts are already producing results. As of April, our Fall 2008 admitted MS students have all-time highs in the mean GPA and GRE Quantitative scores.

MAPP is also launching an aggressive Professional Programs activity, headed by Candace House. I am also pleased to report that our Instructional Technology Program (ITP), ably headed by Ashish Soni, is actively expanding its reach to promote information technology literacy across the campus and beyond.

MAPP has strengthened our student support services to include targeted advisement and academic warning systems; an academic integrity tutorial; and activities to build a stronger MS student community.

PHD PROGRAM
The news for our PhD program, guided by Associate Dean Margie Berti, is also exciting. As of now, more than 80 entering new PhD students in Fall 2008 will be supported by unrestricted fellowships – compared to 53 last year. The acceptance rates for the various fellowships (Annenberg, Provost and Viterbi) averaged close to 50%. A higher percentage than ever before (more than 25%) will be women and underrepresented minorities. If we were to also use the rest of our other unrestricted graduate fellowships supported by endowment towards first-year PhD students, this number could be significantly higher. I am pleased to tell you that this year we received 5 new PhD fellowships from Chevron, in the area of energy, and we hope for more additional PhD fellowships in the near future.

Strong academic programs produce large numbers of PhD students, and that has an impact on our academic reputation. The last two years we graduated approximately .8 PhD students per tenure-track faculty, and we are likely to uphold that level this year. As a school, we must sustain and improve this output – to be competitive, even at the lead, with our peer institutions and consistent with what our expectations. Funding the support of the PhD students is a great challenge: I have proposed a 1+1+3 model, where one year is school-provided unrestricted support, one year is through also a school-supported TA-ship and three years are supported from external research and contracts. With your help, I am looking forward to make this ambitious goal a reality.

NEW INITIATIVES
Throughout my speech today I will be sharing information about our new initiatives. One that is particularly significant is our new Division of Engineering Education, headed at present by Senior Associate Dean Raghavendra. It cuts across the school, and its function is of the utmost importance. Its aspiration is to become a catalyst for innovative changes in engineering education. I expect a great deal from the DEE – and I urge all of you to embrace it.

Under Associate Dean Linda Rock’s leadership, we have invested more than $2M in space renovations this fiscal year – much of it dedicated to improving the undergraduate laboratory facilities such as: a new Undergraduate Nanotechnology Instructional Laboratory; a new Undergraduate Fabrication Laboratory (Fab Lab) that opened this
spring for student design projects across the school; the renovation of the Microsatellite Systems Center; and the renovation of the Human-Centered-Robotics Laboratory.

**OUR FACULTY**

Last year we hired 7 new faculty - and next year’s crop will be even larger. I think I have experienced a new syndrome, FCIF, “faculty candidate interview fatigue” – and I am afraid that many of you have the same condition. At this pace, within two-to-three years we are likely to replace close to 15% of the school’s tenure-track faculty. It is a non-trivial impact – it will change the character and reputation of the school.

In hiring new faculty we must use great care, and with the following attributes guiding our choices:

- Superb candidate quality
- The criterion – “are they better than us?”
- How they fit across the school, rather than within a specific department.

I know that the latter goes against the traditional vertical departmental culture. But the modern trends are inexorably across departments and disciplines, and one must view new faculty hiring in this dimension as well.

I am very proud to say that all 7 faculty hired last year fit the above criteria (with all senior hires receiving multiple joint appointments). I am also very pleased to report that we have taken substantial steps last year to close an unintentional gap between where the school was and where it should be in faculty representation of women and underrepresented minorities.

Promoting academic quality and research should be our overarching goal. For the first time in the school’s history, all departments have now a keynote lecture established – as should be the case for quality departments in an elite school. Just last week, we held the inaugural Al Dorman lecture in Civil and Environmental Engineering delivered by Caltech President Jean Lou Chemin, and earlier this month, we honored the late USC Provost Neal Pings with the first Pings Lecture in Chemical Engineering, delivered by Matt Tirrell, dean of engineering at UCSB.

I am proud that I have worked closely with our Engineering Faculty Council to address various issues and concerns. Earlier this Spring, Senior Associate Dean John O’Brien announced a very liberal (probably nation-leading) reduced teaching-load policy for all junior faculty – and the availability of new resources outside their start-up packages to support travel to conferences. In parallel, we are working to revise the default teaching policy for all faculty ranks. I want to thank John and the EFC Chair Sandeep Gupta for their combined leadership in this effort.

Can the school grow in faculty size? There are two parameters that must be considered in this regard: Resources and Space.

Today the school is financially healthy for a number of reasons: Robust enrollments (including gains in undergraduates, due to retention), increasing endowment, and stable research funding. Our Executive Director of Finance Dave Murphy has been a thoughtful steward of the school’s financial resources. Like almost everyone else, however, we must be alert to potential drastic changes in the economy – domestic and global – to changes in research directions from the federal government, and to the relentless competition from heavily endowed schools, which can force dramatic
behavioral changes on the rest of us, with only a small swing of their endowments (as recently done in regard to financial aid).

Growing the size of our faculty beyond attrition will almost certainly require increased endowment. Fortunately, we have a good plan and a good team in place to accomplish this. Growth would also require additional space. In this regard, I am most pleased to tell you that we are working closely with the College and the Provost to secure trustee approval for the construction of a new Science and Engineering Building. If it becomes a reality, this new space will increase the school’s available capacity by a little more than 15%.

**FACULTY AWARDS AND DISTINCTIONS**

During the year, a remarkable number of Viterbi faculty distinguished the school through the honors they accumulated. I am going to mention a few.

Presidential Professor and benefactor Andrew Viterbi has been named one of four finalists for the 2008 Millennium Prize of the Finnish Academy—the “Nobel Prize” in Technology—which honors innovation that has significantly improved the quality of life throughout the world. The winner will be announced June 11.

One of the great pleasures of my job each year is to report our latest NSF CAREER Award winners. Thanks to Amy Rechenmacher, Michael Neely and Tait Pottebaum, the Viterbi School had again an outstanding year in this category. David Kempe added an Office of Naval Research Young Investigator award to his earlier CAREER award.

The senior faculty didn’t do too badly either. President Steven B. Sample and Provost C.L. Max Nikias each earned significant honors from the IEEE, the Founders Medal and the Simon Ramo Medal respectively. Provost Nikias, along with Maja Mataric, was also named a fellow of the American Association for the Advancement of Science.

And by now you have probably heard that the Provost and I were elected to the National Academy of Engineering. I take particular pride in that both these elections were based on accomplishments made while at USC, demonstrating the power of the institution.

It’s always a good year when you have Professor Solomon Golomb on your faculty. USC named Sol a Distinguished Professor. He joins Warren Bennis as the only other USC faculty member to hold both the University and Distinguished Professor designations. George Bekey won the USC Faculty Lifetime Achievement Award.

In keeping with what has become an annual Viterbi tradition, Jay Kuo and Stefan Schaal won Okawa Foundation research grants.

Our faculty won many other prestigious awards last year. Space limitations herein preclude me from listing them all, but a very large number of faculty contributed to the great year for honors at the Viterbi School with their superlative distinctions. These include Jerry Mendel, Yong Chen, Jim Moore, Najm Meshkati, Ari Requicha, Viktor Prasanna, Hossein Hashemi and Konstantinos Psounis.

**RESEARCH**

The difficult climate for federal research, particularly at DARPA, and the evolving global corporate landscape made for a challenging year in research initiatives last year. In fact, for the first time in several years, our research volume (when combined with ISI)
did not grow, but experienced a decrease.

This was not for lack of effort. With the leadership of Senior Associate Deans Maja Mataric on campus, and Herb Schorr at the Information Sciences Institute (ISI), we have been aggressively promoting innovative research. Our emphasis on Engineering for Health was reflected in a steady increase of support from NIH, at the same time as the national rates of NIH awards are flat or even decreasing.

In addition to last year’s renewals of all of our active research centers, we won a NIH Center for Genomic and Phenomic Studies of Autism, a 5-year $8M center, led by Clara Lajonchere of the Biomedical Engineering Department and Children’s Hospital Los Angeles.

Norberto Grzywacz leads an interdisciplinary team from the Viterbi School, the College and the Keck School of Medicine on a $6-million Bioengineering Research Partnership grant from NIH.

This year saw two National Science Foundation Engineering Research Center full proposal invitations, one in engineering for urban youth, and the other in pulsed power for a range of applications. In close collaboration with the USC Washington DC Office for Research Advancement we have several major center proposal projects planned for the next few months. All these efforts exemplify the broad impact and societal relevance of our faculty’s research pursuits, and our major school research initiatives, including Energy, Megacities, and Engineering for Health, among others.

Many important single-investigator grants were awarded. I will cite a few: Yolanda Gil of ISI leads the $13.8-million Windward Project aimed at "Scaleable Knowledge Discovery through Grid Workflows." Costas Sioutas from Civil and Environmental Engineering has begun a $1.12 million study to examine coarse particle pollution, funded by the EPA.

ISI’s DETER project, headed by Terry Benzel and funded by the Department of Homeland Security, provides the cyber-security community a test bed in which the effects of malicious code can be studied and new defenses devised.

DARPA announced that ISI’s participation in a multi-agency effort to develop a sophisticated combat decision support system would receive $7.6 million in funding. And Alan Willner was the recipient of a multimillion, hard-to-win new funding grant from DARPA.

I am pleased to report that our industry-sponsored research continues to grow. A significant new development is a partnership with General Electric, which will provide several grants for our faculty. Our established partnership with Chevron, through our highly successful CiSoft – directed with the unparalleled leadership of Iraj Ershaghi, whom I want to specially acknowledge in this address – is expanding in scope and annual funding level.

Last month we signed a research agreement with Infosys, in Bangalore, India, to establish a research center at USC in the area of services computing and software engineering. An official announcement is forthcoming.

Provost Nikias has set a challenge for the university to increase its federal research
volume support by 20%. The challenge was clearly articulated in a three-day retreat last February. We must meet this challenge by redoubling our efforts. Maja’s office is responding by actively pairing PIs to win new centers, and by providing research seed funds directly from the Viterbi School for the first time in the school’s history.

OUR COMMUNITY
In his talk to the faculty earlier this year, President Sample emphasized the evolution of USC from a commuter campus to a residential university, and his belief that this transformation will greatly strengthen USC academically. We already see the impact of these changes.

As it makes this transition, the university is also recommitting itself to its neighborhood. The USC Good Neighbors Campaign continues to have a very tangible impact. Last year, the contributions of Viterbi faculty and staff made us “first at USC” among all schools in total dollars raised.

Our commitment to service learning and community outreach has also had a significant impact. The students in the Engineering Writing Program, headed by Steve Bucher, have written hundreds of consulting reports for local non-profit agencies. Many of these have been implemented, with several community organizations using the student reports to secure extramural funding. And, for the third year in a row, a proposal originated by students in the writing program was awarded a USC University Neighborhood Outreach grant.

GLOBALIZATION
President Sample has also noted that USC students – both international and domestic – are well aware of how important it is for them to be prepared for life and work in a global society. Providing our students with such global opportunities is a high priority. The global initiatives during the past year, led by dean Raghavendra, resulted in several impressive agreements for exchange programs.

I signed so many memos of understanding last year that we must be the leader in global understanding! We signed MOUs with National Taiwan University, the Indian Institute of Sciences, Seoul National University, Korea Aerospace University and Shanghai Jiao Tong University – the university producing the global rankings that last year placed Viterbi twelfth best in the world in engineering, technology and computer science programs.

Last summer we hosted 8 students from Tsinghua and 14 students from IIT Kharagpur, and we will be repeating the same this summer. Conversely, we are planning to send 8 Viterbi students to Tsinghua for a summer internship. Last May we held a productive two-day Viterbi-Tsinghua faculty forum at Tsinghua University in Beijing, and we are getting ready for the second version of the USC-THU faculty forum here.

EXTERNAL RELATIONS AND FUNDRAISING
Promoting excellence requires resources, both human and fiscal. The ancient orator Demosthenes said as much to the Athenians. The ancient Greek reading is: “Δεί δὴ χρημάτων οἱ ἄνδρες Αθηναῖοι καὶ μηδενὶ χρημάτων οὐδὲν εστὶ γενέσθαι τῶν δεόντων” which, as all of you know, translates into “you need financial resources, O Athenians, and without them nothing can be done from what is needed.”
Seven years ago, we set a very aggressive and lofty $300 million target for the seven-year fundraising initiative. The initiative is due to end in June 2008. I am extremely pleased to tell you that as of the end of this March, our fundraising total stood at $300,955,609 in cash and pledges, having reached and exceeded the target with three months to go. More importantly, an impressive 62.6% of these funds are going to the school’s endowment, which has more than doubled in that period. Thanks to the development team and our External Relations CEO Christopher Stoy for this remarkable achievement. The highlight of our effort last year was the $17 million naming gift by Sonny Astani for our Civil and Environmental Engineering Department, our third department naming in as many years. We would like to keep this streak alive.

We called our initiative, “Destination – The Future,” and that is what our fundraising is all about. Development funds our growth as a school.

But when I say we completed the initiative, don’t think for a moment that we will pause too long to take a breath. We are accelerating our effort – the School must really be in a perpetual state of fundraising, for more named professorships, more named departments, more buildings, more student support, and a larger endowment.

CONCLUSION
In closing, I would like to ask you to join me to increase our ambitions, raise the expectation bar, do elite school work – and generate the academic culture and the intellectual climate so that we can lead in creating knowledge, forming people and pioneering solutions to society’s problems. We can really be what we want to be. Let us then continue wanting to be:

-First at USC
-A leader in the nation
-With constantly improving quality
-And excellence in all our endeavors

So that it will be possible for:

Our students to say that they are fortunate to be Viterbi students…

Our alumni to say that they are fortunate to be Viterbi alumni…

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Thank you.