

# Biophysical Journal

## Call for Papers

### Special Issue: Genome Organization: Integrating Mathematics, Physics, and Computation for Advances in Biology and Medicine

**Editors: Tamar Schlick, New York University**

**Lars Nordenskiöld, Nanyang Technological University**

The folding and dynamics of the chromatin fiber regulates life's essential processes like gene expression, DNA repair, and cell differentiation and thus affects human disease. Profound questions regarding DNA geometry, topology, and function span from the single nucleosome/base-pair level to condensed chromosomal arrangements on the mega-base-pair level in the metaphase cell cycle.

Various computational models and simulation methods—from atomistic to polymer levels—have been developed and applied to bridge experimental data and push science frontiers connected to genome organization. Despite major progress, this field has major open questions. At the molecular level, mechanochemical mechanisms along DNA remain unclear, as do the influences of DNA longitudinal and torsional tension, nucleosome positioning, and transcriptional activity on loop extrusion dynamics. Interdisciplinary research combining theoretical modeling, single-molecule biophysics, and high-resolution imaging continues to advance our understanding of these active processes and their implications for cellular function and disease. In addition to a bridging between modeling and experimentation on nucleosome and fiber levels with genome studies on the kilo-base level, tailored multiscale computational approaches are needed to help interpret experimental structural and kinetic data.

In conjunction with a series of successful workshops organized over the past decade that brought together and built a strong community of interdisciplinary researchers in this area, most recently in March 2026, we invite multidisciplinary contributions of original research articles to our special issue on genome organization, focusing on state-of-the-art modeling, experimentation, and biological/biomedical applications associated with DNA, the chromatin fiber, and chromosomal organization in the cell.

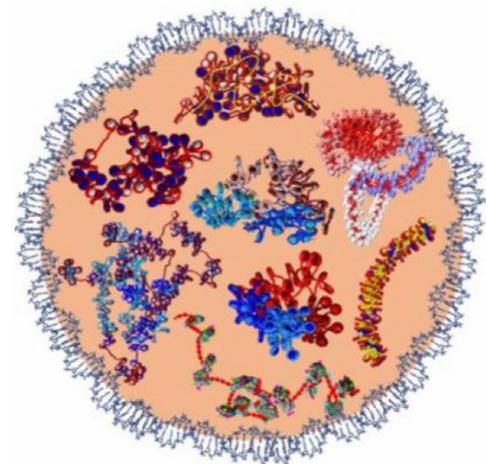
If you have questions or are interested in contributing a review or perspective, please contact Tamar Schlick (schlick@nyu.edu) or Lars Nordenskiöld (larsnor@ntu.edu.sg).

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#### Deadline for submission: November 15, 2026

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- Instructions for authors can be found at: <https://www.cell.com/biophysj/authors>.
- Please include a cover letter stating that you would like to contribute to the Genome Organization special issue and please describe why the work fits into the issue.
- All accepted articles will be reviewed upon receipt and will appear online as soon as accepted, even if submitted early.
- Normal publishing charges will apply.
- Questions can be addressed to the BJ Editorial Office at [BJ@biophysics.org](mailto:BJ@biophysics.org) or to (240) 290-5600.



To submit, visit <https://www.editorialmanager.com/biophysical-journal/>