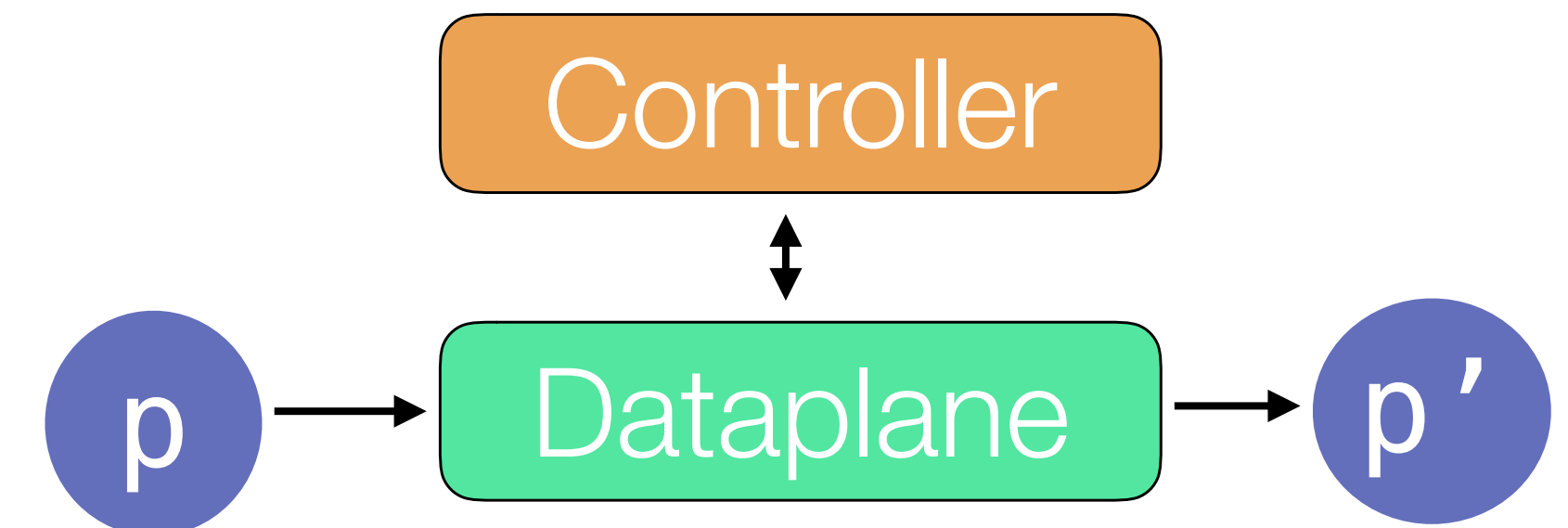# Magellan: Mapping Algorithmic Policies to Multi-Table Switches
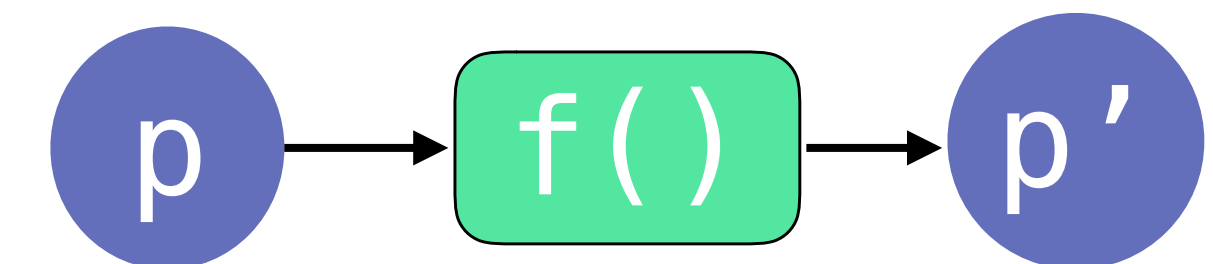
Andreas Voellmy (Forward Networks), Y. Richard Yang (Yale University)

SDN programming is **hard**: behavior is split across two, tightly correlated programs written in different languages. Easy to introduce bugs.

Let's simplify: write a single program that expresses the overall input-output behavior of the system, in a simple and familiar programming style.

Magellan implements this programming model on multi-table switches with two novel components: (1) *Table designer* generates optimized table designs and (2) *Explorer*, a controller that proactively populates tables using *execution exploration.*