

Accepted Manuscript

Mathematical comparison of memory functions between mutual activation and repression networks in a stochastic environment

A.B.M. Shamim UI Hasan , Hiroyuki Kurata

PII: S0022-5193(17)30258-8
DOI: [10.1016/j.jtbi.2017.05.036](https://doi.org/10.1016/j.jtbi.2017.05.036)
Reference: YJTBI 9093



To appear in: *Journal of Theoretical Biology*

Received date: 20 December 2016
Revised date: 31 May 2017
Accepted date: 31 May 2017

Please cite this article as: A.B.M. Shamim UI Hasan , Hiroyuki Kurata , Mathematical comparison of memory functions between mutual activation and repression networks in a stochastic environment, *Journal of Theoretical Biology* (2017), doi: [10.1016/j.jtbi.2017.05.036](https://doi.org/10.1016/j.jtbi.2017.05.036)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Highlights

- Mathematical comparison by simulation and theoretical analyses identified critical differences in the memory function between the regulated mutual activation network (MAN) and regulated mutual repression network (MRN).
- The MAN provided much more robust, persistent memory than the MRN.
- The memory of the MRN was very fragile to noise and the MRN required a high-cooperativity and strong binding repressors for enhanced memory.

ACCEPTED MANUSCRIPT

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات