

# Sugihara\_\_brain

*Kamal Kamalaldin*

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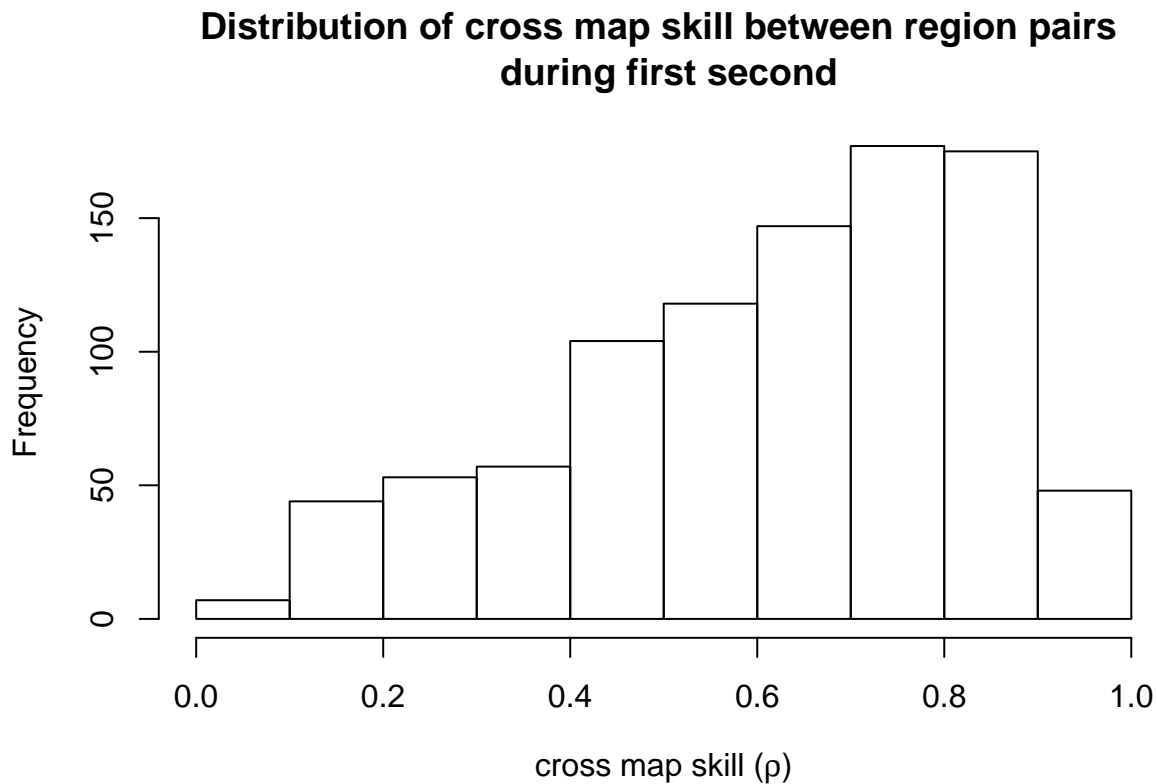
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**Note** Unless explicatedly stated otherwise, the data analysis in this document pertain only to the first second of 500 during the experiment.

## Sugihara Cross Map Skill ( $\rho$ ) analysis

First we measured pairwise sugihara cross map skill ( $\rho$ ) measure. Most of the pairs showed high causality measures as shown by the histogram.

```
hist(netw$strength, main="Distribution of cross map skill between region pairs \n during first second",
```



Then we observe that many of the pairs have very similar  $\rho$  measure between them. This indicates that

```
rho_diff <- c()
for (i in 1:31)
{
  for (j in 1:31)
```

```

{
  if (i != j)
  {
    rho_diff <- c(rho_diff, netw$strength[netw$from==i & netw$to==j] - netw$strength[netw$from==j & netw$to==i])
  }
}
}
hist(rho_diff, main = expression(paste("Distribution of difference of ", rho, " between regions in each pair")))

```

Distribution of difference of  $\rho$  between regions in each pair

