

# Lecture-07: Generalized Expectations

## **1 Generalization of Expectation Operator**

### **1.1 Expectation of functions of discrete random variables**

### **1.2 Moments**

#### **1.2.1 Variance**

#### **1.2.2 $K$ -th order moments**

#### **1.2.3 Central moments**

### **1.3 Linearity of expectation for discrete random variables**

### **1.4 Correlation**