

Gail Hanson

Background: I have worked in experimental particle physics for many years, first as an undergraduate and graduate student at M.I.T., then as a postdoc and staff physicist at SLAC, and finally as a faculty member at Indiana University and now at the University of California, Riverside (Distinguished Professor both places). I worked first in $e^+ e^-$ collider physics, then on developing an experiment for the SSC, back to $e^+ e^-$ physics at LEP, and then hadron collider physics at the LHC. I have two children, now grown, and have lived long-term at CERN three times, the first two times with my family and then on sabbatical after my children were grown, so I am quite knowledgeable about living in the CERN area. My first experiment at CERN was OPAL at LEP, with many fewer U.S. collaborators than my current experiment, CMS, so I am experienced with working internationally. In particle physics, I work on the CMS Tracker and on Higgs physics and searches for new physics, which are the same areas I worked in at LEP.

Statement: There are three areas of interest to me with regards to USLUA: (1) the international professional experience; (2) the challenges of family and personal life not only at CERN but also in working at CERN from the U.S.; and (3) how to improve the negative attitudes of the U.S. government not only to particle physics but to basic research in general. I think that it is wonderful to be able to carry out particle physics research with physicists from other countries, not just from the U.S. In general we all have the same goals, whether we are physicists from France, China, or the U.S., for example, although we may have cultural differences in our approaches. The research experience benefits from these differences. I would like to encourage U.S. physicists to be able to work internationally, not just in U.S.-based groups. However, the work styles and life styles that particle physicists tend to adopt make family life and personal life difficult. Younger physicists face the challenges of finding a permanent position while possibly trying to raise young children either in a foreign environment or while having to spend large amounts of time traveling and working, and assuming that they do attain a faculty position, there are the challenges of teaching, raising teenagers, and still traveling and spending large amounts of time at CERN. I have experience in these areas, and my children have benefitted (I think) from having lived with this lifestyle. The area in which I really need to learn more is how to improve the priorities of the government with regards to supporting basic research. From my experience the public is excited about the ideas and discoveries in particle physics. When I was younger, the U.S. government did support basic research (maybe for the wrong reasons), but now with difficulties with the economy we are asked how particle physics brings jobs and economic growth, cures cancer, and solves the energy and climate crisis.