

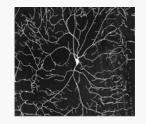
## Visiting Professor Seminar Level 6 Wallace Wurth Bldg (Kirby Institute) 3-4pm, Thursday 15<sup>th</sup> February 2018





Prof. Jonathon (Joe) Howard

Eugene Higgins Professor of Molecular Biophysics and Biochemistry Professor of Physics Co-Director, Yale Quantitative Biology Institute Yale University

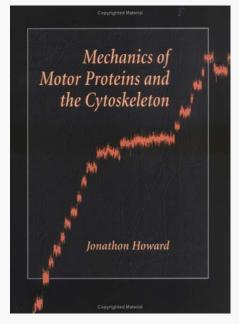


## Motor Proteins, Microtubules, and Morphogenesis

The Cell Motility & Mechanobiology group, the Single Molecule Science node and SoMS are proud to host Prof. Joe Howard for a 6-month visiting appointment until June 2018.

**Biography** Prof. Howard is a biophysicist interested in how motor proteins and the cytoskeleton shape and move cells. He uses optical and mechanical techniques to study the behaviour of individual molecules, and uses theory and computation to understand how molecular interactions give rise to coordinated, collective behaviour at the cellular level. After studying mathematics (B.Sc.) and neurobiology (Ph.D.) at the Australian National University in Canberra, he has moved around geographically —Bristol, San Francisco, Seattle, Heidelberg, Dresden, New Haven —where he has pursued a diverse range of scientific interests including vision, audition, intracellular transport, mitosis, cell motility, embryonic development and neuronal morphogenesis.





Prof. Howard pioneered the use of advanced biophysical techniques to study the mechanics of motor proteins and the fibrous networks they travel on - and he literally wrote the book on the subject! Come see him talk about his latest research!

## References

- <u>J. Howard</u> (2001). Mechanics of Motor Proteins and the Cytoskeleton. *Sinauer Associates, Oxford University Press* [2,686 citations]
- Garzon-Coral C, Fantana H & <u>Howard J</u> (2016) A force-generating machinery maintains the spindle at the cell center during mitosis. *Science 352, 1124–1127*
- Geyer VF, Sartori P, Jülicher F & <u>Howard J</u> (2016) Independent control of static and dynamic components of the Chlamydomonas flagellar beat. *Current Biology 26, 1098–1103*
- Hibbel A, Bogdanova A, Mahamdeh M, Jannasch A, Storch M, Schäffer E, Liakopoulos D & **Howard J** (2015). Kinesin Kip2 enhances microtubule growth in vitro through length-dependent feedback on polymerization and catastrophe. **eLife 4 e10542**