
Gary T. Horowitz

Dr. Gary Horowitz received his PhD from University of Chicago in 1979. After spending several years in the University of California, Santa Barbara and Oxford University as a postdoc, he worked as an Einstein Fellow at the Institute for Advanced Study. He became an Assistant Professor in 1983, Associate Professor in 1986, and finally Professor in 1990 at the University of California at Santa Barbara. Horowitz works on gravitation phenomena such as black holes in string theory. He is known for the joint work with Phillip Candelas, Andrew Strominger and Edward Witten on the compactification of superstrings in Calabi-Yau spaces.

In 1982 Horowitz won first prize in the Gravity Research Foundation essay competition. From 1985 to 1989, he was a Sloan Fellow. In 1993, he was awarded the Xanthopoulos Prize. He has been a Fellow of the American Physical Society since 2002, of the National Academy of Sciences since 2010, and of the American Academy of Arts and Sciences since 2013.

I want to express my deep gratitude for your guidance at an early stage in my career. The two years I spent under your mentorship at the Institute for Advanced Study in Princeton (1981-1983) helped me enormously. Most importantly, I remember that you told me about the Calabi conjecture and your recent

proof of it. This knowledge was invaluable a few years later when I was working on compactifications of string theory, and we discovered that your result was exactly what was needed to preserve supersymmetry in four dimensions. To recognize the significance of your result, we called the compact extra dimensions Calabi-Yau spaces.

I also remember that while I was at the IAS, we were both very interested in extending the positive energy theorem to null infinity, and prove the positivity of the Bondi energy. Our proofs came out at essentially the same time and were published together. Although our approaches were very different, I enjoyed learning about the techniques you had used to obtain this result.

When I left the IAS, I was offered a faculty job at the University of California, Santa Barbara, where I have happily remained for the past 35 years. I can only imagine that you played a large part in making that happen. Once again, I am grateful. You must know that you have had a profound impact on general relativity. From your first proof of the positive energy conjecture to your recent work on quasilocal mass, you have solved a series of longstanding problems that have pushed the field forward. I wish you a very happy birthday.