Jean-Paul Berrut was born in 1952 in Troistorrents, a village of the Canton of Valais, Switzerland. He studied in Zurich, first mathematics at the Swiss Federal Institute of Technology (ETH), then economics at the University. He wrote his PhD thesis in numerical analysis as a teaching assistant of Peter Henrici at the ETH. This led him to positions as a Visiting assistant professor at the University of North Carolina, Chapel Hill in 1985, and as a Stefan E. Warshawski assistant professor at the University of California, San Diego in 1986.

Since 1988 he is back in Switzerland and teaches numerical analysis at the University of Fribourg. His research deals with infinitely smooth interpolation and its applications; he currently constructs barycentric rational interpolants as well as sinc interpolants and extends them to several dimensions.

Linear barycentric rational interpolation with guaranteed degree of precision in several dimensions

Abstract: The talk will address the problem of constructing a surface from an equispaced sample of a smooth function of two variables. Our approach is an extension of linear barycentric rational interpolation (LBRI). In recent years, this scheme, introduced in 1988 and improved in 2007 by Floater and Hormann, has turned out to be one of the most efficient infinitely smooth interpolants from equispaced data in one dimension (see R.B. Platte, “Algorithms for recovering smooth functions from equispaced data”, preprint). However, there does not seem to exist a straightforward way of generalizing it to two-dimensional non-rectangular domains. In our presentation we shall present an attempt to extend to some two-dimensional domains the LBRI with guaranteed degree of precision introduced in 2014.