Getting the Best of Both Worlds

- Link type theory with set theory
  - type system a ‘layer’ on top of set theory
  - prove set membership by typechecking
- Experiments done using HOL
  - compatibility with existing HOL proofs
  - set theory defined inside HOL logic
  - transfer principles link types with sets
- Case studies
  - definition of lists
  - conventional abstract algebra
- Experimental prototype: HOL-ST