

## **MaryKfest --- Tributes read at banquet**

### **Howard Georgi**

There is no way that those of you who came of age as physicists in the 80s and later can possibly imagine how confusing particle physics was in the late '60s and early '70s. Different experiments seemed to be pointing in contradictory directions. It was so confusing that the month before the discovery of the Psi at SLAC, Burt Richter was at Harvard giving lectures on his theory that the electron had a hadronic component. But those of us who were awake at the time were already convinced by Mary's work with Ben Lee that Charm was real and was the key missing piece. It is even harder now to imagine that after the November revolution, most people were still not convinced. It took almost two more years to find particles with a single charmed quark, and in that strange period, the charm believers were often ridiculed. But Mary and others stuck to it and continued to push experimenters to search, and eventually, the truth came out (those were the days!).

To one of the unsung architects of the standard model, a great physicist and a great human being, Happy Birthday Mary!

### **Stanley Deser**

Dear Mary K,

I feel as though I have known you forever, rather than just during a majority of our lives! It was a special pleasure when I got to see you in person, whether at the CERN cafeteria, on wobbly little planes through the Alps, and yes, even in Berkeley. I should add that we are so used to our good theoreticians' weirdness that your straightforward humanity is a refreshing exception! While the details of our research interests are a bit different, I always felt I learned about the REAL world through your papers, from the mid-sixties on, whether in French or English, alone or with a wide circle of collaborators. Long may you continue to thrive!

Stanley Deser

### **Alvaro De Rujula**

Mary K, you are the best. And I am the most concise

Cheers

Alvaro

**Jogesh Pati**

FROM AN ADMIRER AND A FRIEND

Dear MaryK,

Congratulations on reaching the golden 80 with exemplary accomplishments, including one that nature gracefully obliged- a reliable estimate of the charm mass- an achievement of the kind that many of us strive to realize!

While I am unable to attend the celebration in person, I will surely be there in spirit.

I wish you much Happiness and Health, through physics, through your writings, and through life, in the years to come.

Your Friend ,  
Jogesh

**Andreas Birkedal**

A hearty congratulations to Mary K on a remarkable career (thus far!) in physics. Having made such deep contributions to phenomenology as your work on the charm quark mass, you have continued pushing boundaries with your more recent focus on anomaly cancellation in supergravity. Your career is clearly remarkable as a standalone achievement. It is all the more extraordinary considering the numerous gender barriers you encountered and broke through. You have made long-lasting contributions to physics through your research results as well opening the door wider for all who have the drive to further our understanding of the universe. I am honored to have been your student, and am delighted to get to take part in the celebrations  
- Andreas Birkedal

**Guy F. de Teramond**

A note to Mary K:

In a recent visit to CERN I found in the library Mary K's biographical book describing her brilliant journey through physics. Reading the book, I found, to my surprise, that I was Mary K's first Ph. D. student! Its lecture immediately brought vivid memories of a wonderful period when I arrived at CERN as a summer student in the summer of 1969 to work on my thesis under Mary K's. Those were exciting moments for physics where daring theoretical constructs like the quark model of hadrons, the W-boson Yang-Mills construct of the weak interactions and the introduction of charm, with the prediction of its mass by Mary K. Gaillard, Benjamin Lee and Jon Rosner, were one by one discovered later in a series of notable experiments! A great experience. Thank you Mary K. for your guidance and inspiration.

**Mark Wise**

Mary,

I wish I could come to your 80'th celebration but a family matter that needs attention will keep me in Toronto that weekend.

You are probably not aware of that fact that your research had a profound influence on my own career. The first paper I worked through in detail when I was a graduate student was your paper with Ben Lee on flavor changing neutral current processes involving kaons. I recall feeling, as I was working thought it, that it exemplified much of what I find exciting in theoretical physics. The paper was filled with calculations that required great physical insight and technical prowess and provided a detailed understanding of how adding a fourth quark to the laws of nature impacts the rates for kaon flavor changing neutral current processes. As a graduate student and throughout my career your work has helped keep me thinking about various aspects of standard model weak and strong interaction physics.

Enjoy your 80'th celebration and thank you for your profound contributions to theoretical physics,

Warm regards,

Mark

**Sascha Davidson**

Like most of us, I have studied with care many papers of Mary-K's : profound, clear, and thorough. Thank you Mary-K for your brilliant papers.

And long ago, when I was a young and not-so-well-prepared Canadian arriving at her first postdoc at Berkeley, I arrived with a draft paper I had written with another grad student from my Canadian University. Mary-K troubled herself to read it, and made some pertinent suggestions that greatly improved both the presentation and the content. So I also thank Mary-K for her kind consideration, and I think Andrzej Czarnecki, my co-author, would join me, because we both greatly appreciated her comments.

Sacha

**Pierre Sikivie**

Mary, Dear Mary K,

congratulations on a long and productive life and best wishes for many years to come!

I am glad that your contributions to theoretical physics are being recognized by your colleagues at UC Berkeley and by the worldwide community. I very much wanted to attend MaryK Fest but a pile up of things to do will keep me from being present in person.

Your paper with Ben Lee on the suppression of flavor changing neutral currents, the famous box diagram and your successful prediction of the charm quark mass played a pivotal role in the development of the Standard Model. I read the paper several times, became very fond of it and tried to imitate it in a number of contexts. Your work with John E. and Demetres N. dominated for many years the landscape of particle physics, at least those aspects I was most interested in. I am very proud that, during the couple of years I was a Fellow at CERN, I joined the collaboration and co-authored a paper "Can one tell Technicolor from a hole in the ground?" (I think John came up with the title ...) I remember vividly your earnestness and your honesty, as well as your technical prowess while we worked on this.

You may recall that I started a collaboration with your then student Pierre Binetruy and Subir Chadha. We studied the vacuum structure of Technicolor models. This work is at the origin of my interest in axion domain walls, cosmology, and dark matter detection. So, even though our physics paths crossed but briefly, with you going up and I going down, we are very much connected! I cherish this connection and wish you well.

Take care!

Pierre S