Good afternoon. I always like being back on campus and I’m especially honored by the invitation to give this year’s Noonan Lecture. Tom had wanted to be here this afternoon, but as he is scheduled to give a talk at the Zurich Stock Exchange this afternoon he didn’t think he could make it back in time.

For the past six months I’ve been engaged in trying to answer four, important questions:

- Why do we have a College of Computing at Georgia Tech today?
- How did we get here?
- Why does it have the breadth it has?
- How has it been able to advance so far in only 25 years?
I am able to shed some light on the first three questions, with some brief personality sketches. They will set the stage to give an answer to the fourth question - but that is for another day.

As some of you may recall, I’m terrible at remembering and telling jokes. So, I’ll spare you the agony of watching me try and get started on a journey back through time.

Let’s begin with the “The father of CoC,” Pat Crecine.

John Patrick Crecine was president of Tech from 1987 to 1994. He relished ideas, was a true visionary, could make useful connections where no one else saw them, and insisted on the highest quality possible. But he could also
be rash, dismissive of boring topics like management details, headstrong, and ultimately stubborn to the point of antagonizing even his employer - the Board of Regents.

Pat loved people - especially students - softball, and baseball – he considered it a metaphor for life, swimming – he was a varsity swimmer in college and set records that stood for 30 years, and sailing.

After Atlanta was awarded the 1996 Olympics, Pat took a month in the summer of 1992 to sail his 50’ boat from Savannah to Barcelona to observe the 1992 Games. With no real, open-ocean experience himself he set sail with a minimally trained crew – his son Rob, and three other young men! He basically didn’t have any communication while at sea, which concerned Mike Thomas no end - Mike was Provost and responsible for running the campus in Pat’s absence. They survived some terrible storms and made it to Barcelona safely with a great stock of stories. The campus survived, too!

This picture gives you an idea of the company he kept – some fellow visionaries. Do you recognize the others? Hint: it’s the Board of the NeXT Computer Company in the 1980’s. Anyone?

You may have heard of the man in the middle, Steve Jobs, and Ross Perot on the right (far right!), famed entrepreneur and two-time third-party candidate for President. You can imagine the stories that were told at their Board meetings!

His son Rob relates the following, “As I remember it, the summer that Steve was fired from Apple - 1986, he called Pat and asked what kind of computer
would be necessary for the next step forward. Pat gave him a detailed answer. I remember he had a series of long phone calls with Steve all summer long from home and I overheard many of them.”

Pat is properly credited with “starting” the College because the catalyst was his academic reorganization of the campus and his specification that there should be “a Computing College to give ourselves and the world a clear idea of the importance of computing in the academic and research life of Georgia Tech.”

But the College was not created overnight out of thin air. Before Pat, there was Pete.

Alton P. Jensen was known and loved by all. When he passed away in 2005 at the age of 79, Pete had played numerous roles in his 50+ years at Tech - starting as a student and finishing as my first Associate Dean. Pete’s quiet, inclusive, and able steering of the Computing College Committee resulted in what we started with in 1990 and what I suspect he knew from the start was the desired result.

Pete taught thousands of students and individually advised in meaningful ways more people than could fit in this room. He tutored dozens of local entrepreneurs, legislators (including former Speaker Newt Gingrich, who spoke at his Memorial Service), and governors – which probably led to his chairing an important national IT committee under President Carter. He taught me much of what I know about Tech, even more about people – especially Southern people, and a lot about leading faculty. I drank it in - usually at his home along with several glasses of good Scotch!

Who would have guessed that such an outspoken person as Newt Gingrich – I’ll refrain from using more colorful terms to describe Newt - would have a
lasting and deep respect for Pete thirty years after “he taught me everything I know about computers and systems thinking?”

Pete was very proud of his infantry service in WW2, was awarded a Silver Star for gallantry, but never spoke of it (even his wife of many years didn’t know about it until after he passed away), and continued to attend annual reunions of his wartime comrades almost to the end of his life. Because of his quiet style, I haven’t discovered any amusing stories about him, but the degree and extent of his influence on thousands of us and on the College goes far beyond Georgia Tech.

Our backwards journey doesn’t stop with Pete though.

Raymond E. Miller was Chair of ICS (Information and Computer Science, the predecessor to CoC) from 1980 to 1987. A true computer pioneer, Ray had been with IBM for thirty years prior to coming to Atlanta. As a well-known theoretician who gave great service to our field in many capacities, he was widely known and had many well-placed friends across the country. He later moved to the University of Maryland, where today at 85 he still comes into his office daily.

Ray was clearly the right man at the right time, dramatically increasing the technical focus and resource base of ICS. He was able to obtain enhanced financial support, hire a cohort of outstanding faculty to complement those already in place, and obtain approval for starting and guiding the design of what is now the College of Computing Building.

My earliest memory of Ray, probably from IBM Research in the 60’s, is of a very gentlemanly, smart, energetic man - and that still applies today. Interestingly, he did research and wrote papers in the 70s with two current CoC faculty, Dick Lipton and Rich DeMillo. Indeed, it was a call from Rich in 1979 that alerted him to the search for a new chair. Ray says, in a
wonderful memoir he has written and published, that he wasn’t interested in leaving IBM but agreed to visit and give a talk. The rest is history.

(An aside for the memoir I haven’t written yet, is that Rich was also involved in alerting me that a new college was being formed and that Tech was looking for a founding dean by introducing me to Rich LeBlanc in 1989).

When Ray joined Tech in 1980, there was already a solid group of faculty, students, and active research. Due to his efforts, the time was then ripe in 1987 for Pat Crecine, Pete Jensen, and a cohort of strong faculty to fashion a new college on a solid and broad foundation. So, let’s continue our backwards journey further.

Vladimir Slamecka was the Founding Director of the School of Information Science (IS) in 1964. (IS was the predecessor to ICS). Vladimir escaped Czechoslovakia after the Communists took over in 1949, lived in a refugee camp, made his way to Australia on a fluke, and escaped deportation because of a crippling skiing injury but was protected by a doctor whose life had been saved in the war by Czechs. After continuing his studies in physical sciences, he worked in Munich where he and a colleague obtained nine patents on a chemical process. Those experiences over thirteen years resulted in his being fluent in five languages and giving him solid confidence in his abilities.

When he moved to the U.S., he planned to live with his aunt in Chicago, but she passed away the day before he arrived. So, he started life in his new home arranging a funeral in a strange city. After that inauspicious start he moved to New York City where he entered Columbia, and in 1962 received a Ph.D. in Library Science.
His advisor at Columbia, Mortimer Taube, had started a firm in Washington that was the world’s first company in non-numeric computing and Vladimir was asked to be Director of Research. He did seminal work there in non-numeric applications of computers, gained a lot of practical experience, got married, and started a family.

When approached about moving in late 1963, he said he had never been south of Washington although he vaguely knew where Atlanta was - but he had never even heard of Georgia Tech. Always curious about the world, he agreed to visit and was favorably impressed – noting that he liked engineering schools because “they did something concrete.” To his surprise, an attractive offer was made at the end of his visit to become the founding director of a new school. It was clearly a unique opportunity in an area that was his real interest, and after talking it over with his wife they moved in the summer of 1964.

His real introduction to the South came that summer, a time of great social strife, when he was signing the usual stack of papers to be a new employee. When he turned them in to the clerk to make sure everything was in order, she read them, looked up at him, and said “Man, you have had it here! You are a foreigner, a Catholic, and you didn’t fill out the question on your race. Did you get here by bus? You must be one of those troublemakers.”

Today, we can only imagine those early times. When he started he was the only permanent faculty member in the School of IS. His budget was solely an NSF grant and he had one room in the basement of the Electrical Engineering Building to be his office and that of his secretary. The Rich Computer Center had a modern B5000 computer to serve the entire campus, but there was no equipment for the new School. A few professors on campus taught application courses using computers but there was almost nothing we would recognize today.

When Slamecka arrived there was already an approved School, a curriculum for a Master’s Degree in Information Science, an NSF grant of $200,000 ($1.5M in today’s dollars), a few acting faculty, and even a student waiting in the wings. Joanne Butterworth became the first graduate of Georgia Tech with a degree in a computing subject the following June.

Those early years must have been hectic and stressful as Slamecka tried to develop a better curriculum, deliver promised courses, and hire new faculty.
One expedient and fortuitous thing he did very early on was to engage some of the computer center staff, notably Pete Jensen and John Goda. Pete covered hardware and John covered software. Pete later became a full professor and John’s programming courses were so ably taught that he continued doing that for us until he retired in 2002.

While there was a curriculum of sorts in place, Slamecka knew that something more current and grounded was needed. So he quickly developed a new framework that could also serve as a guide for hiring tenure-track faculty for the fledging school. There were three main themes in his plan that can still be seen in the College today: The design of information systems, the design of computer systems, and theories that underlie those and other activities.

There was rapid growth in students and faculty, demand for more technical courses by undergraduates, and the hiring of faculty that became influential in various ways. He established the tradition of teaching and research by faculty – a practice not widely seen at Tech in those days and invited well-known researchers from around the world to visit. The faculty he hired produced future leaders including Rich DeMillo, Craig Mundie, former number two at Microsoft, Edith Martin, former head of DoD research and development, and several future department chairs at other universities.

One of the early faculty Vladimir hired was Pranas Zunde. Vlad had worked with him in Washington and Pranas came to Tech shortly afterwards to get a Ph.D. in industrial engineering. At the time, the IE School had no systems engineering work but they permitted him to design his own course of study in the topic. He began teaching courses that were so popular that IE changed its name to Industrial and Systems Engineering and made the program one of its primary areas. Vladimir then brought Zunde into ICS as a faculty member where he taught for us until 1997.

Another first that presaged one of the most successful campus programs today was a joint degree in Biomedical Information and Computer Science with Emory’s School of Medicine. Unfortunately, it did not last long. He also helped found an early medical information company in Atlanta. After Vladimir stepped down as Director in 1987 he focused on the design and development of information systems in developing countries around the world, actively working in and with multiple nations.
Vladimir Slamecka built the School from almost nothing to a respected and active group of computer and information science faculty, grew the student population from 1 to over 500, oversaw and helped in the development of a full suite of undergraduate and graduate courses, hired a number of faculty who were (or later became) nationally recognized in their fields, established the ethos of teaching and research for faculty, and developed one of the earliest programs in computing and medical information. Not bad for 15 years.

Why did he come to Tech? Who made sure he received an acceptable offer? Who was responsible for the program, the organizational approvals, and the NSF funding waiting for him?

Let’s let Vladimir tell you in his own words, taken from a video interview in 1998.

**Video clip: ~1 min available in the Powerpoint presentation.**
The mother of the College of Computing, Dorothy Murray Crosland – Dot as everyone called her - was Director of the Georgia Tech Library from 1927 to 1971. Born in 1903 in Stone Mountain, Georgia, she attended “Girl’s High” where she played basketball and was voted the most fashionable girl in her senior class and then attended the Carnegie Library Science School. When she started working at the Carnegie Library on campus in 1925, now the Administration Building, it had only 16,000 volumes, a hundred periodical subscriptions, and two other employees. She received many local and national accolades over her career and when she retired on April 13, 1971, the Governor declared the day as Dorothy M. Crosland Day.

After WW2, Dot launched a campaign to enlarge the Library’ holdings and raised private funds for the project. Her goal was to make the Library as good as that of the Georgia Tech of the North (a.k.a. MIT). In 1946 she made a remarkable buying trip to war-ravaged Europe, covering 13,000 miles and 8 countries in 24 days – a daunting trip even today! The results were remarkable and comprise a large part of the five linear miles of out-of-print journals and rare books acquired during her time as Librarian.

But then the Carnegie Library was entirely too small to house her purchases, so she proceeded to raise more private and public funds to build a new building, still the main Library today. Since Dot was also a registered interior designer she personally selected the décor and furnishings for the new building, as well as those for other campus buildings.

Her next campaign was to get women admitted to Tech. Again using her political skill, contacts, and respect among Georgia officials, she
orchestrated a successful effort culminating in the admission of women in 1952.

Accomplishments of the magnitude of hers would be outstanding today, but remember that at that time there were no women in the Administration, at an all-male school, in the South. In 1952 there were still very sexist attitudes espoused by some, including Regents. One publicly noted when discussing the resolution to admit women “…here is where the women get their nose under the tent….Next we’ll have a home economics major at Georgia Tech.”

Dot launched her final major campaign in the late 50’s. She claimed to have never understood anything about computers but she had heard about their use in information handling while attending national library science conferences. She had an intuition that they were going to be important far beyond their use as calculating machines and set about to make Tech a national leader in the emerging field of information science.

The Russian launch of the first successful, man-made orbiting satellite, Sputnik, in 1957 resulted in alarm in this country, especially regarding our science education capabilities. A new Office of Science Information was established at NSF and the first director happened to be a friend of Dot’s. She quickly convinced him to fund two national conferences at Tech on education in information science.

Following the meetings, she recruited three Tech professors with some knowledge of computers to prepare a proposal to NSF for a Master’s degree: Bill Atchinson, head of the computer center, professor of mathematics, and chair of the ACM Curriculum Committee; Vernon Crawford, a physicist and later dean, Acting President, and Chancellor; and Waldemar Ziegler, a chemical engineer. NSF funded the proposal and Dot and her team started looking for a permanent director of the program. In the fall of 1963 they went to a conference in Chicago where Vladimir was presenting a paper. They were impressed and approached him after his talk and convinced him to visit Atlanta.

We very likely wouldn’t have a College of Computing in the form it is today if it hadn’t been for this remarkable woman and those that followed her. She never met Pat Crecine since she passed away in 1983 and probably not Ray Miller since she apparently never came to campus after retiring, but she certainly would have known Pete Jensen, and lived to see the growth of what
she started. After retiring, she and her husband moved to Monroe, Georgia, along with her 3000 cookbooks (she was an accomplished chef) and enjoyed her cooking, gardening, and four grandchildren for the remainder of her remarkable life.

Before we end this story, however, I’ve left out an important person that I skipped over in describing Vladimir’s structuring of the first School. Again, let him make the introduction.

**Video clip: ~2 min available in the Powerpoint presentation.**

So, we can claim a principled intellectual heritage that goes back to the man that made one of the most prescient predictions ever, Vannevar Bush.

By the way, please note his choice of neckwear.
The article is available on the History website of the College, along with a detailed timeline, narratives, and other material. There is a 1-page flyer available as you leave describing this information.

I can draw a number of lessons from this history, but for today, I will leave that for a future talk or paper – and as an exercise for you.

But as we finish our journey, permit me to share a personal thought.

As the founding dean, delving into our history has been a humbling experience. Learning so much more about the remarkable people and amazing results that have come before me has given me an enriched realization of a larger effort that began in 1945, has already touched so many people, and today continues into a limitless future. The realization that perhaps my small part in an effort seventy years old will have helped the effort along its path brings me some sense of fulfillment in knowing that I am a part of something much larger than myself that has brought - and is continuing to bring - extraordinary changes to the world.

Our shared history is one of which we should all be very proud – and work every day to enrich and extend. Thank you!