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## **E1 244: Detection and Estimation**

February-May 2021

### **Solution – Homework 2**

## **Analysis and Algorithms for Faulty Sensor Interpolation**

### **Part A: Derivation and Modelling**

**Wiener Interpolator**

**Two-Point-Average Interpolator**

**Causal Wiener Interpolator**

**Kalman Filter**

### **Part B: Implementation**

**Wiener Interpolator**

**Two-Point-Average Interpolator**

**Causal Wiener Interpolator**

**Kalman Filter**

### **Scripts**

**Implementation of Wiener Interpolator**

**Implementation of Two-Point-Average Interpolator**

**Implementation of Causal Wiener Interpolator**

**Implementation of Kalman Filter**