

AL MAC RAE, PhD 1960

November 11, 2007

I enjoyed wandering around the Physics Building three weeks ago and having brief conversations with Josh and Arnie late in the morning.... Unfortunately, I did not get a chance to wander down to the shop and view my plaque on Mrs. Jennings Wooden Leg. I assume that the Wooden Leg is still there as is the tradition of wearing the pole climbing equipment to attach the PhD recipient's plaque to the pole.....

I have enjoyed the two issues of "Physics Matters." It is a great idea. In the first issue, Josh encouraged former students to contribute a few words on the impact of the Physics dept on their careers. Here is mine;

I owe a lot to the faculty of the Physics Department for contributing to my enthusiasm for physics and science. I was treated as a professional and not just a lowly student. Faculty members were always available for discussions, extra work and even coffee(?) down on Marshall Street. Leinstein shared his visitors with us. Many of them had world-wide reputations - we interacted with them as members of the physics community and as equals. Ditto with the Thursday afternoon Colloquium speakers. I well remember going out to dinner with many of them. I attended the March APS meetings on a regular basis. I gave talks at APS and other organization meetings. Thus, as a student, I was treated both within and outside the department as a physicist. I was even given a coveted key to the library! (The campus parking permit is a separate story.)

Upon leaving SU, I joined the Basic Research Area of Bell Labs in Murray Hill, where I worked on solid state, specializing in surface physics. I then started a group doing ion implantation and became the Director of Advanced Integrated Circuit Technology. I then switched to the development and introduction to manufacture of transmission equipment. I retired as Director of Satellite Communications and am now doing consulting, primarily on satellite technology. I can't say enough about how well I was treated by Bell Labs. It was a great - and stimulating - place to work. I interacted and collaborated with world class scientists and engineers. I cry when I think of what has happened to that great institution.

I have published more than 50 papers in refereed journals, given over 100 external talks at professional society meetings and universities. I have 18 patents, including one that was singled out by the CEO of AT&T for generating considerable cash income to the corporation.

I am an elected member of the National Academy of Engineering, a Fellow of the American Physical Society, and a Fellow of the Institute of the Electrical and Electronic Engineers (IEEE) in addition to being a member of the honorary, the Bohmische Physicalische Gesellschaft.

Al Mac Rae