

## **History of the Constraint Satisfaction Problem: Motivation, Techniques, Solution and Beyond**

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**Abstract.** I will start by reviewing the basic premises of the Descriptive Complexity (1980s) which led to the formulations of the Constraint Satisfaction Problem and the Dichotomy Conjecture on its complexity. Further, I will describe the methods which were developed in 2000s and 2010s, in various areas of mathematics, to resolve that conjecture. Next I will give the basic ideas used in the two proofs of the Dichotomy Conjecture (2017). Finally, the conclusion of the lecture is a review of the three directions of further research, of which I am personally most interested in the return to Descriptive Complexity, into more general settings than the Constraint Satisfaction, with the aim at eventually describing the class P.