

Autocorrelation_stats

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Load datasets

```
# This dataset contains replicates for which a preparation technique was performed (repeated first born  
original_dataset_2 <- read.csv("https://raw.githubusercontent.com/Cuddington-Lab/thermal-experiments/main/original_dataset_2.csv")  
original_dataset_2$prep <- rep("yes", times=length(original_dataset_2$Experiment_Number))  
  
# This dataset contains replicates of experiments performed without a preparation technique  
original_dataset_1 <- read.csv("https://raw.githubusercontent.com/Cuddington-Lab/thermal-experiments/main/original_dataset_1.csv")  
original_dataset_1$prep <- rep("no", times=length(original_dataset_1$Experiment_Number))
```

Clean the data according to pre-defined thresholds (temperature data quality check)

```
# Blending both datasets, as there are no significant differences between preparation methods (probably  
datin <- rbind(original_dataset_1, original_dataset_2)  
  
datin <- datin[!(datin$Treatment == 0 & (datin$Obs_sd <= 2.1 | datin$Obs_sd >= 2.9))  
              &!(datin$Treatment == 0.95 & (datin$Obs_sd <= 2.1 | datin$Obs_sd >= 2.9)),]  
  
datin <- datin[!(datin$Treatment == 0 & (datin$Obs_ac <= -0.2 | datin$Obs_ac >= 0.2))  
              &!(datin$Treatment == 0.95 & (datin$Obs_ac <= 0.92 | datin$Obs_ac >= 0.98)),]  
  
datin <- subset(datin, !Errors == "y" | is.na(Errors))  
datin <- subset(datin, !Treatment == "constant")
```

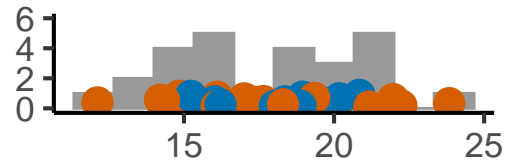
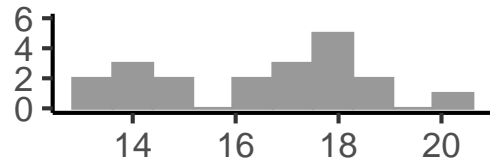
Plotting histograms

Frequency distribution of performance across average temperature

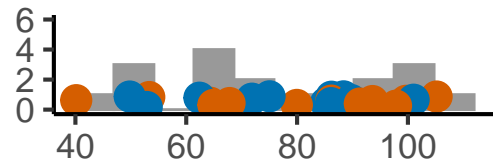
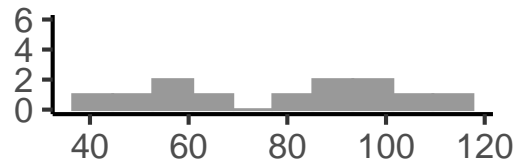
No autocorrelation

Strong autocorrelation

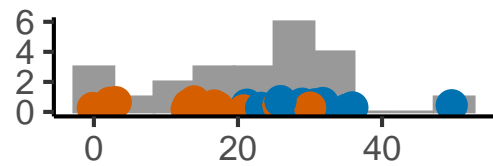
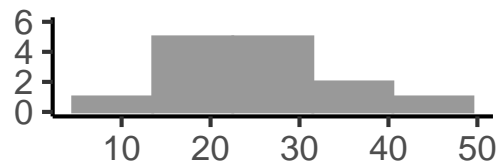
10–15°C



27°C



37°C



Number of living fronds

Plotting histograms (stacked)

Frequency distribution of performance across average ter

