



# Happy 100th Henri Cartan!

On July 8, 2004, Henri Cartan turns one hundred years old. One of the outstanding figures of twentieth-century mathematics, Cartan made contributions to several areas of mathematics, including complex analysis, algebraic topology, and homological algebra. He had an especially profound influence on mathematics in France, particularly through the so-called “Cartan Seminar”, which he ran from 1948 to 1964 in Paris. His best-known work may be *Homological Algebra* (1956), which he wrote with Samuel Eilenberg and which ushered in a new era of mathematics. Cartan is also known for his efforts at reestablishing relations between French and German mathematicians after World War II, a role that demanded the utmost integrity and sensitivity.

The April 2004 issue of *Gazette des Mathématiciens*, the news publication of the Société Mathématique de France, carried some tributes to Cartan on the occasion of his one hundredth birthday. One of the contributors was Luc Illusie of the Université de Paris-Sud, who as a young man in 1963 began participating in the Cartan Seminar. Illusie wrote in part:

“It is hard for us to appreciate today the importance that a seminar such as the Cartan seminar held for the formation of young mathematicians. First of all, it was a ‘thematic’ seminar, lasting a year, of a type that has nowadays disappeared. Cartan chose among the recent results a theorem or a theory sufficiently rich to justify devoting a seminar to it. At the beginning of the year, he divided the lectures among the volunteers. A lecture, once presented, had to be written up in the

following month—a rigorous discipline, and it was observed. Rather than the ‘rotating seminars’ of today, where each week one goes, often without much conviction, to hear people speak on continually changing subjects, the Cartan seminar demanded a serious, long-term investment by the participants. It was in the Cartan seminar, and, later, in the seminars of Grothendieck, which followed the same principle, that I learned the *métier*. Nothing was left in the shadows. There was no ‘black box.’ The necessary preliminaries and background were presented in detail. The proofs were not simply ‘sketched’ but presented completely. Cartan was concerned that one should understand, a legitimate concern that is no longer so widespread, it seems to me. Many times I saw him interrupt a lecture to ask the speaker to ‘light the way’. The seminar was a privileged occasion for meetings and discussions, made all the more fertile by strong common interests.”

Pierre Samuel, an emeritus professor at Université de Paris-Sud, also wrote a tribute, as did Jean Cerf of the Centre National de la Recherche Scientifique, who noted Cartan’s efforts in French-German reconciliation and on behalf of human rights. “Thank you, Monsieur Cartan,” Cerf wrote, “for showing us by your example that it is possible to become more and more humane as we age.”

—Allyn Jackson

*An interview with Henri Cartan appeared in the August 1999 issue of the Notices. See also “Andre Weil: Memories of a Long Friendship”, by Henri Cartan, Notices, June/July 1999.*