Summing-up Involutive Bases Computations Experience

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Abstract. In this talk, I want to briefly summarize 25 years of experience in the involutive basis computations. I will shortly consider the theory behind and will talk about various data structures, computational approaches, and technologies utilized to go from monomial ideals calculations through polynomial equations system solving to the solution of system of difference equations and from a single-threaded program to distributed computations on supercomputers. This talk will be presented in memory of teacher and scientific advisor V. P. Gerdt.

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