

Network Biology

The Network Biology (ISSN 2220-8879; CODEN NBEICS) is an open access (BOAI definition), peer/open reviewed online journal that considers scientific articles in all different areas of network biology. It is the transactions of the International Society of Network Biology. It dedicates to the latest advances in network biology. The goal of this journal is to keep a record of the state-of-the-art research and promote the research work in these fast moving areas. The topics to be covered by Network Biology include, but are not limited to:

- Theories, algorithms and programs of network analysis
- Evolution, dynamics, optimization and control of biological networks
- Network construction, link prediction
- Network topology, topological analysis, relationship between topological structure and network functions, sensitivity analysis, network robustness and stability
- Network flow analysis
- Design and formulation of biological networks
- Ecological networks, food webs and natural equilibrium, co-evolution, co-extinction, biodiversity conservation
- Metabolic networks, protein-protein interaction networks, biochemical reaction networks, gene networks, transcriptional regulatory networks, cell cycle networks, phylogenetic networks, network motifs and modules
- Physiological networks, social networks, epidemiological networks
- Network regulation of metabolic processes, human diseases and ecological systems
- System complexity, self-organization, emergence of biological systems, agent-based modeling, neural network modeling, and other network-based modeling, etc.
- Big data analytics of biological networks, meta-analysis, Mendelian randomization, casual inference, Bayesian inference, etc.

We are also interested in short communications that clearly address a specific issue or completely present a new ecological network, food web, or metabolic or gene network, etc.

Authors can submit their works to the email box of this journal, networkbiology@iaees.org and(or) wjzhang@iaees.org. All manuscripts submitted to Network Biology must be previously unpublished and may not be considered for publication elsewhere at any time during review period of this journal. In addition to free submissions from authors around the world, special issues are also accepted. The organizer of a special issue can collect submissions (yielded from a research project, a research group, etc.) on a specific topic, or submissions of a conference for publication of special issue.

Editorial Office: networkbiology@iaees.org

Publisher: International Academy of Ecology and Environmental Sciences

Address: Unit 3, 6/F., Kam Hon Industrial Building, 8 Wang Kwun Road, Kowloon Bay, Hong Kong

Tel: 00852-2138 6086

Fax: 00852-3069 1955

E-mail: office@iaees.org

Network Biology

ISSN 2220-8879 | CODEN NBEICS

Volume 15, Number 4, 1 December 2025

Articles

State space analysis of diphtheria pathogenesis using semi-tensor products and permutation methods

Ugbene Ifeanyichukwu Jeff, Ighovotueko Sophia Ajuremisan 123-149

A study on Nilpotent graph in genetic code algebra

Birinchi Kumar Boruah 150-162



IAEES

<http://www.iaees.org/>