

Stanford

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Bio

ACADEMIC APPOINTMENTS

- Basic Life Science Research Associate, Bioengineering

Publications

PUBLICATIONS

- **NuSeT: A deep learning tool for reliably separating and analyzing crowded cells** *PLoS Computational Biology*
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2020
- **A fluorogenic array for temporally unlimited single-molecule tracking** *NATURE CHEMICAL BIOLOGY*
Ghosh, R. P., Franklin, J., Draper, W. E., Shi, Q., Betran, B., Spakowitz, A. J., Liphardt, J. T.
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- **Optical Control of Fast and Processive Engineered Myosins In Vitro and in Living Cells**
Ruijgrok, P. V., Ghosh, R. P., Nakamura, M., Zemsky, S., Chen, R., Vachharajani, V., Liphardt, J. T., Bryant, Z.
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- **Concerted localization resets precede YAP-dependent transcription**
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Cold Spring Harbor Laboratory Press.
2019 ; biorxiv (10.1101/539049): 539049v3
- **A Mutation in Histone H2B Represents a New Class of Oncogenic Driver.** *Cancer discovery*
Bennett, R. L., Bele, A. n., Small, E. C., Will, C. M., Nabet, B. n., Oyer, J. A., Huang, X. n., Ghosh, R. P., Grzybowski, A. T., Yu, T. n., Zhang, Q. n., Riva, A. n., Lele, et al
2019
- **Satb1 integrates DNA binding site geometry and torsional stress to differentially target nucleosome-dense regions.** *Nature communications*
Ghosh, R. P., Shi, Q. n., Yang, L. n., Reddick, M. P., Nikitina, T. n., Zhurkin, V. B., Fordyce, P. n., Stasevich, T. J., Chang, H. Y., Greenleaf, W. J., Liphardt, J. T.
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- **ATAC-se reveals the accessible genome by transposase-mediated imaging and sequencing.** *Nature methods*
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- **Rapid Disorganization of Mammary Acini Driven by Long-Range Mechanical Interaction**
Shi, Q., Ghosh, R.
CELL PRESS.2014: 174A
- **Rapid disorganization of mechanically interacting systems of mammary acini** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Shi, Q., Ghosh, R. P., Engelke, H., Rycroft, C. H., Cassereau, L., Sethian, J. A., Weaver, V. M., Liphardt, J. T.
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- **Binding of the Rett Syndrome Protein, MeCP2, to Methylated and Unmethylated DNA and Chromatin** *IUBMB LIFE*
Hansen, J. C., Ghosh, R. P., Woodcock, C. L.
2010; 62 (10): 732–38
- **MeCP2 Binds Cooperatively to Its Substrate and Competes with Histone H1 for Chromatin Binding Sites** *MOLECULAR AND CELLULAR BIOLOGY*
Ghosh, R. P., Horowitz-Scherer, R. A., Nikitina, T., Shlyakhtenko, L. S., Woodcock, C. L.
2010; 30 (19): 4656–70
- **Unique Physical Properties and Interactions of the Domains of Methylated DNA Binding Protein 2** *BIOCHEMISTRY*
Ghosh, R. P., Nikitina, T., Horowitz-Scherer, R. A., Gierasch, L. M., Uversky, V. N., Hite, K., Hansen, J. C., Woodcock, C. L.
2010; 49 (20): 4395–4410
- **Chromatin Higher-order Structure and Dynamics** *COLD SPRING HARBOR PERSPECTIVES IN BIOLOGY*
Woodcock, C. L., Ghosh, R. P.
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- **Rett syndrome-causing mutations in human MeCP2 result in diverse structural changes that impact folding and DNA interactions** *JOURNAL OF BIOLOGICAL CHEMISTRY*
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- **Multiple modes of interaction between the methylated DNA binding protein MeCP2 and chromatin** *MOLECULAR AND CELLULAR BIOLOGY*
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