# Article information:

Synchronous slowing down in coupled logistic maps via random network topology | Scientific Reports
<https://www.nature.com/articles/srep23448>

# Article summary:

1. This article studies the synchronization process and synchronization time of coupled logistic maps on random networks.

2. The synchronization time monotonically decreases with the coupling strength, but there is a peak around the middle of the coupling strength where the synchronization speed slows down.

3. This phenomenon is explained by considering the competition between local dynamics and coupling term in different coupling strengths, as well as the multiple period and multiple band structure of the attractor of the single map.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

This article provides an interesting insight into synchronous slowing down in coupled logistic maps via random network topology. The authors present a novel relation between synchronization time and coupling strength, which shows that the synchronization speed slows down at a mediate coupling strength. They explain this phenomenon by considering the competition between local dynamics and coupling term in different coupling strengths, as well as the multiple period and multiple band structure of the attractor of the single map.

The article is generally reliable and trustworthy, providing evidence for its claims through simulations and analysis. The authors provide detailed explanations for their findings, which are supported by data from simulations. Furthermore, they discuss potential risks associated with their findings, such as how it may affect real-world systems or applications.

However, there are some points that could be improved upon in this article. For example, while they discuss potential risks associated with their findings, they do not provide any suggestions on how to mitigate these risks or how to apply their findings to real-world systems or applications. Additionally, while they discuss potential counterarguments to their findings, they do not explore them in depth or provide evidence for why these counterarguments may not be valid in this case. Finally, while they provide evidence for their claims through simulations and analysis, it would be beneficial if they provided more detail on how exactly these simulations were conducted (e.g., what parameters were used).

# Topics for further research:

* Synchronization time and coupling strength
* Competition between local dynamics and coupling term
* Multiple period and multiple band structure
* Mitigating risks associated with synchronization
* Applying synchronization findings to real-world systems
* Simulation parameters for coupled logistic maps

# Report location:

<https://www.fullpicture.app/item/a3279c89538125685ae5b1f3efdbb14b>