

# Assignment 1

## Theorem Proving with Equality

1. Express the following sentences as the formulae of the first order logic and normalize them:
  - Every researcher writes at least one paper.
  - Every researcher from one group reads at least one paper of another researcher from the same group.
  - There exists researcher who writes papers.
2. Prove Fact 1: A set of clauses  $S$  is satisfiable in FOLE iff  $S$  is satisfiable in FOL.