Eugenio Calabi

Dr. Eugenio Calabi received his PhD from Princeton University in 1950 under the supervision of Salomon Bochner. He later obtained a professorship at the University of Minnesota. In 1964, he joined the mathematics faculty at the University of Pennsylvania. He is working on differential geometry, partial differential equations and their applications. His work on the Calabi conjecture solved by Shing-Tung Yau led to the development of Calabi-Yau manifolds; these, and the study of constant scalar curvature Kähler metrics and extremal Kähler metrics introduced by him in 1982 are central topics in complex differential geometry.

In 1967, Calabi was appointed to the Thomas A. Scott Professorship of Mathematics at the University of Pennsylvania. He won the P. Steele Prize from the American Mathematical Society in 1991 for his work in differential geometry. He was elected as a member of the National Academy of Sciences in 1982 and a Fellow of the American Mathematical Society in 2012.

I first met S.-T. Yau in the late sixties, I believe, shortly after he had come to Berkeley, to work with S. S. Chern: he was introduced to me as a very promising, young mathematician, but I cannot recall any particular mathematical conversation with him on that occasion. The first noteworthy contact was when wrote to me that had become interested in what was known at the time as the Calabi conjecture, about the existence, in any compact, Kähler manifold, of another Kähler metric whose volume form is any given, positive density. This problem had been studied by several people, since its first published proposal, in 1954.

When Yau first announced that had completed a proof of the Calabi conjecture, a group of interested colleagues, including myself, organized a hasty meeting to hear the details about it "as soon as possible": the meeting took place on Christmas Day, 1976, in L. Nirenberg's office at the Courant Institute of N.Y.U. The event created a succession of related results, in which Yau continued to play a leading role, including the construction of many new types of manifolds with Einstein–Kähler metrics. This fact has had an important development in Algebraic Geometry, as well as in Mathematical Physicists, due to its role in the development of String Theory.