The Prolog language and the WAM

- Prolog is a constraint logic language that solves equality constraints over finite trees or rational trees. Constraint solving is done by unification. Control flow is sequential augmented with chronological backtracking.

- Prolog has been used as a base to build constraint systems using other domains, both practically and theoretically. For example, CLP(R) handles linear equalities and inequalities over floats, and is built on top of a standard Prolog engine.

- Prolog systems are reaching the performance of imperative programming. Hence it is important to understand what makes Prolog run fast.

- The main breakthrough in Prolog implementation was the development of the Warren Abstract Machine (WAM) in 1983. The WAM defines a high-level instruction set and execution model for Prolog. Implementation work since then has built on this foundation.