Aloysio Janner passed away on January 27th 2016. He was born in 1928 in Muralto, Ticino, the Italian speaking part of Switzerland. He got his master’s degree with a thesis under Pauli at the ETH Zürich, but during his PhD work Pauli died and he finished a PhD with Thellung, at the university of Zürich. Then he went to the research institute Batelle in Geneva, where he worked with Edgar Ascher. One of their achievements was an analysis of the structure of space groups in terms of extensions in the mathematical sense. In 1963 he came to Nijmegen as head of the group Theoretical Solid State Physics. There his interest in the relation between structure and properties led him to study the symmetry of electro-magnetic fields in terms of four-dimensional space-time groups. I was his first PhD student and we derived the first list of these groups. In 1972 Aloysio met Pim de Wolf, who had found that the γ-phase of anhydrous sodium carbonate has a structure that does not have lattice periodicity but still has sharp diffraction peaks, that, however, require 4 indices for their indexation. He proposed a 4-dimensional space for the description of its structure. The symmetry groups he needed were exactly the four-dimensional groups in our work, now called superspace groups. Aloysio continued this research with Pim and me by generalising this approach, called the superspace approach, to include other aperiodic structures, like density modulated and composite compounds and...
quasicrystals. He was very happy that the result of this research led to an international respons. He received the Aminoff Prize of the Swedish Academy of Science (with Pim and me) and the Ewald Prize of the IUCr (with me). Furthermore, he got honorary degrees from the universities of Rennes, Geneva and Lausanne. After his official retirement he choose a different direction, though related to his earlier work. He studied the symmetry of snow crystals, and later of polytopes, biomolecules and viruses. These structures show scale symmetries similar to those of quasi-periodic tilings, like the Penrose tiling. He published several papers in that direction as well.

Aloysio was a very enthusiastic and warm person. In the last ten years he did not travel much, but at every conference I attended in that period there were always people asking about Aloysio. You did not need many words to start him telling about the problems he was working on. He was very stimulating for his PhD students. Some of them were experimentalists because he thought that, just as experimental groups have sometimes theoreticians, a theoretic group could have experimental members, who could do the research suggested by the calculations of theoreticians. An example is the morphology of calaverite. This compound shows facets that cannot be indexed in the usual way with 3 indices. Aloysio and collaborators showed that it is possible to index them with four indices. The reason for that is that the structure is aperiodic, and the diffraction pattern also needs four indices. Aloysio gave the solution of a very old riddle.

Next to his research, he was active in other fields. He was the dean of the faculty for several years, he (co-)organised twice the Conference on Group Theoretical Methods in Physics, was a member of an EPS committee on Physics and Education and chairman of another on "University, Industry and Public Authorities" of the university in Nijmegen. These tasks he performed also with much energy.

We have lost a great colleague.

Ted Janssen
University of Nijmegen.