

Previous Work

Giovanni Bianchi: Single Evaluation of Building Energy Demand

Johannes Hofer: Detailed Model and Evaluation of PV Electricity Production

Prageeth Jayathissa: Parametric Thermal Model with Estimated PV

Master Thesis Goals

- Combine to Create Single Model
- Design Parametric Simulation Tool
- Evaluate Multiple Scenarios

Long Term Goals

Implementation of Model Predictive Control (MPC) for Prototypes of ASF

Detailed Parametric Model for ASF Design Considerations

In Depth Analysis of ASF Performance

- Add Bypass Diodes and String Connection to PV Model
- Implement RC Model
- Include Energy for Actuation

- Extended Evaluation of individual Actuation
- Iterative Algorithm to increase Accuracy
- Life Cycle Analysis