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# Inferred Network Graph



# Regulation Detection Scores for Self-Regulation

```
Columns 1 through 3
```

```
               0    1.000000000000000   -0.920153641378521
-0.994468928361520                   0   -0.489915955685279
 0.577712256748242   -0.096974977572577                   0
 0.995676532007443    0.861514979463501   -0.226331266560389

Column 4

-0.922582496371002
-0.719885446022116
 0.655239772230122
                 0
```

# Regulation Detection scores for across component interactions (column variable acting on row variable)

```
Columns 1 through 3

               0   -0.781689677824100   -0.944150239228138
 0.907462995332976                   0   -0.989162142933636
 0.873505920927479    0.931222439614847                   0
 0.801984601240147    0.916251689852151    0.884115112263225

Column 4

-0.409767320106384
-0.966327811820108
-0.730074721292125
                 0
```
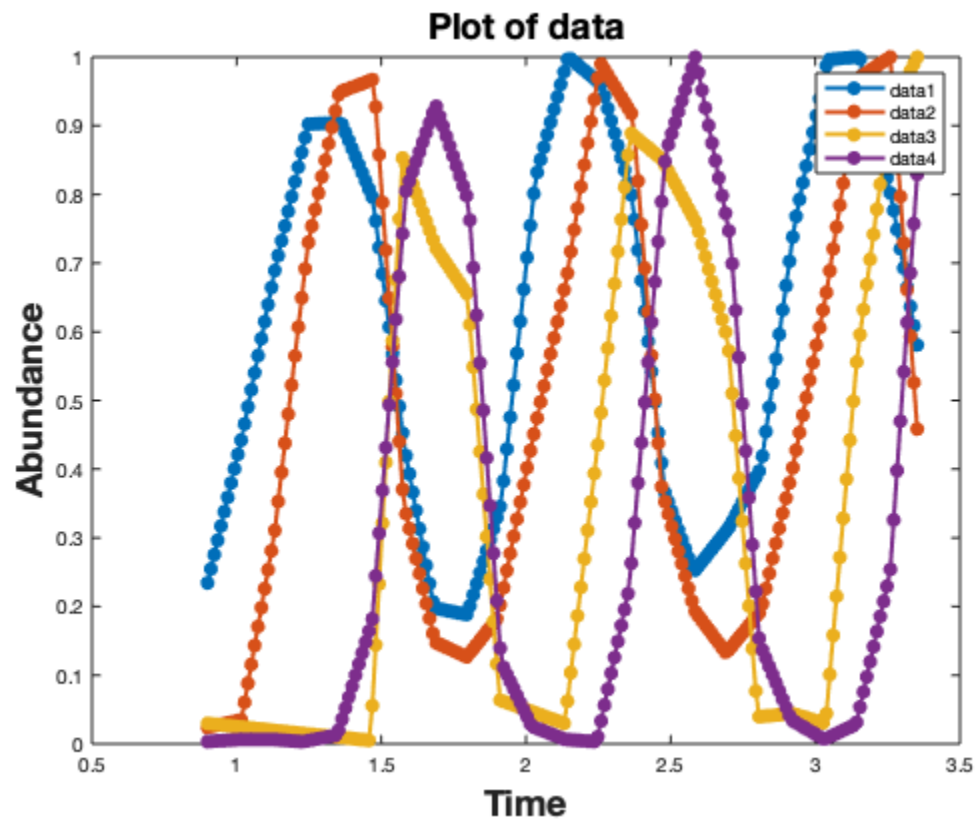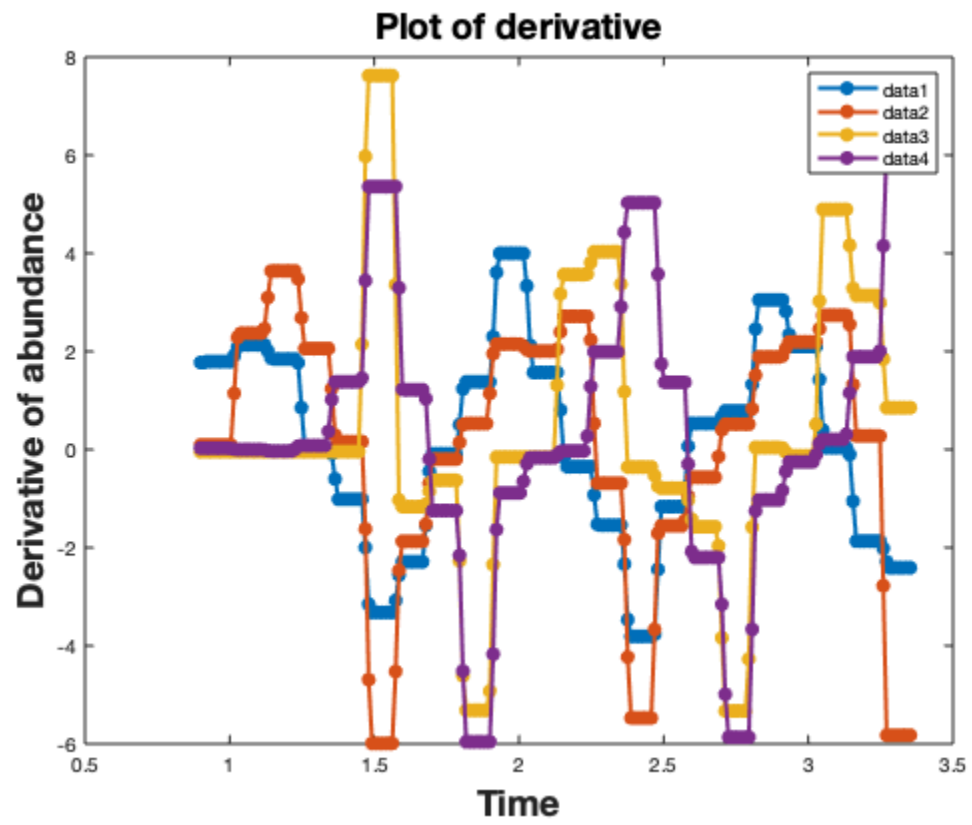
# Inferred Interactions

```
Variable 3 negatively regulates Variable 1
Variable 1 positively regulates Variable 2
```
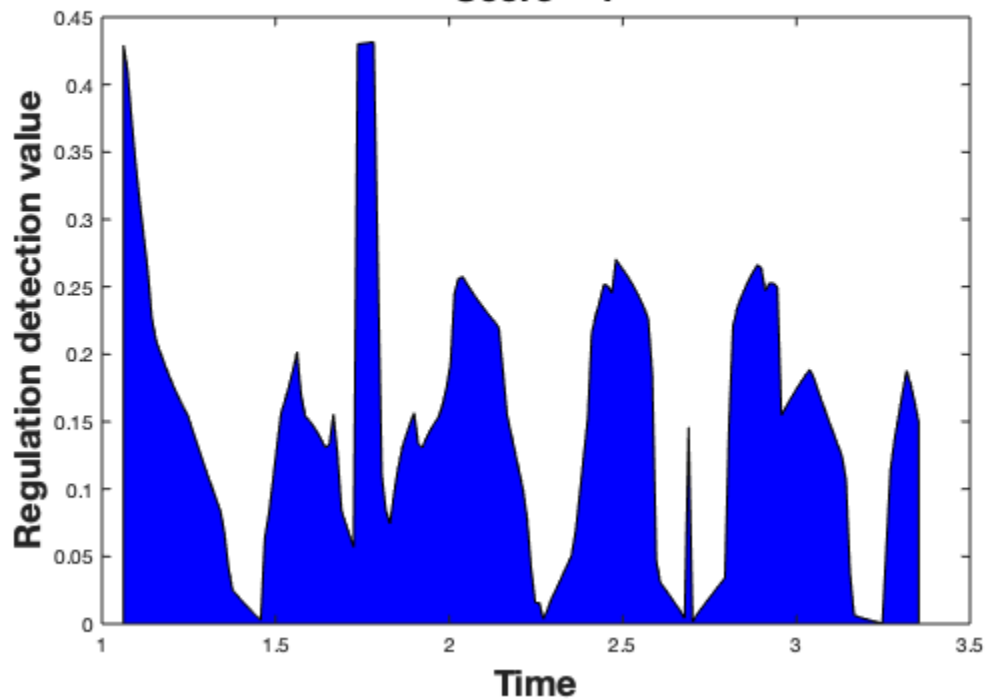
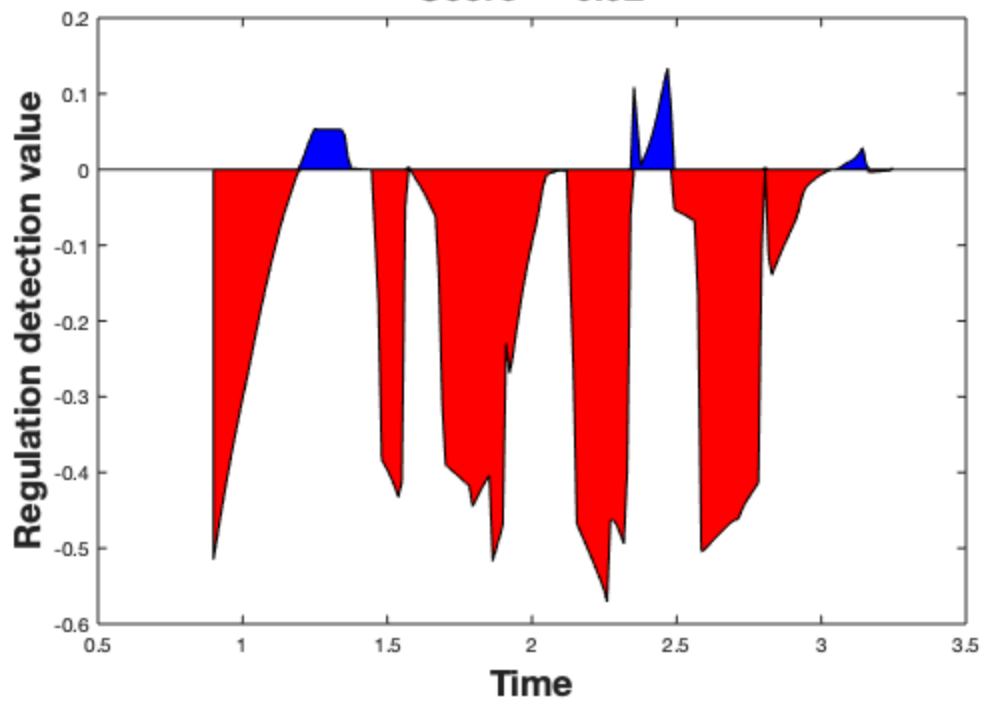# Data figure

# Derivative Figure

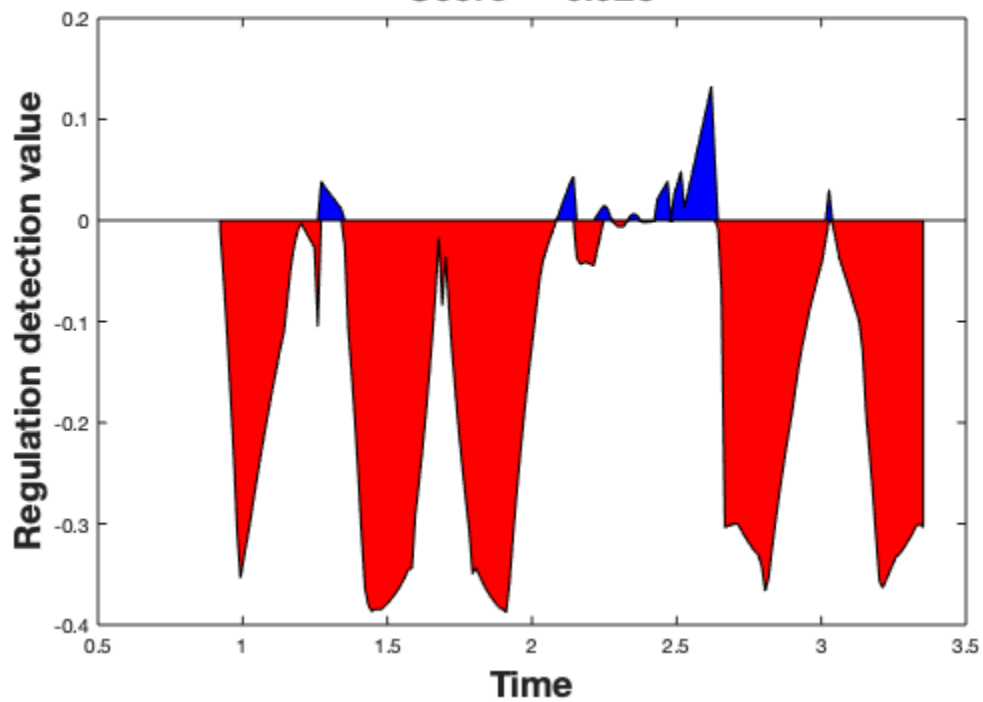# Regulation detection functions for self-regulations



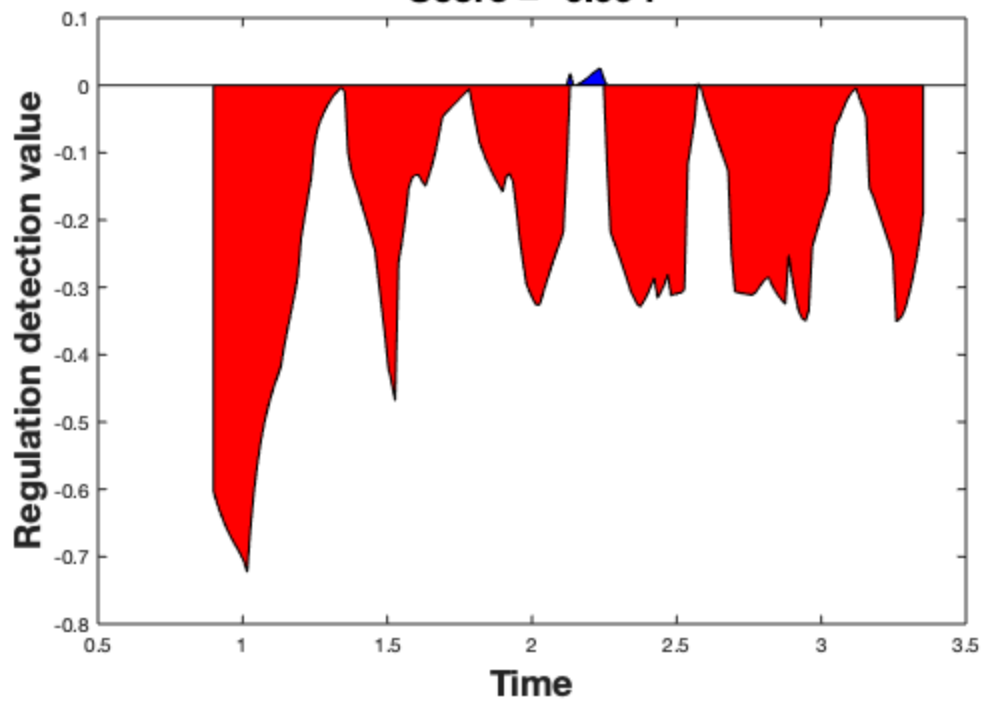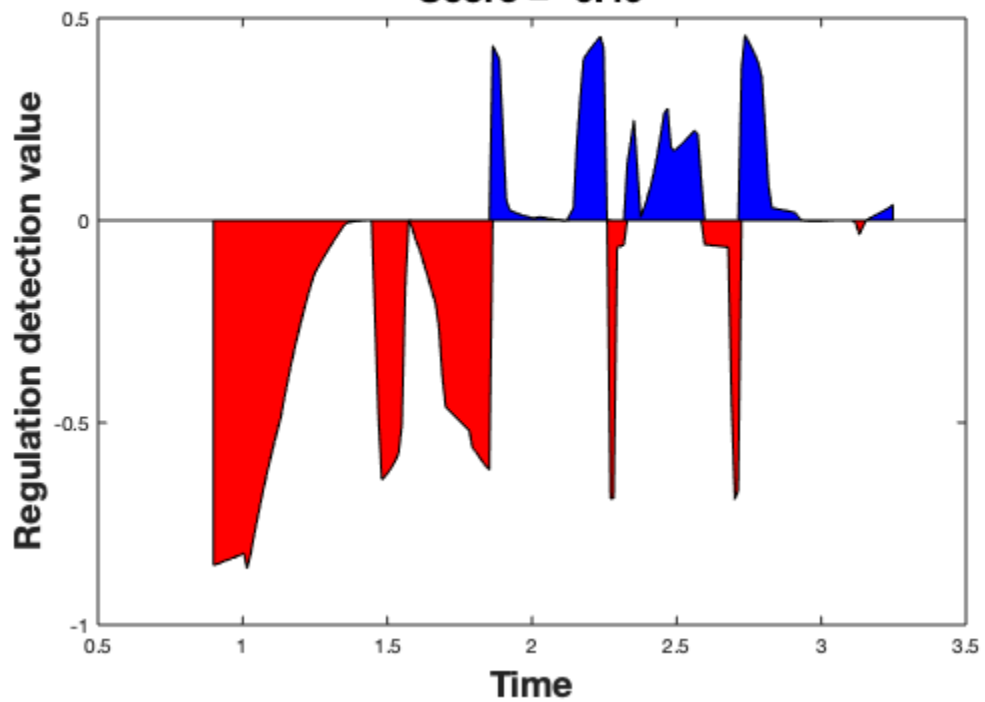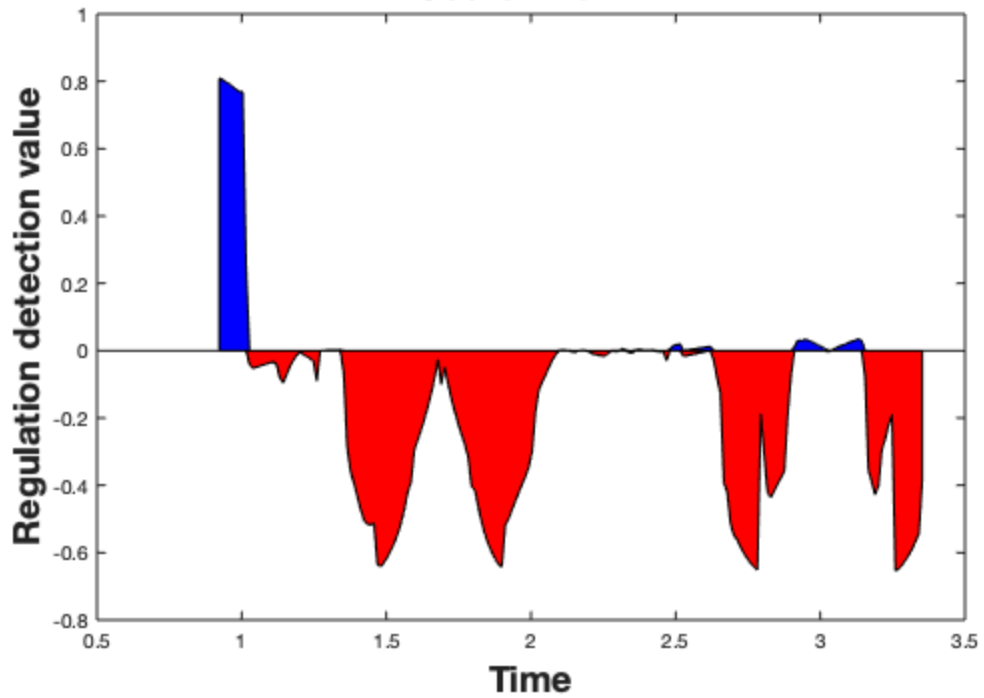Regulation Detection Function for Variable 1 onto Variable 1
Fixing Variable 2
Score = 1

## Regulation Detection Function for Variable 1 onto Variable 1
## Fixing Variable 3
## Score = -0.92



## Regulation Detection Function for Variable 1 onto Variable 1
## Fixing Variable 4
## Score = -0.923

## Regulation Detection Function for Variable 2 onto Variable 2
### Fixing Variable 1
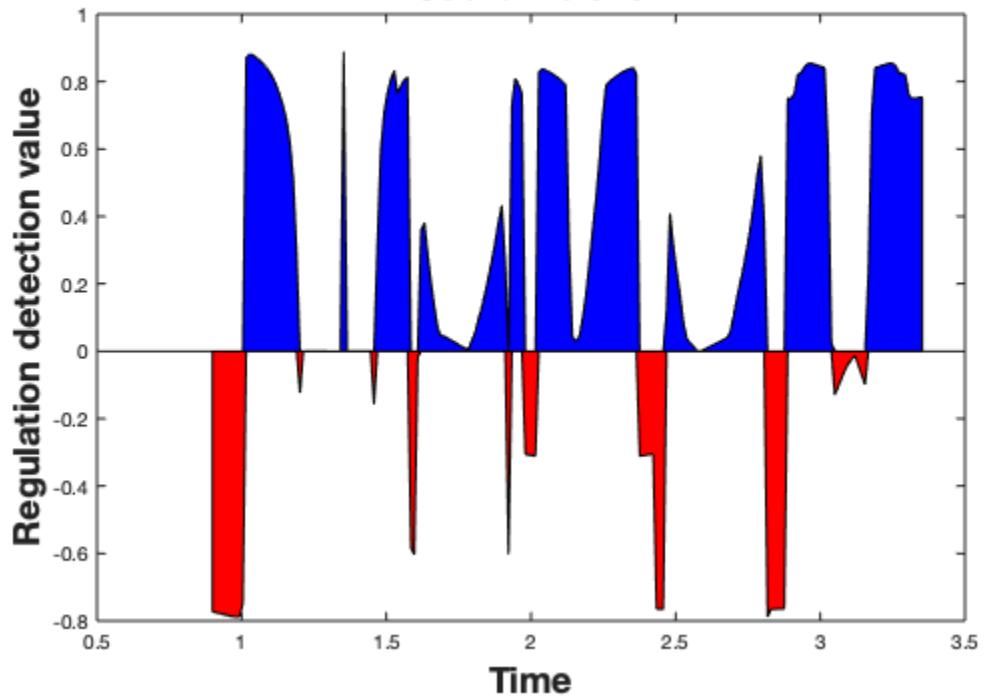### Score = -0.994



## Regulation Detection Function for Variable 2 onto Variable 2
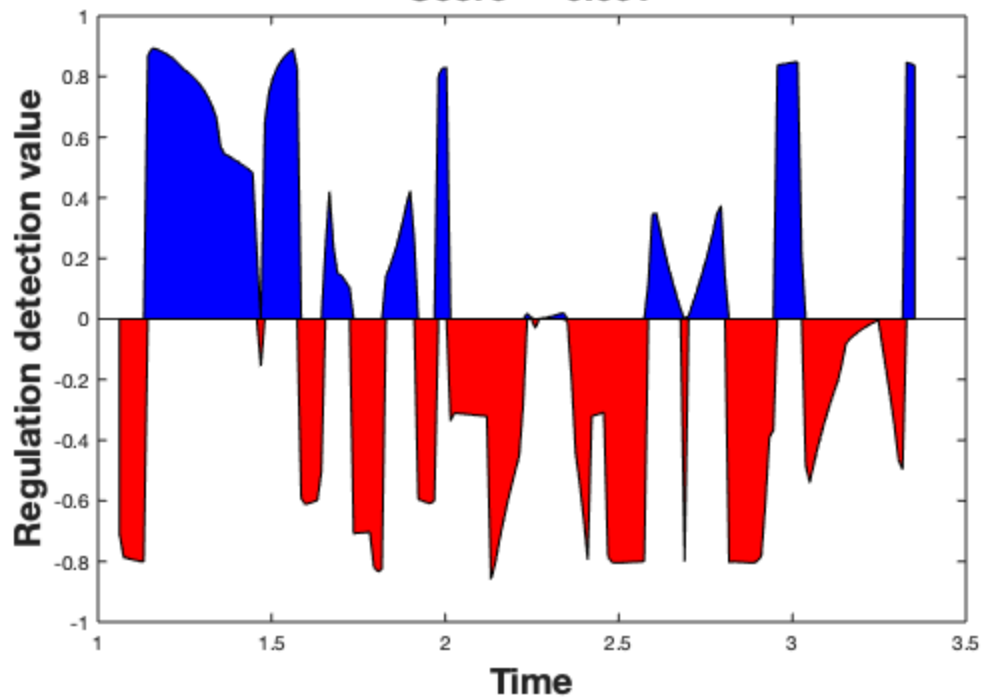### Fixing Variable 3
### Score = -0.49

## Regulation Detection Function for Variable 2 onto Variable 2
## Fixing Variable 4
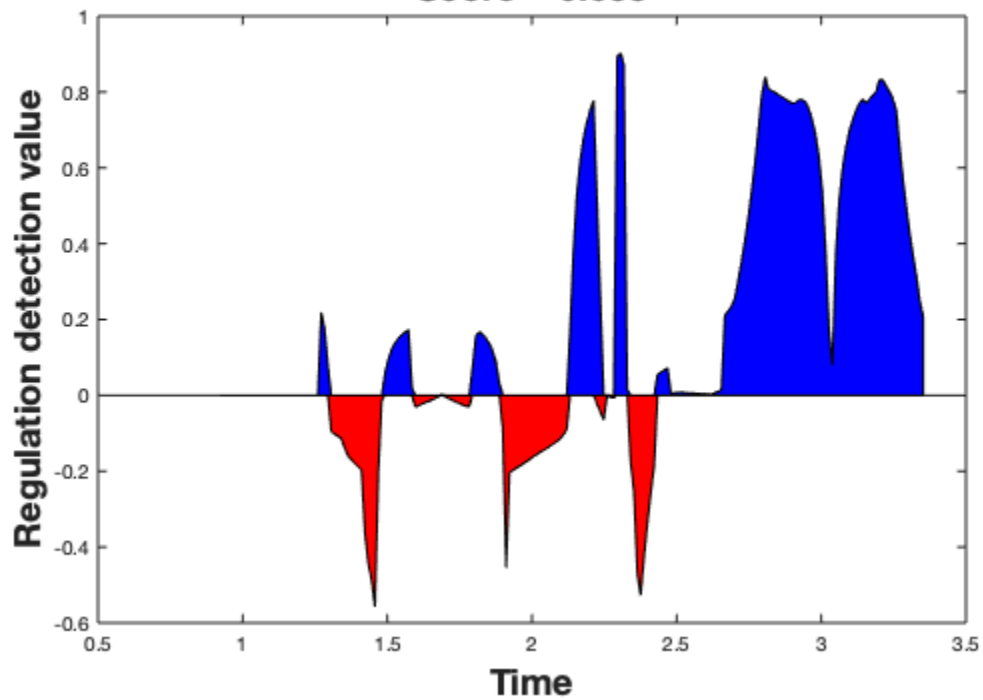## Score = -0.72



## Regulation Detection Function for Variable 3 onto Variable 3
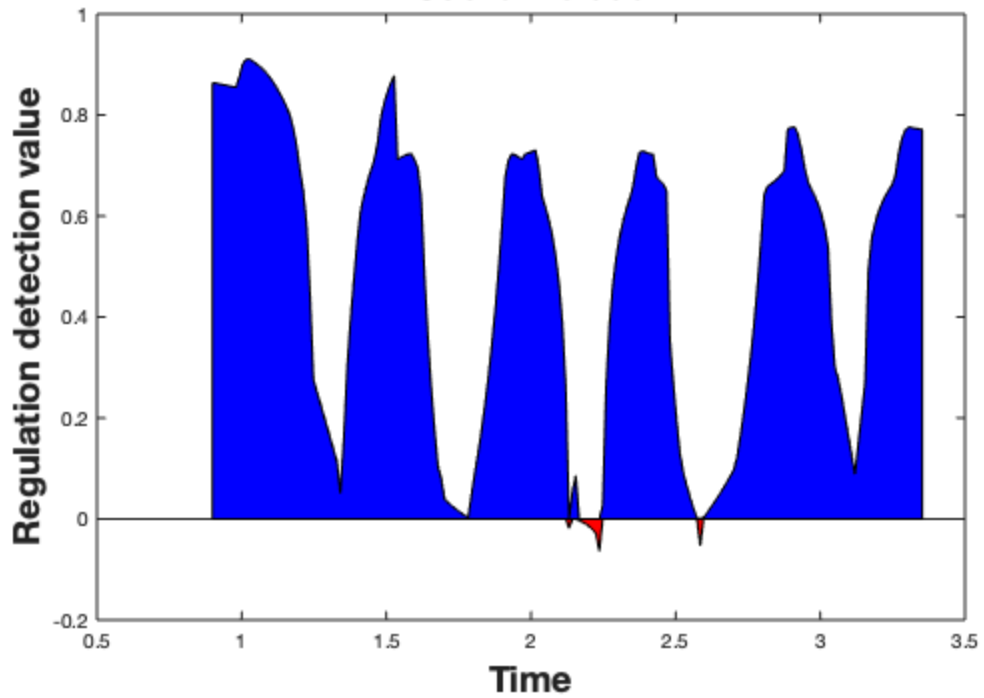## Fixing Variable 1
## Score = 0.578

# Regulation Detection Function for Variable 3 onto Variable 3 Fixing Variable 2
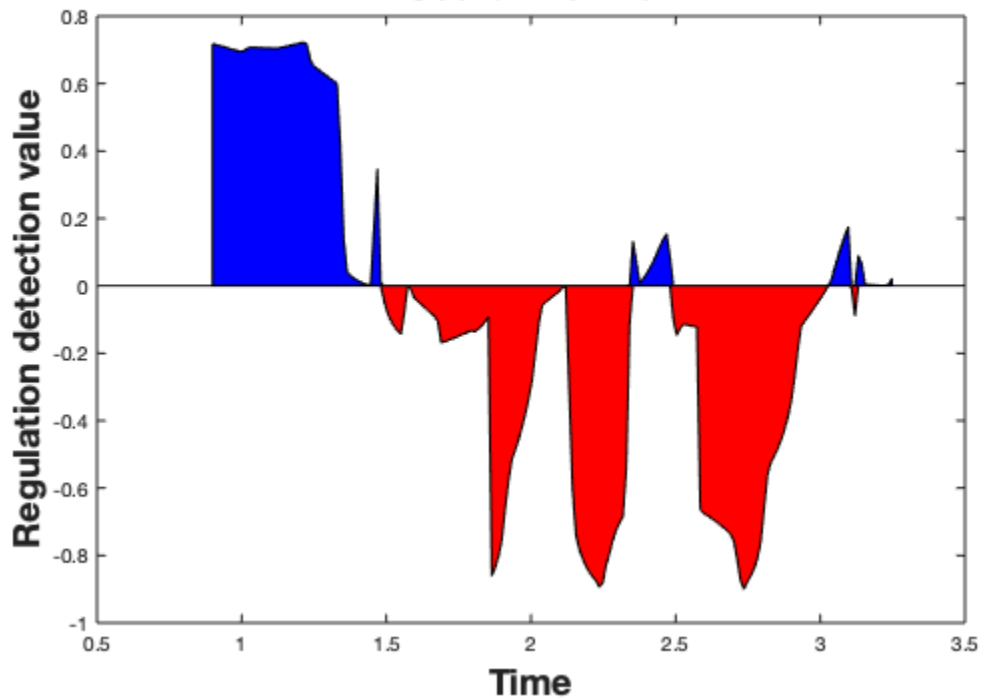## Score = -0.097



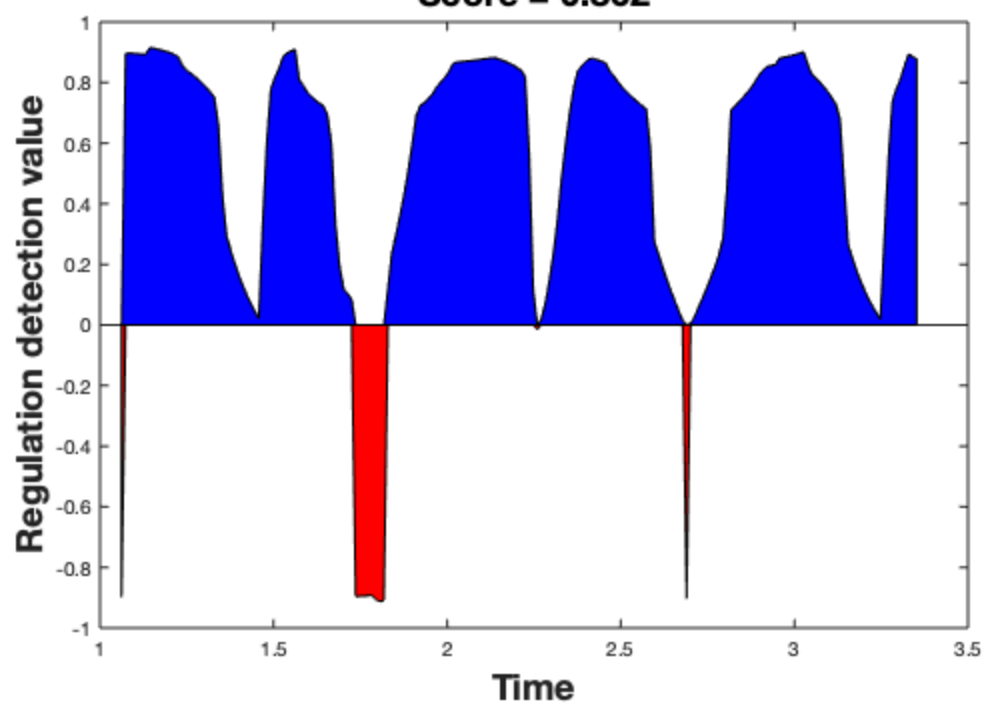# Regulation Detection Function for Variable 3 onto Variable 3 Fixing Variable 4
## Score = 0.655

## Regulation Detection Function for Variable 4 onto Variable 4
## Fixing Variable 1
## Score = 0.996



## Regulation Detection Function for Variable 4 onto Variable 4
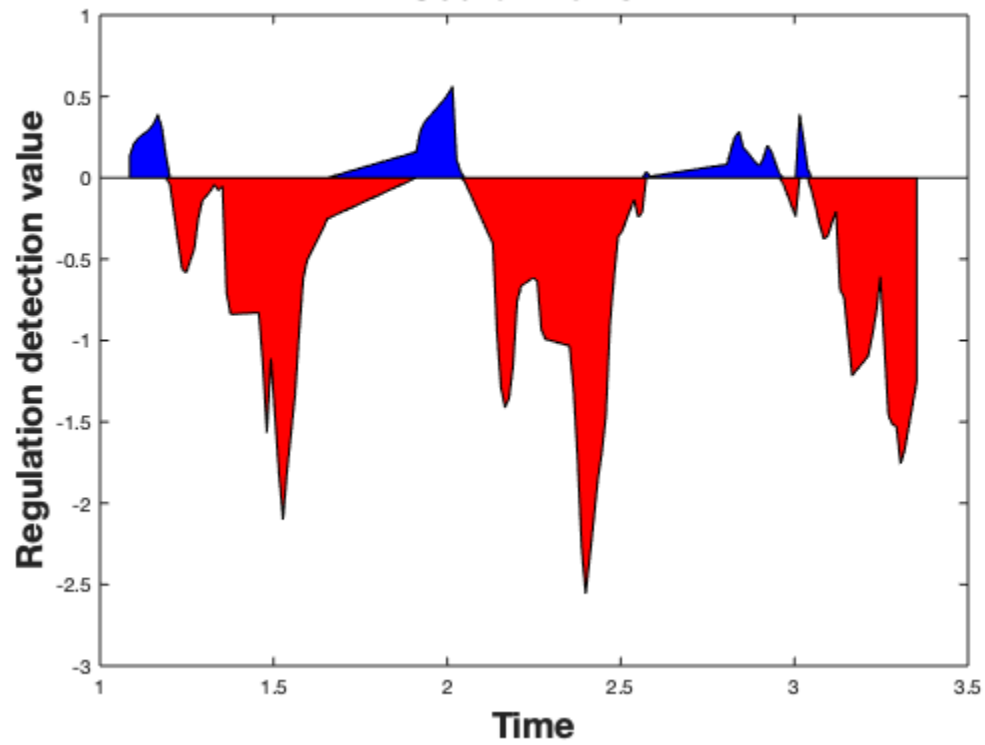## Fixing Variable 3
## Score = -0.226

**Regulation Detection Function for Variable 4 onto Variable 4**
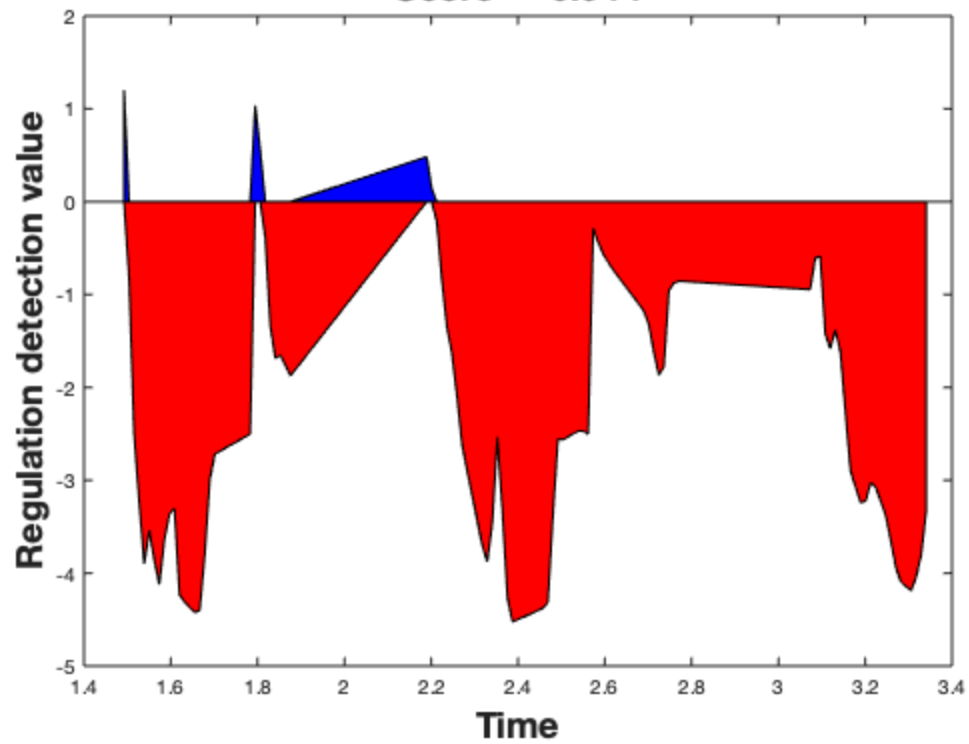**Fixing Variable 2**
**Score = 0.862**

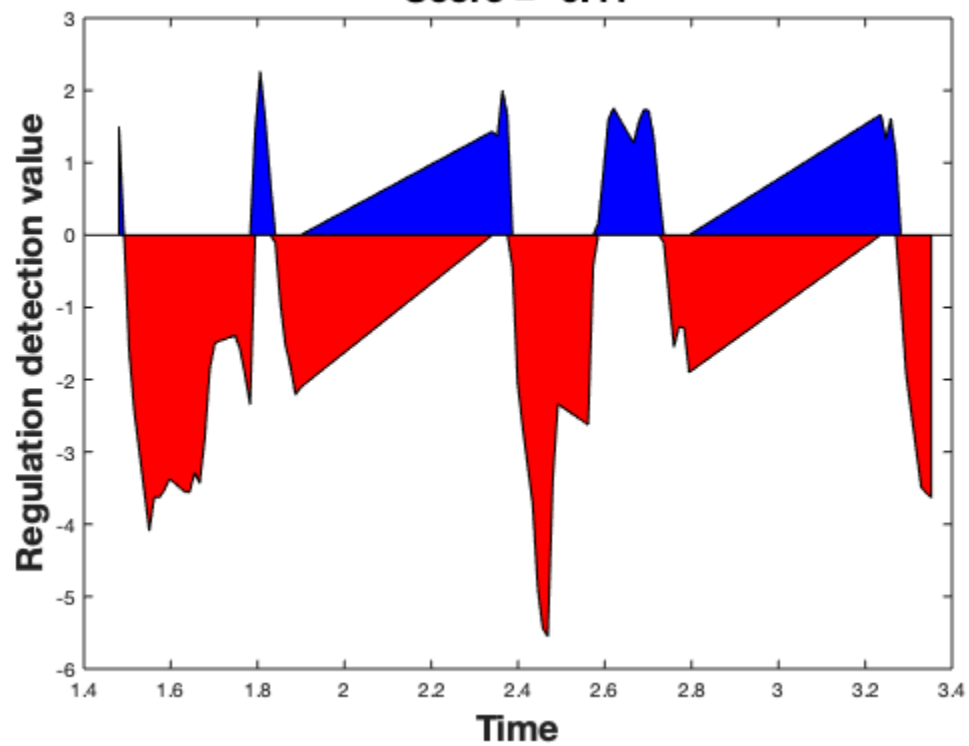# Regulation detection functions



Regulation Detection Function for Variable 2 onto Variable 1
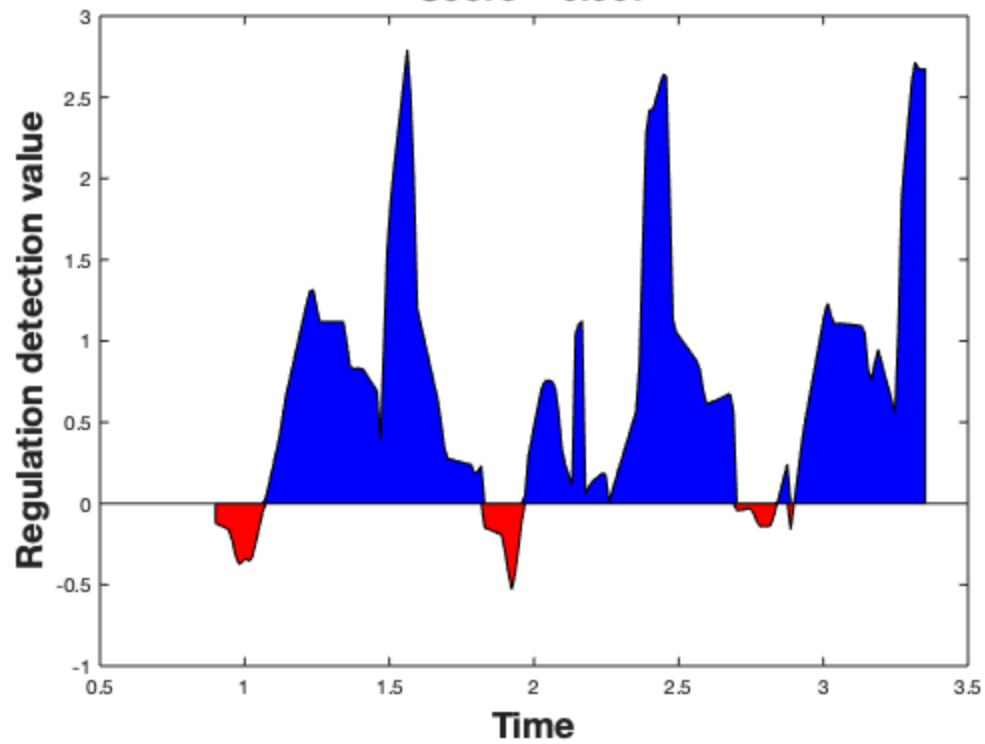Score = -0.782

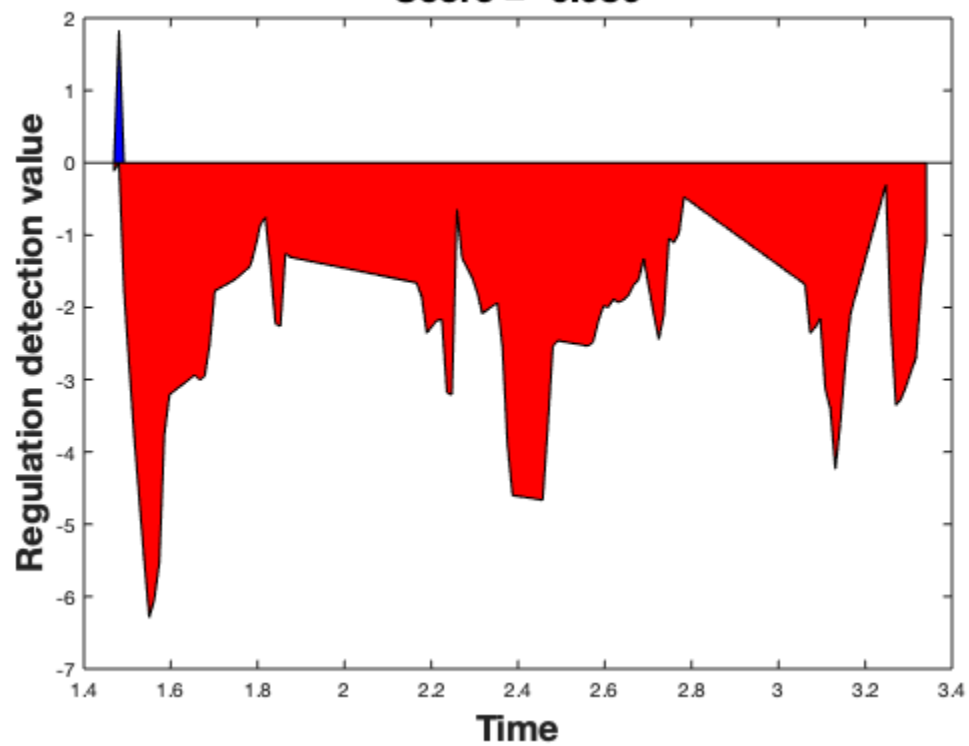## Regulation Detection Function for Variable 3 onto Variable 1
## Score = -0.944



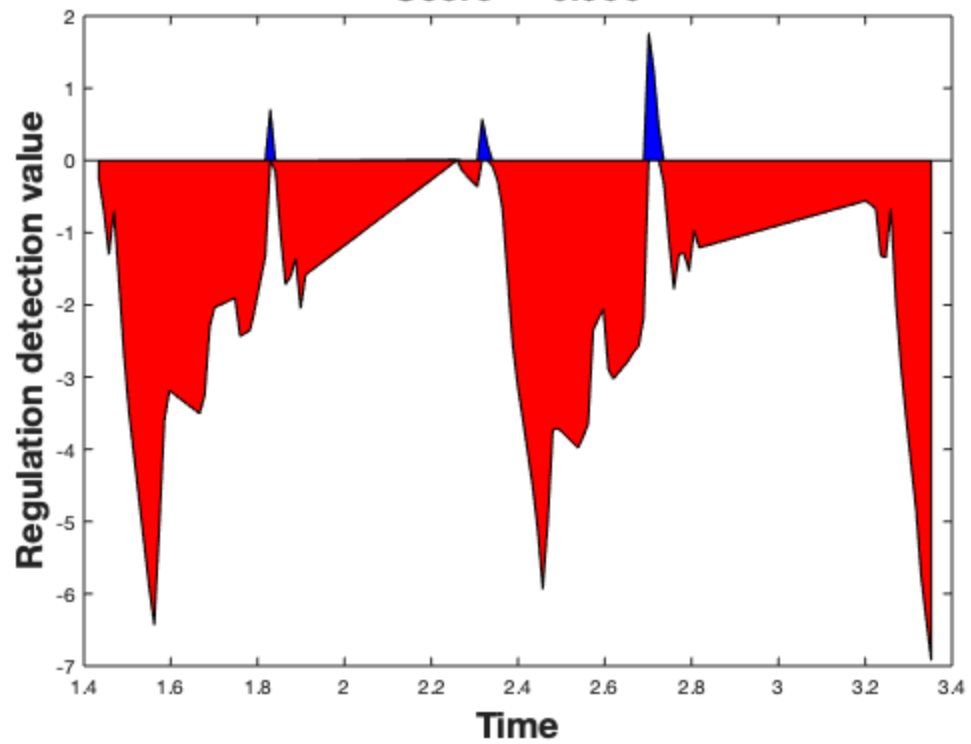## Regulation Detection Function for Variable 4 onto Variable 1
## Score = -0.41

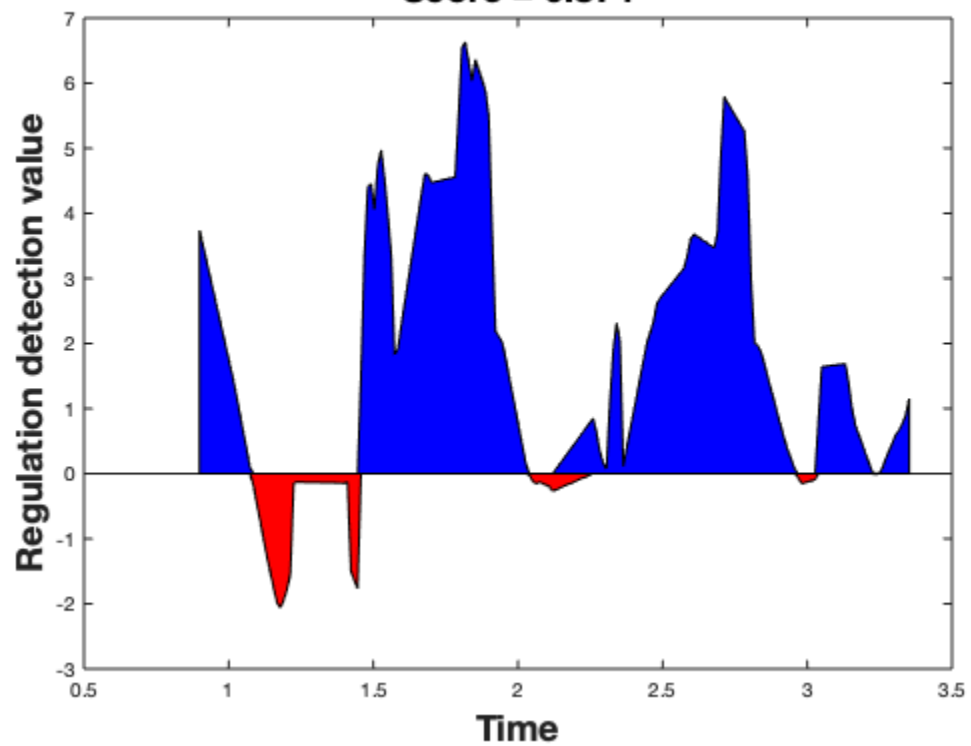**Regulation Detection Function for Variable 1 onto Variable 2**
**Score = 0.907**



**Regulation Detection Function for Variable 3 onto Variable 2**
**Score = -0.989**

**Regulation Detection Function for Variable 4 onto Variable 2**
**Score = -0.966**



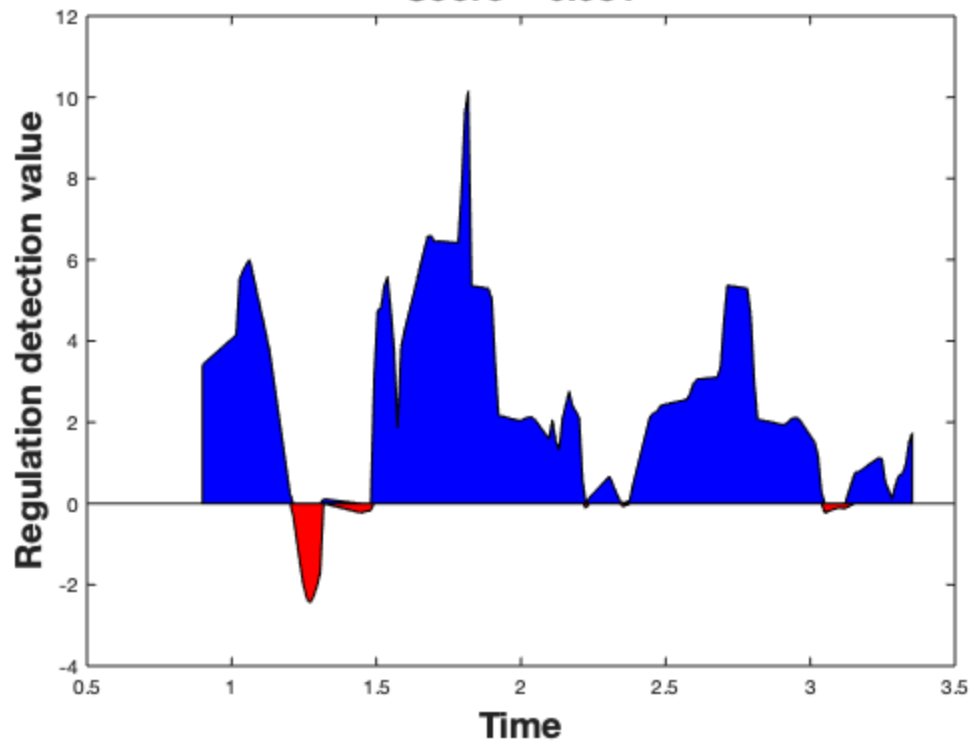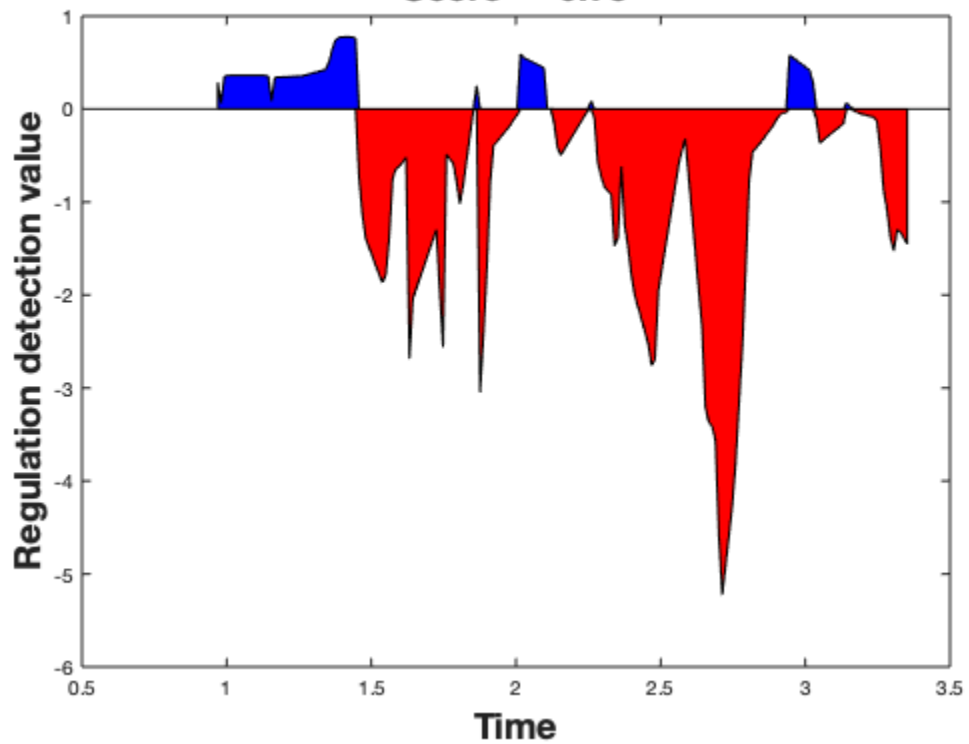**Regulation Detection Function for Variable 1 onto Variable 3**
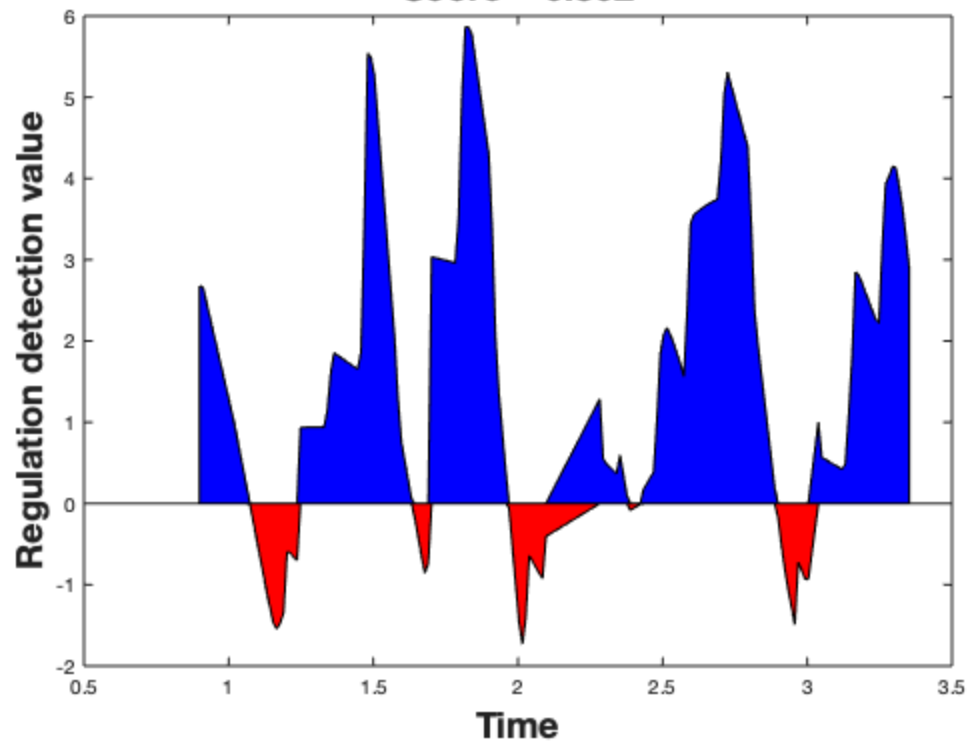**Score = 0.874**

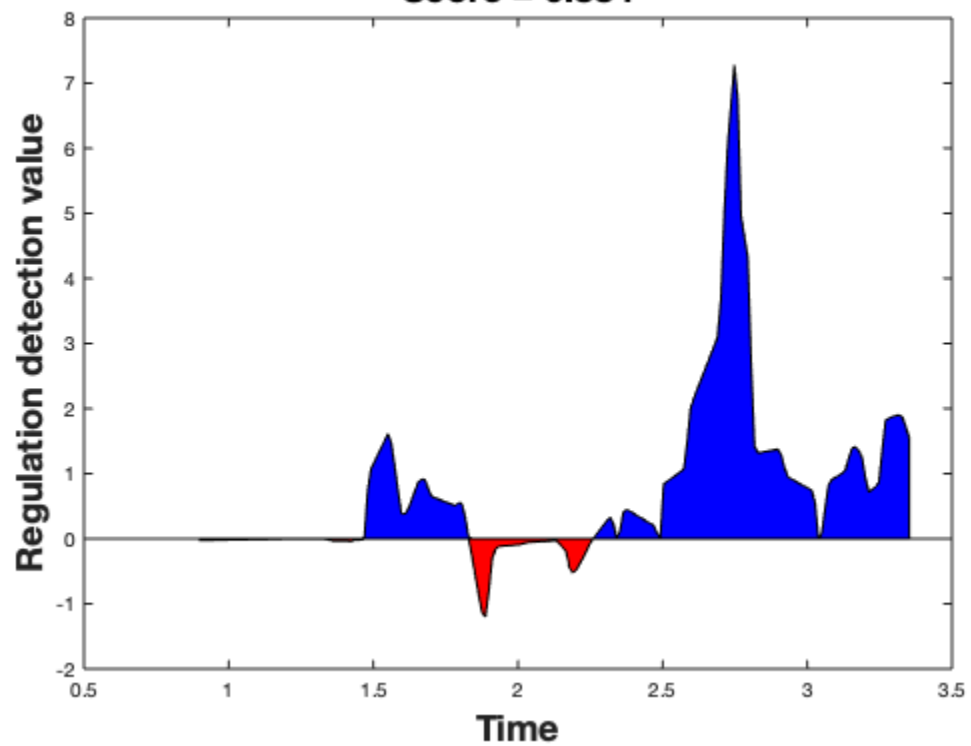Regulation Detection Function for Variable 2 onto Variable 3
Score = 0.931



Regulation Detection Function for Variable 4 onto Variable 3
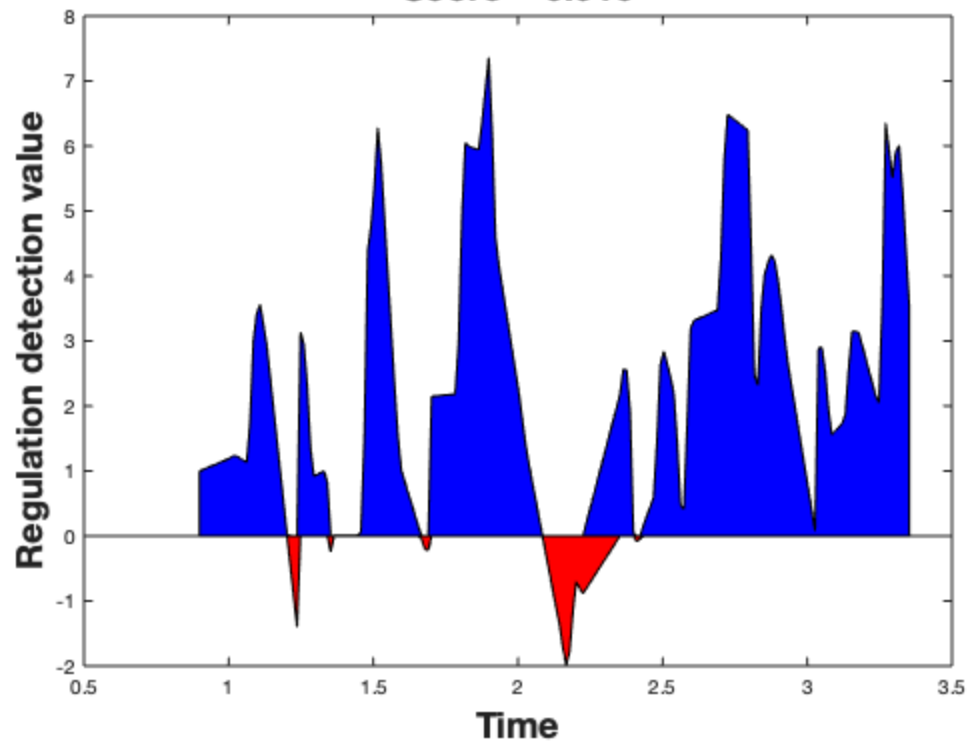Score = -0.73

**Regulation Detection Function for Variable 1 onto Variable 4**
**Score = 0.802**



**Regulation Detection Function for Variable 3 onto Variable 4**
**Score = 0.884**

**Regulation Detection Function for Variable 2 onto Variable 4**
**Score = 0.916**

*Published with MATLAB® R2019b*