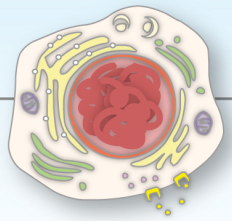
Cell Biology Center Colloquium



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2021 11.9 (Tue) 16:00-17:00

Zoom online Meeting

# Damien Hall


## WPI Nano Life Science Institute
## Kanazawa University


## New biological concepts from multi-scale biophysical simulations


Tokyo Institute of Technology
Institute of Innovative Research
Cell Biology Center

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## Title: New biological concepts from multi-scale biophysical simulations

**Abstract:** This talk presents some recent insights into the processes of protein folding, chaperone action, amyloid formation, yeast division, virus infection and high-speed atomic force microscopy measurements that have come from multi-scale biophysical simulation pitched at different levels of time and distance scales. Presented as a set of five 10-minute research vignettes this seminar also serves to describe recent research progress made by the speaker over the last three years.

## References

**D Hall**, A Kinjo, Y Goto (2018) 'A new look at an old view of denaturant induced protein unfolding.' Analytical biochemistry 542, 40-57

Ando, S., Matsuzawa, Y., Tsurui, H., Mizutani, T., **Hall, D.** and Kuroda, Y., 2021. Stochastic modelling of the effects of human-mobility restriction and viral infection characteristics on the spread of COVID-19. Scientific reports, 11(1), pp.1-10.

**Hall, D.**, 2020. On the nature of the optimal form of the holdase‐type chaperone stress response. FEBS letters, 594(1), pp.43-66.

**Hall, D.**, 2020. A simple method for modeling amyloid kinetics featuring position biased fiber breakage. Biophysics and Physicobiology, 17, pp.30-35.

**Hall, D.**, and Foster A.S. 2021. Practical considerations for feature assignment in high-speed AFM of live cell membranes. (submitted 2021)

**Hall, D.**, and Foster A.S. 2021. A multi-scale kinetic and spatial model of yeast replication and prion transmission. (submitted 2021)

## Speaker: Damien Hall

Damien Hall is a UK/Australian scientist who is currently an Assistant Professor at Kanazawa University. He has a long-time interest in the biophysical chemistry of disease. He has previously held named fellowships at the NIH (US), Cambridge University (UK), Tsukuba University (Japan) and The Australian National University (Australia) and was most recently supported by a US Department of Energy ORISE Established Scientist scheme in America. Following a rapid return in March 2020 he has once again been working as a scientist in Japan, first affiliated with the Nagoya Institute of Technology (2020) and then Kanazawa University (2021).

**Scholar:**https://scholar.google.co.jp/citations?view_op=list_works&hl=en&hl=en&user=SaFISegAAAAJ&sortby=pubdate

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