Abstract

Join is the most important operator in relational databases, and remains the most expensive one despite years of research and engineering efforts. Following the ground-breaking work of Atserias, Grohe, and Marx in 2008, worst-case optimal join algorithms have been discovered, which has led to not only a series of beautiful theoretical results, but also new database systems based on drastically different query evaluation techniques. In this talk, I will present an overview of this topic, including algorithms in various computation models (sequential and parallel), variants of the problem (full, Boolean, and counting), and approximate solutions.

2012 ACM Subject Classification Information systems → Data management systems

Keywords and phrases query evaluation

Digital Object Identifier 10.4230/LIPIcs.ISAAC.2020.2

Category Invited Talk